Unum Group
Form 10-K
February 19, 2019

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

FORM 10-K

(Mark One)

[X] Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the fiscal year ended December 31, 2018

[ ] Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the transition period from to

Commission file number 1-11294

Unum Group
(Exact name of registrant as specified in its charter)

Delaware	62-1598430
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1 FOUNTAIN SQUARE CHATTANOOGA, TENNESSEE	37402
(Address of principal executive offices)	(Zip Code)

423.294.1011
(Registrant's telephone number, including area code)

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

Title of each class	Name of each exchange on which registered
Common stock, $0.10 par value	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer as defined in Rule 405 of the Securities Act. Yes [X] No [ ]

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes [ ] No [X]

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes [X] No [ ]

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [ ]

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

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

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

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

The aggregate market value of the shares of the registrant's common stock held by non-affiliates (based upon the closing price of these shares on the New York Stock Exchange) as of the last business day of the registrant's most recently completed second fiscal quarter was $8.1 billion. As of February 15, 2019, there were 214,625,710 shares of the registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the information required by Part III of this Form 10-K are incorporated herein by reference from the registrant's definitive proxy statement for its 2019 Annual Meeting of Stockholders which will be filed with the Securities and Exchange Commission pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, within 120 days after the end of the registrant's fiscal year ended December 31, 2018.

TABLE OF CONTENTS

		Page
	Cautionary Statement Regarding Forward-Looking Statements	1
	PART I	
Item 1.	Business	2
Item 1A.	Risk Factors	19
Item 1B.	Unresolved Staff Comments	30
Item 2.	Properties	30
Item 3.	Legal Proceedings	30
Item 4.	Mine Safety Disclosures	30
	PART II	
Item 5.	Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	31
Item 6.	Selected Financial Data	32
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	34
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	90
Item 8.	Financial Statements and Supplementary Data	97
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	190
Item 9A.	Controls and Procedures	190
Item 9B.	Other Information	192
	PART III	
Item 10.	Directors, Executive Officers and Corporate Governance	193
Item 11.	Executive Compensation	193

Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	194
Item 13.	Certain Relationships and Related Transactions and Director Independence	195
Item 14.	Principal Accounting Fees and Services	195
	PART IV	
Item 15.	Exhibits and Financial Statement Schedules	196
	Index to Exhibits	207
	Signatures	211

Cautionary Statement Regarding Forward-Looking Statements

The Private Securities Litigation Reform Act of 1995 (the Act) provides a "safe harbor" to encourage companies to provide prospective information, as long as those statements are identified as forward-looking and are accompanied by meaningful cautionary statements identifying important factors that could cause actual results to differ materially from those included in the forward-looking statements. Certain information contained in this Annual Report on Form 10-K (including certain statements in the business description in Item 1, Management's Discussion and Analysis in Item 7, and the consolidated financial statements and related notes in Item 8), or in any other written or oral statements made by us in communications with the financial community or contained in documents filed with the Securities and Exchange Commission, may be considered forward-looking statements within the meaning of the Act. Forward-looking statements are those not based on historical information, but rather relate to our outlook, future operations, strategies, financial results, or other developments. Forward-looking statements speak only as of the date made. We undertake no obligation to update these statements, even if made available on our website or otherwise. These statements may be made directly in this document or may be made part of this document by reference to other documents filed by us with the Securities and Exchange Commission, a practice which is known as "incorporation by reference." You can find many of these statements by looking for words such as "will," "may," "should," "could," "believes," "expects," "anticipates," "estimates," "plans," "assumes," "intends," "projects," "goals," "objectives," or similar expressions in this document or in documents incorporated herein.

These forward-looking statements are subject to numerous assumptions, risks, and uncertainties, many of which are beyond our control. We caution readers that the following factors, in addition to other factors mentioned from time to time, may cause actual results to differ materially from those contemplated by the forward-looking statements:

- Sustained periods of low interest rates.
- Fluctuation in insurance reserve liabilities and claim payments due to changes in claim incidence, recovery rates, mortality and morbidity rates, and policy benefit offsets due to, among other factors, the rate of unemployment and consumer confidence, the emergence of new diseases, epidemics, or pandemics, new trends and developments in medical treatments, the effectiveness of our claims operational processes, and changes in governmental programs.
- Unfavorable economic or business conditions, both domestic and foreign, that may result in decreases in sales, premiums, or persistency, as well as unfavorable claims activity.
- Changes in or interpretations of laws and regulations, including tax laws and regulations.
- A cyber attack or other security breach could result in the unauthorized acquisition of confidential data.
- The failure of our business recovery and incident management processes to resume our business operations in the event of a natural catastrophe, cyber attack, or other event.
- Investment results, including, but not limited to, changes in interest rates, defaults, changes in credit spreads, impairments, and the lack of appropriate investments in the market which can be acquired to match our liabilities.
- Increased competition from other insurers and financial services companies due to industry consolidation, new entrants to our markets, or other factors.
- Changes in our financial strength and credit ratings.
- Our ability to execute on our technology systems upgrades or replacements.
- Damage to our reputation due to, among other factors, regulatory investigations, legal proceedings, external events, and/or inadequate or failed internal controls and procedures.
- Actual experience in the broad array of our products that deviates from our assumptions used in pricing, underwriting, and reserving.
- Changes in accounting standards, practices, or policies.
- Effectiveness of our risk management program.
- Contingencies and the level and results of litigation.
- Availability of reinsurance in the market and the ability of our reinsurers to meet their obligations to us.
- Ineffectiveness of our derivatives hedging programs due to changes in the economic environment, counterparty risk, ratings downgrades, capital market volatility, changes in interest rates, and/or regulation.

- Fluctuation in foreign currency exchange rates.
- Ability to generate sufficient internal liquidity and/or obtain external financing.
- Recoverability and/or realization of the carrying value of our intangible assets, long-lived assets, and deferred tax assets.
- Terrorism, both within the U.S. and abroad, ongoing military actions, and heightened security measures in response to these types of threats.

All subsequent written and oral forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

PART I

ITEM 1. BUSINESS

General

Unum Group, a Delaware general business corporation, and its insurance and non-insurance subsidiaries, which collectively with Unum Group we refer to as the Company, operate in the United States, the United Kingdom, Poland, and, to a limited extent, in certain other countries. The principal operating subsidiaries in the United States are Unum Life Insurance Company of America (Unum America), Provident Life and Accident Insurance Company (Provident), The Paul Revere Life Insurance Company (Paul Revere Life), Colonial Life & Accident Insurance Company, Starmount Life Insurance Company (Starmount Life), in the United Kingdom, Unum Limited, and in Poland, Unum Zycie TUiR S.A. (Unum Poland). We are a leading provider of financial protection benefits in the United States and the United Kingdom. Our products include disability, life, accident, critical illness, dental and vision, and other related services. We market our products primarily through the workplace.

We have three principal operating business segments: Unum US, Unum International, and Colonial Life. Our other segments are the Closed Block and Corporate segments. These segments are discussed more fully under "Reporting Segments" included herein in this Item 1.

Business Strategies

The benefits we provide help protect people from the financial hardship of illness, injury, or loss of life by providing support when it is needed most. As one of the leading providers of employee benefits in the U.S. and the U.K., we offer a broad portfolio of products and services through the workplace.

Specifically, we offer group, individual, and voluntary benefits, either as stand-alone products or combined with other coverages, that help employers of all sizes attract and retain a stronger workforce while protecting the incomes and livelihood of their employees. We believe employer-sponsored benefits represent the single most effective way to provide workers with access to the information and options they need to protect their financial stability. Working people and their families, particularly those at lower and middle incomes, are perhaps the most vulnerable in today's economy yet are often overlooked by many providers of financial services and products. For many of these people, employer-sponsored benefits are the primary defense against the potentially catastrophic fallout of death, illness, or injury.

We have established a corporate culture consistent with the social values our products provide. We are committed not only to meeting the needs of our customers who depend on us, but also to operating with integrity and being accountable for our actions. Our sound and consistent business practices, strong internal compliance program, and comprehensive risk management strategy enable us to operate efficiently as well as to identify and address potential areas of risk in our business. We have also applied these same values to our social responsibility efforts. Because we see important links between the obligations we have to all of our stakeholders, we place a strong emphasis on contributing to positive change in our communities.

We believe our disciplined approach to providing financial protection products at the workplace puts us in a position of strength as we seek to capitalize on the growing and largely unfilled need for our products and services. We protect people when they need it most, and we believe the need for our products and services remains strong. We intend to continue protecting our solid margins and returns through our pricing and risk actions. We also continue to invest in our infrastructure and our employees, with a focus on quality and simplification of processes and offerings. Our strategy is centered on market growth through the expansion of our product portfolio, distribution system, and geographic footprint, and enhancing the customer experience through efficiency, simplification, and investment in digital capabilities. Accordingly, we continue to identify ways to expand our product offerings, which we believe will allow us to strengthen our brand through both new and existing customer relationships. Although the low interest rate environment continues to place pressure on our profit margins, we continue to analyze and employ strategies that we believe will help us navigate this environment and allow us to maintain solid operating margins and significant financial flexibility to support the needs of our businesses, while also continuing to return capital to our shareholders and exploring merger and acquisition opportunities to enhance our business lines. We have substantial leverage to rising interest rates and an improving economy which generates payroll growth and wage inflation. We believe that consistent operating results, combined with the implementation of strategic initiatives and the effective deployment of capital, will allow us to meet our long-term financial objectives.

Reporting Segments

Our reporting segments are comprised of the following: Unum US, Unum International, Colonial Life, Closed Block, and Corporate. In connection with our acquisition of Unum Poland in the fourth quarter of 2018, we changed the name of our Unum UK segment to Unum International. The Unum International segment is comprised of our Unum UK line of business and our Unum Poland line of business. The percentage of consolidated premium income generated by each reporting segment for the year ended December 31, 2018 is as follows:

Unum US	63.8 %
Unum International	6.3
Colonial Life	17.9
Closed Block	12.0
Total	100.0%

Financial information, including discussion of the acquisition of Unum Poland, is provided in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained herein in Item 7 and Note 13 of the "Notes to Consolidated Financial Statements" contained herein in Item 8.

Unum US Segment

Our Unum US segment includes group long-term and short-term disability insurance, group life and accidental death and dismemberment products, and supplemental and voluntary lines of business. The supplemental and voluntary lines of business are comprised of individual disability, voluntary benefits, and dental and vision products. Unum US products are issued primarily by Unum America, Provident, and Starmount Life. Paul Revere Life previously issued products reported in our Unum US segment and continues to service the in-force policies, but Paul Revere Life no longer actively markets new business. These products are marketed through our field sales personnel who work in conjunction with independent brokers and consultants. Our market strategy for Unum US is to effectively deliver an integrated offering of employee benefit products in the group core market segment, which we define for Unum US as employee groups with fewer than 2,000 employees, the group large case market segment, and the supplemental and voluntary market segment.

The percentage of Unum US segment premium income generated by each product line during 2018 is as follows:

Group Disability	43.1 %
Group Life and Accidental Death & Dismemberment	30.3
Individual Disability	7.4
Voluntary Benefits	15.6
Dental and Vision	3.6
Total	100.0%

Group Long-term and Short-term Disability

We sell group long-term and short-term disability products to employers for the benefit of employees. Group long-term disability provides employees with insurance coverage for loss of income in the event of extended work absences due to sickness or injury. We offer services to employers and insureds to encourage and facilitate rehabilitation, retraining, and re-employment. Most policies begin providing benefits following 90 or 180 day waiting periods and continue providing benefits until the employee reaches a certain age, generally between 65 and 70, or recovers from the disability. The benefits are limited to specified maximums as a percentage of income. Effective January 1, 2018, coverage began for our new medical stop-loss product, which is included in our group long-term disability product line. Medical stop-loss is designed to protect self-insured employers if their employees' medical claims exceed certain agreed upon thresholds.

Group short-term disability insurance generally provides coverage from loss of income due to injury or sickness, effective immediately for accidents and after one week for sickness, for up to 26 weeks, limited to specified maximums as a percentage of income.

Premiums for group long-term and short-term disability are generally based on expected claims of a pool of similar risks plus provisions for administrative expenses, investment income, and profit. In some cases, coverage for large employers will include retrospective experience rating provisions or will be underwritten on an experience-rated basis. Premiums for experience-rated group long-term and short-term disability business are based on the expected experience of the client given its demographics, industry group, and location, adjusted for the credibility of the specific claim experience of the client. Both group long-term and short-term disability are sold primarily on a basis permitting periodic repricing to address the underlying claims experience. We also offer fee-based administrative services only (ASO) products, where the responsibility for funding claim payments remains with the customer, and fee-based family medical leave products. Premiums for our medical stop-loss product are generally based on the number of covered employees in self-insured employer groups and their estimated overall health risk plus provisions for administrative expenses, and profit.

We have defined underwriting practices and procedures. If the coverage amount exceeds certain prescribed age and amount limits, we may require a prospective insured to submit evidence of insurability. Our disability policies are typically issued, both at inception and renewal, with rate guarantees. For new group policyholders, the usual rate guarantee is one to three years. For group policies being renewed, the rate guarantee is generally one year, but may be longer. The profitability of the policy depends on the adequacy of the rate during the rate guarantee period. The contracts provide for certain circumstances in which the rate guarantees can be overridden. Our medical stop loss contracts are typically renewable on an annual basis and rates are not guaranteed beyond one year. There is no requirement for prospective insureds to submit evidence of insurability because coverage levels are determined for the group as a whole.

Profitability of group long-term and short-term disability insurance and our medical stop-loss product is affected by sales, persistency, investment returns, claims experience, and the level of administrative expenses. Morbidity is an important factor in disability claims experience, and many economic and societal factors can affect claim incidence for disability insurance. We routinely make pricing adjustments on our group insurance products, when contractually permitted, which take into account emerging experience and external factors.

Group Life and Accidental Death and Dismemberment

Group life and accidental death and dismemberment products are sold to employers as employee benefit products. Group life consists primarily of renewable term life insurance with the coverages frequently linked to employees' wages and includes a provision for waiver of premium, if disabled. Accidental death and dismemberment consists primarily of an additional benefit amount payable if death or severe injury is attributable to an accident.

Premiums are generally based on expected claims of a pool of similar risks plus provisions for administrative expenses, investment income, and profit. Underwriting practices and rate guarantees are similar to those used for group disability products, and evidence of insurability is required for benefits in excess of a specified limit.

Profitability of group life and accidental death and dismemberment insurance is affected by persistency, investment returns, claims experience, and the level of administrative expenses.

Individual Disability

Individual disability products are offered primarily to multi-life employer groups to supplement their group disability plans and may be funded by the employer, but the policy is owned by the employee and is portable. Individual disability insurance provides the insured with a portion of earned income lost as a result of sickness or injury. The benefits, including the underlying group disability coverage, typically range from 30 percent to 75 percent of the insured's monthly earned income. We provide various options with respect to length of benefit periods, product features, and waiting periods before benefit payments begin, which permit tailoring of the multi-life plan to a specific employer's needs. We also market individual disability policies which include payments for the transfer of business ownership between partners and payments for business overhead expenses, also on a multi-life basis. Individual disability products do not provide for the accumulation of cash values.

Premium rates for individual disability products vary by age, product features, and occupation based on assumptions concerning morbidity, mortality, persistency, administrative expenses, investment income, and profit. We develop our assumptions based on our own experience. Our underwriting rules, issue limits, and plan designs reflect risk and the financial circumstances of prospective insureds. Individuals in multi-life groups may be subject to limited medical underwriting. The majority of our individual disability policies are written on a noncancelable basis. Under a noncancelable policy, as long as the insured continues to pay the fixed annual premium for the policy's duration, we cannot cancel the policy or change the premium.

Profitability of individual disability insurance is affected by persistency, investment returns, claims experience, and the level of administrative expenses.

Voluntary Benefits

Voluntary benefits products are primarily sold to groups of employees through payroll deduction at the workplace and include life, disability, accident, hospital indemnity, cancer, and critical illness offered on both a group and individual basis.

Premium rates for voluntary benefits products are based on assumptions concerning morbidity, mortality, persistency, administrative expenses, investment income, and profit. We develop our assumptions based on our own claims and persistency experience and published industry tables. Our underwriters evaluate the medical condition of prospective policyholders prior to the issuance of a policy on a simplified basis. Underwriting requirements may be waived for cases that meet certain criteria, including participation levels. Individual voluntary benefits products other than life insurance are offered on a guaranteed renewable basis which allows us to re-price in-force policies, subject to regulatory approval. Group voluntary benefits products are offered primarily on an optionally renewable basis which allows us to re-price or terminate in-force policies.

Profitability of voluntary benefits products is affected by the level of employee participation, persistency, investment returns, claims experience, and the level of administrative expenses.

Dental and Vision

Group dental and vision products are sold to employers as employee benefit products. Our group dental products include a variety of insured and self-insured dental care plans including preferred provider organizations and scheduled reimbursement plans. Our group vision products provide coverage that includes a range of both in-network and out-of-network benefits for routine vision services offered either in conjunction with our dental product offerings or as stand-alone coverage.

Premiums for small case group dental and vision products are generally based on expected claims of a pool of similar risks plus a provision for administrative expenses, investment income, and profit. Premiums for large employer groups are underwritten on an experience-rated basis.

Profitability of our dental and vision products is affected by persistency, investment returns, claims experience, and the level of administrative expenses.

We discontinued offering our direct-to-consumer individual dental and vision products, a portion of the Starmount Life offering, in the second half of 2018 to focus on the integration of our dental and vision products in our existing Unum US and Colonial Life distribution channels.

Unum International Segment

The Unum International segment includes our operations in the United Kingdom and Poland. Unum UK's business includes insurance for group long-term disability, group life, and supplemental lines of business which include dental, individual disability, and critical illness products. Unum Poland's business primarily includes insurance for individual and group life with accident and health riders. Both Unum UK's and Unum Poland's products are sold primarily through field sales personnel and independent brokers and consultants. Unum Poland 's results are included within the supplemental product. The market strategy for the segment is to offer benefits to employers and employees through the workplace, with a focus on the expansion of the number of employers and employees covered in our Unum UK core market segment, which we define as employee groups with fewer than 500 employees, and the growth of the existing Unum Poland business through the incorporation of our benefits and distribution expertise.

The percentage of Unum International segment premium income generated by each product line during 2018 is as follows:

Group Long-term Disability	63.1	%
Group Life	19.5	
Supplemental	17.4	
Total	100.0	%

5

Group Long-term Disability

Group long-term disability products are sold to employers for the benefit of employees. Group long-term disability provides employees with insurance coverage for loss of income in the event of extended work absences due to sickness or injury. Services are offered to employers and insureds to encourage and facilitate rehabilitation, retraining, and re-employment. Most policies begin providing benefits following 90 or 180 day waiting periods and continue providing benefits until the employee reaches a certain age, generally between 60 and 67. The benefits are limited to specified maximums as a percentage of income.

Premiums for group long-term disability are generally based on expected claims of a pool of similar risks plus provisions for administrative expenses, investment income, and profit. Some cases carry experience rating provisions. Premiums for experience-rated group long-term disability business are based on the expected experience of the client given its demographics, industry group, and location, adjusted for the credibility of the specific claim experience of the client.

We have defined underwriting practices and procedures. If the coverage amount exceeds certain prescribed age and amount limits, we may require a prospective insured to submit evidence of insurability. Policies are typically issued, both at inception and renewal, with rate guarantees. The usual rate guarantee is two years but may vary depending on circumstances. The profitability of the policy is dependent upon the adequacy of the rate during the rate guarantee period. The contracts provide for certain circumstances in which the rate guarantees can be overridden.

Profitability of group long-term disability insurance is affected by persistency, investment returns, claims experience, and the level of administrative expenses. Morbidity is an important factor in disability claims experience. We routinely make pricing adjustments on our group insurance products, when contractually permitted, which take into account emerging experience and external factors.

Group Life

Group life products are sold to employers as employee benefit products. Group life consists of two types of products, a renewable term life insurance product and a group dependent life product. The renewable term life product provides a lump sum benefit to the beneficiary on death of an employee. The group dependent life product, which we discontinued offering to new customers in 2012, provides an annuity to the beneficiary upon the death of an employee. Both coverages are frequently linked to employees' wages. Premiums for group life are generally based on expected claims of a pool of similar risks plus provisions for administrative expenses, investment income, and profit. Underwriting and rate guarantees are similar to those utilized for group long-term disability products.

Profitability of group life is affected by persistency, investment returns, claims experience, and the level of administrative expenses.

Supplemental

Supplemental products for our Unum UK line of business are sold to individual retail customers as well as groups of employees and include individual disability, group and individual critical illness, and group dental. Individual disability products provide the insured with a portion of earned income lost as a result of sickness or injury. Critical illness products provide a lump-sum benefit on the occurrence of a covered critical illness event. Group dental products generally provide fixed benefits based on specified treatments or a portion of the cost of the treatment. Unum Poland products, which include both individual and group life products, provide renewable term and whole life insurance with accident and health riders.

Premiums for our individual products vary by age and are based on assumptions concerning morbidity, mortality, persistency, administrative expenses, investment income, and profit. We develop our assumptions based on our own claims and persistency experience and published industry tables. Approximately one half of our individual disability policies are written on a noncancelable basis. The remainder of our individual disability policies and all of our individual critical illness products are offered on a guaranteed renewable basis which allows us to re-price in-force policies. Our underwriters evaluate the medical and financial condition of prospective policyholders prior to the issuance of a policy.

Premiums for group critical illness products are generally based on expected claims of a pool of similar risks plus provisions for administrative expenses, investment income, and profit. Underwriting and rate guarantees are similar to those utilized for group long-term disability products. Premiums for group dental products are generally based on standard industry rates that vary by age, with minor pricing variation based on the number of covered employees in the group.

Premiums for Unum Poland products are based on expected claims of a pool of similar risks plus provisions for administrative expenses, investment income, and profit.

Profitability of our supplemental products is affected by persistency, investment returns, claims experience, and the level of administrative expenses.

Colonial Life Segment

Our Colonial Life segment includes insurance for accident, sickness, and disability products, which includes our expanded dental and vision products, life products, and cancer and critical illness products issued primarily by Colonial Life & Accident Insurance Company and marketed to employees, on both a group and an individual basis, at the workplace through an independent contractor agency sales force and brokers. Our market strategy for Colonial Life is to effectively deliver a broad set of voluntary products and services in the public sector market and in the commercial market, with a particular focus on the core commercial market segment, which we define for Colonial Life as accounts with fewer than 1,000 employees.

We have defined underwriting practices and procedures for each of our products. Most policies are issued on a simplified issue basis, based on answers to simple health and employment questions. If the amount applied for exceeds certain levels, the applicant may be asked to answer additional health questions or submit to additional medical examinations.

The percentage of Colonial Life segment premium income generated by each product line during 2018 is as follows:

Accident, Sickness, and Disability	57.9	%
Life	20.5	
Cancer and Critical Illness	21.6	
Total	100.0	%

Accident, Sickness, and Disability

The accident, sickness, and disability product line consists of short-term disability plans, accident-only plans providing benefits for injuries on a specified loss basis, and our expanded dental and vision products. It also includes accident, health, and dental plans covering hospital admissions, confinement, surgeries, and dental services on an indemnity basis.

Premiums for accident, sickness, and disability products are generally based on assumptions for morbidity, mortality, persistency, administrative expenses, investment income, and profit. We develop our assumptions based on our own experience. Premiums are primarily individual guaranteed renewable for which we have the ability to change premiums on a state by state basis. A small percentage of the policies are written on a group basis for which we retain the right to change premiums at the individual account level. Premiums for our expanded dental and vision products are generally guaranteed issue with standard industry rates that vary by age and region.

Profitability is affected by the level of employee participation, persistency, investment returns, claims experience, and the level of administrative expenses.

The accident, health and dental products qualify as fringe benefits that can be purchased with pre-tax employee dollars under flexible benefits programs. Flexible benefits programs assist employers in managing benefit and compensation packages and provide policyholders the ability to choose benefits that best meet their needs. Laws could be changed to limit or eliminate fringe benefits available on a pre-tax basis, eliminating our ability to continue marketing our products this way. However, we believe our products provide value to our policyholders that will remain even if the tax advantages offered by flexible benefits programs are modified or eliminated.

Life

Life products are primarily comprised of universal life, whole life, and term life policies.

Premium rates vary by age and are based on assumptions concerning mortality, persistency, administrative expenses, investment income, and profit. We develop our assumptions based on our own experience and published industry tables. Premiums for the whole life and level term products are guaranteed for the life of the contract. Premiums for the universal life products are flexible and may vary at the individual policyholder level. For the group term life products, we retain the right to change premiums at the account level based on the experience of the account.

Profitability is affected by the level of employee participation, persistency, investment returns, claims experience, and the level of administrative expenses.

Cancer and Critical Illness

Cancer policies provide various benefits for the treatment of cancer including hospitalization, surgery, radiation, and chemotherapy. Critical illness policies provide a lump-sum benefit and/or fixed payments on the occurrence of a covered critical illness event.

Premiums are generally based on assumptions for morbidity, mortality, persistency, administrative expenses, investment income, and profit. We develop our assumptions based on our own experience. Premiums are primarily individual guaranteed renewable wherein we have the ability to change premiums on a state by state basis.

Profitability of these products is affected by the level of employee participation, persistency, investment returns, claims experience, and the level of administrative expenses.

Closed Block Segment

Our Closed Block segment consists of individual disability, group and individual long-term care, and other insurance products no longer actively marketed. Closed Block segment premium income for 2018 was comprised of approximately 39 percent individual disability and 61 percent group and individual long-term care.

Individual Disability

We began limiting sales of the types of individual disability policies reported in our Closed Block segment subsequent to the mid-1990s after substantial changes in product design were implemented to improve the overall risk profile of our offerings of individual disability products. We entirely discontinued issuing new policies in this closed block of business in 2004, other than through update features contractually allowable on existing policies. The majority of the policies were written on a noncancelable basis and were marketed on a single-life customer basis. Profitability is affected by persistency, investment returns, claims experience, and the level of administrative expenses.

Group and Individual Long-term Care

We discontinued offering individual long-term care in 2009 and group long-term care in 2012, other than features contractually allowable on existing group policies. Group long-term care was previously offered to employers for the benefit of employees. Individual long-term care was previously marketed on a single-life customer basis.

Long-term care insurance pays a benefit upon the loss of two or more activities of daily living and the insured's requirement of standby assistance or cognitive impairment. Payment is generally made on an indemnity basis, regardless of expenses incurred, up to a lifetime maximum. Benefits begin after a waiting period, usually 90 days or less, and are generally paid for a period of three years, six years, or lifetime.

Our long-term care insurance was sold on a guaranteed renewable basis which allows us to re-price in-force policies, subject to regulatory approval. Premium rates for long-term care vary by age and are based on assumptions concerning morbidity, mortality, persistency, administrative expenses, investment income, and profit. Premium rate increases continue to be implemented where needed and where approved by state regulators. We develop our assumptions based on our own claims and persistency experience and published industry tables.

Profitability is affected by premium rate increases, persistency, investment returns, claims experience, and the level of administrative expenses.

Other

Other insurance products not actively marketed include group pension, individual life and corporate-owned life insurance, reinsurance pools and management operations, and other miscellaneous product lines. The majority of these products have been reinsured, with approximately 80 percent of reserves at December 31, 2018 ceded to other insurance companies.

Corporate Segment

Our Corporate segment includes investment income on corporate assets not specifically allocated to a line of business, interest expense on corporate debt other than non-recourse debt, and certain other corporate income and expense not allocated to a line of business.

Reinsurance

In the normal course of business, we assume reinsurance from and cede reinsurance to other insurance companies. In a reinsurance transaction, a reinsurer agrees to indemnify another insurer for part or all of its liability under a policy or policies it has issued for an agreed upon premium. We undertake reinsurance transactions for both risk management and capital management. If the assuming reinsurer in a reinsurance agreement is unable to meet its obligations, we remain contingently liable. In the event that reinsurers do not meet their obligations under the terms of the reinsurance agreement, reinsurance recoverable balances could become uncollectible. We evaluate the financial condition of reinsurers to whom we cede business and monitor concentration of credit risk to minimize our exposure. We may also require assets to be held in trust, letters of credit, or other acceptable collateral to support reinsurance recoverable balances. The collectibility of our reinsurance recoverable is primarily a function of the solvency of the individual reinsurers. Although we have controls to minimize our exposure, the insolvency of a reinsurer or the inability or unwillingness of a reinsurer to comply with the terms of a reinsurance contract could have a material adverse effect on our results of operations.

In general, the maximum amount of life insurance risk retained by our U.S. insurance subsidiaries under group or individual life or group or individual accidental death and dismemberment policies during 2018 was $1 million per covered life per policy. The retention amount remains at $1 million for 2019. For Unum Limited life insurance risk, during 2018 we had reinsurance agreements which provided 75 percent coverage up to £500 thousand per covered life for group dependent life benefits and 25 percent coverage for group lump sum benefits, as well as 100 percent coverage per covered life above that amount.

We have reinsurance agreements on approximately 76 percent of our Closed Block individual disability business. As of December 31, 2018, this reinsurance covers approximately 67 percent of that portion of the consolidated risk above a $4.6 billion retention limit. The risk limit for the reinsurer grows over time to a maximum of $2.2 billion, after which any further losses will revert to us.

We have global catastrophic reinsurance coverage which covers all Unum Group insurance companies and includes four layers of coverage to limit our exposure under life, accidental death and dismemberment, long-term care, and disability policies in regard to a catastrophic event. Each layer provides coverage for all catastrophic events, including acts of war and any type of terrorism, up to $1 million of coverage per person per policy for each U.S. and non-U.K. line of covered business, and up to £2 million of coverage for each U.K. covered line of business. We have the following coverage for 2019, after a $100 million deductible:

Layer	Coverage (in millions)	Percent Coverage
First	$ 50.0	50.0 %

Second	55.0	55.0
Third	90.0	60.0
Fourth	180.0	60.0
Total Catastrophic Coverage	$ 375.0	

In addition to the global catastrophic reinsurance coverage noted above, Unum Limited has additional catastrophic coverage via an arms-length, inter-company reinsurance agreement with Unum America, under similar terms as the global catastrophic treaties. Unum Limited has the following additional coverage for 2019, after a £75 million deductible:

Layer	Coverage (in millions)	Percent Coverage
First	£ 15.0	20.0 %
Second	6.8	22.5
Total Catastrophic Coverage	£ 21.8	

Unum Poland has additional global catastrophic reinsurance coverage of up to zł70 million with a maximum retention limit of zł0.8 million in 2018. Insurable events include passive war, as well as nuclear, chemical, biological and other forms of terrorism. This agreement was renewed with the same conditions for 2019.

Events may occur which limit or eliminate the availability of catastrophic reinsurance coverage in future years.

We have a quota share reinsurance agreement under which we cede certain blocks of Unum US group long-term disability claims. The agreement is on a combination coinsurance with funds withheld and modified coinsurance basis and provides 90 percent quota share reinsurance on the ceded claims, which was increased from 80 percent during 2018 on all ceded blocks of business. We also have four reinsurance agreements that collectively cede approximately 55 percent of Unum US group life risk up to our per person retention limit for our U.S. insurance subsidiaries. These reinsurance agreements for Unum US group disability and group life allow us to more effectively manage capital in conformity with statutory accounting principles but do not meet insurance risk transfer in accordance with applicable U.S. generally accepted accounting principles (GAAP) and therefore are not accounted for as reinsurance in our consolidated GAAP financial statements.

We also cede 30 percent of the risk for certain blocks of recently issued Unum US individual disability policies, as well as some related claims development risk for a limited period of time. The agreement is on a non-proportional modified coinsurance basis with a provision for experience refunds.

Certain of our domestic insurance subsidiaries cede blocks of business to Northwind Reinsurance Company (Northwind Re) and Fairwind Insurance Company (Fairwind), both of which are affiliated captive reinsurance subsidiaries (captive reinsurers) domiciled in the United States, with Unum Group as the ultimate parent. These captive reinsurers were established for the limited purpose of reinsuring risks attributable to specified policies issued or reinsured by our insurance subsidiaries in order to effectively manage risks in connection with certain blocks of our business as well as to enhance our capital efficiency. On a consolidated reporting basis for Unum Group, financial statement impacts of our reinsurance arrangements with affiliates are eliminated in accordance with GAAP.

For further discussion of our reinsurance activities, refer to "Risk Factors" contained herein in Item 1A; "Consolidated Operating Results," "Segment Results," and "Liquidity and Capital Resources - Cash Available from Subsidiaries" contained herein in Item 7, and Notes 1, 12, and 15 of the "Notes to Consolidated Financial Statements" contained herein in Item 8.

Reserves for Policy and Contract Benefits

The applicable insurance laws under which insurance companies operate require that they report, as liabilities, policy reserves to meet future obligations on their outstanding policies. These reserves are the amounts which, with the additional premiums to be received and interest thereon compounded annually at certain assumed rates, are calculated to be sufficient to meet the various policy and contract obligations as they mature. These laws specify that the reserves shall not be less than reserves calculated using certain specified mortality and morbidity tables, interest rates, and methods of valuation required for statutory accounting.

The reserves reported in our financial statements contained herein are calculated in conformity with GAAP and differ from those specified by the laws of the various states and reported in the statutory financial statements of our life insurance subsidiaries. These differences result from the use of mortality and morbidity tables and interest assumptions which we believe are more representative of the expected experience for these policies than those required for statutory accounting purposes and also result from differences in actuarial reserving methods.

The assumptions we use to calculate our reserves are intended to represent an estimate of experience for the period that policy benefits are payable. If actual experience is equal, or favorable, to our reserve assumptions, then reserves should be adequate to provide for future benefits and expenses. If experience is less favorable than the reserve assumptions, additional reserves may be required. The key experience assumptions include claim incidence rates, claim resolution rates, mortality and morbidity rates, policy persistency, interest rates, premium rate increases, and any applicable policy benefit offsets, including those for social security and other government-based welfare benefits. We periodically review our experience and update our policy reserves for new issues and reserves for all claims incurred, as we believe appropriate.

The consolidated statements of income include the annual change in reserves for future policy and contract benefits. The change reflects a normal accretion for premium payments and interest buildup and decreases for policy terminations such as lapses, deaths, and benefit payments. If policy reserves using best estimate assumptions as of the date of a test for loss recognition are higher than existing policy reserves net of any deferred acquisition costs, the increase in reserves necessary to recognize the deficiency is also included in the change in reserves for future policy and contract benefits.

For further discussion of reserves, refer to "Risk Factors" contained herein in Item 1A, "Critical Accounting Estimates" and the discussion of segment operating results included in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained herein in Item 7, and Notes 1 and 6 of the "Notes to Consolidated Financial Statements" contained herein in Item 8.

Investments

Investment activities are an integral part of our business, and profitability is significantly affected by investment results. We segment our invested assets into portfolios that support our various product lines. Generally, our investment strategy for our portfolios is to match the effective asset cash flows and durations with related expected liability cash flows and durations to consistently meet the liability funding requirements of our businesses. We seek to earn investment income while assuming credit risk in a prudent and selective manner, subject to constraints of quality, liquidity, diversification, and regulatory considerations. Our overall investment philosophy is to invest in a portfolio of high quality assets that provide investment returns consistent with that assumed in the pricing of our insurance products. Assets are invested predominately in fixed maturity securities. Changes in interest rates may affect the amount and timing of cash flows.

We actively manage our asset and liability cash flow match and our asset and liability duration match to limit interest rate risk. We may redistribute investments among our different lines of business, when necessary, to adjust the cash flow and/or duration of the asset portfolios to better match the cash flow and duration of the liability portfolios. Asset and liability portfolio modeling is updated on a quarterly basis and is used as part of the overall interest rate risk management strategy. Cash flows from the in-force asset and liability portfolios are projected at current interest rate levels and also at levels reflecting an increase and a decrease in interest rates to obtain a range of projected cash flows under the different interest rate scenarios. These results enable us to assess the impact of projected changes in cash flows and duration resulting from potential changes in interest rates. Testing the asset and liability portfolios under various interest rate scenarios enables us to choose what we believe to be the most appropriate investment strategy, as well as to limit the risk of disadvantageous outcomes. Although we test the asset and liability portfolios under various interest rate scenarios as part of our modeling, the majority of our liabilities related to insurance contracts are not interest rate sensitive, and we therefore have minimal exposure to policy withdrawal risk. Our determination of investment strategy relies on long-term measures such as reserve adequacy analysis and the relationship between the portfolio yields supporting our various product lines and the aggregate discount rate assumptions embedded in the reserves. We also use this analysis in determining hedging strategies and utilizing derivative financial instruments for managing interest rate risk and the risk related to matching duration for our assets and liabilities. We do not use derivative financial instruments for speculative purposes.

Refer to "Risk Factors" contained herein in Item 1A; "Critical Accounting Estimates" and the discussion of investments in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained herein in Item 7; and Notes 1, 2, 3, and 4 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for information on our investments and derivative financial instruments.

Ratings

AM Best, Fitch Ratings (Fitch), Moody's Investors Service (Moody's), and Standard & Poor's Ratings Services (S&P) are among the third parties that assign issuer credit ratings to Unum Group and financial strength ratings to our insurance subsidiaries. Issuer credit ratings reflect an agency's opinion of the overall financial capacity of a company to meet its senior debt obligations. Financial strength ratings are specific to each individual insurance subsidiary and reflect each rating agency's view of the overall financial strength (capital levels, earnings, growth, investments, business mix, operating performance, and market position) of the insuring entity and its ability to meet its obligations to policyholders. Both the issuer credit ratings and financial strength ratings incorporate quantitative and qualitative analyses by rating agencies and are routinely reviewed and updated on an ongoing basis.

Rating agencies assign an outlook statement of "positive," "negative," or "developing" to indicate an intermediate-term trend in credit fundamentals which could lead to a rating change. "Positive" means that a rating may be raised, "negative" means that a rating may be lowered, and "developing" means that a rating may be raised or lowered with equal probability. Alternatively, a rating may have a "stable" outlook to indicate that the rating is not expected to change.

"Credit watch" or "under review" highlights the potential direction of a short-term or long-term rating. It focuses on identifiable events and short-term trends that cause a rating to be placed under heightened surveillance by a rating agency. Events that may trigger this action include mergers, acquisitions, recapitalizations, regulatory actions, criteria changes, or operating developments. Ratings may be placed on credit watch or under review when an event or a change in an expected trend occurs and additional information is needed to evaluate the current rating level. This status does not mean that a rating change is inevitable, and ratings may change without first being placed on a watch list. A rating is not a recommendation to buy, sell, or hold securities and may be subject to revision or withdrawal at any time by the rating agency. Each rating should be evaluated independently of any other rating.

See "Management's Discussion and Analysis of Financial Condition and Results of Operations - Ratings" contained herein in Item 7 for our current outlook, issuer credit, and financial strength ratings. See also further discussion in "Risk Factors" contained herein in Item 1A.

Competition

There is significant competition among insurance companies for the types of products we sell. We are operating in a dynamic competitive environment of both traditional and non-traditional competitors, with changes in product offerings, enrollment services, and technology solutions. We believe that the principal competitive factors affecting our business are price, quality of the customer experience regarding service and claims management, integrated product choices, enrollment capabilities, financial strength ratings, and claims-paying ratings. In the individual and group disability markets, we compete in the United States with a number of major companies and regionally with other companies offering specialty products. Our principal competitors for our other products, including group life and the product offerings sold to groups of employees through payroll deduction, include the largest insurance companies in the United States. Some of these companies have more competitive pricing or have higher claims-paying ratings. Some may also have greater financial resources with which to compete.

In both the United Kingdom and Poland, we compete for the individual and group products we sell with a mix of large internationally recognized providers and strong local carriers.

We believe the need for the types of products we offer is significant. Individuals and families often live paycheck to paycheck with a considerable chance of being out of work. Pressure is also mounting on governments as to the sustainability of public assistance. Based on current penetration levels, we believe there is substantial upside growth potential.

All areas of the employee benefits markets are highly competitive due to the yearly renewable term nature of our products and the large number of insurance companies offering products in this market. There is a risk that our customers may be able to obtain more favorable terms or improved technology solutions from competitors in lieu of renewing coverage with us. The effect of competition may, as a result, adversely affect the persistency of these and other products, as well as our ability to sell products in the future.

We must attract and retain independent agents and brokers to actively market our products. Strong competition exists among insurers for agents and brokers. We compete with other insurers for sales agents and brokers primarily on the basis of our product offerings, financial strength, support services, and compensation. Sales of our products could be materially adversely affected if we are unsuccessful in attracting and retaining agents and brokers.

For further discussion, refer to "Risk Factors" contained herein in Item 1A.

Regulation

We and our subsidiaries are subject to extensive and comprehensive supervision and regulation in the United States, the United Kingdom, and Poland. The laws and regulations with which we must comply are complex and subject to change. New or existing laws and regulations may become more restrictive or otherwise adversely affect our operations. As a result of the financial market and economic challenges in recent years, regulation and the cost of compliance with regulation has continued to increase.

Insurance Regulation and Oversight

Our U.S. insurance subsidiaries are subject to regulation and oversight by insurance regulatory authorities in the jurisdictions in which they do business and by the U.S. Department of Labor (DOL) on a national basis, primarily for the protection of policyholders. State insurance regulators in the U.S. generally have broad powers with respect to all aspects of the insurance business, including the power to: license and examine insurance companies; regulate and supervise sales practices and market conduct; license agents and brokers; approve policy forms; approve premium rates and subsequent increases thereon for certain insurance products; establish reserve requirements and solvency standards; place limitations on shareholder dividends; prescribe the form and content of required financial statements and reports; regulate the types and amounts of permitted investments; and regulate reinsurance transactions. Our U.S. insurance subsidiaries are examined periodically by their states of domicile and by other states in which they are licensed to conduct business. The domestic examinations have traditionally emphasized financial matters from the perspective of protection of policyholders, but they can and have covered other subjects that an examining state may be interested in reviewing, such as market conduct issues. Examinations in other states more typically focus on market conduct, such as a review of sales practices, including the content and use of advertising materials and the licensing and appointing of agents and brokers, as well as underwriting, claims, and customer service practices, and identification and handling of unclaimed property to determine compliance with state laws. Our U.S. insurance subsidiaries are also subject to assessments by state insurance guaranty associations to cover the proportional cost of insolvent or failed insurers. The DOL enforces a comprehensive federal statute which regulates claims paying fiduciary responsibilities and reporting and disclosure requirements for most employee benefit plans.

Our U.K. insurance subsidiary, Unum Limited, is subject to dual regulation by the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA). The PRA oversees the financial health and stability of financial services firms and is responsible for the prudential regulation and day-to-day supervision of insurance companies. The FCA seeks to protect consumers and oversees financial services products and practices, including those governing insurance companies in the U.K.

In June 2016, the U.K. held a referendum and voted to leave the European Union (EU). The U.K. subsequently invoked Article 50 of the Treaty and is due to leave the EU on March 29, 2019. The U.K.'s decision to leave the EU may add cost and complexity to our compliance efforts if new laws and regulations are established that significantly diverge from those currently in place, however, we are not aware of any indications of such changes in the short-term and do not expect significant changes over the longer term.

Our Polish insurance subsidiary, Unum Poland, is subject to regulation by the Komisja Nadzoru Finansowego (KNF) of the Financial Supervision Authority (FSA) in Poland. The KNF oversees the financial health and stability of financial services firms and is responsible for the prudential regulation and day-to-day supervision of insurance companies and other financial institutions.

Capital Requirements

Risk-based capital (RBC) standards for U.S. life insurance companies are prescribed by the National Association of Insurance Commissioners (NAIC). The domiciliary states of our U.S. insurance subsidiaries have all adopted a version of the NAIC RBC Model Act, which prescribes a system for assessing the adequacy of statutory capital and surplus for all life and health insurers. The basis of the system is a risk-based formula that applies prescribed factors to the various risk elements in a life and health insurer's business to report a minimum capital requirement proportional to the amount of risk assumed by the insurer. The life and health RBC formula is designed to measure annually (i) the risk of loss from asset defaults and asset value fluctuations, (ii) the risk of loss from adverse mortality and morbidity experience, (iii) the risk of loss from mismatching of asset and liability cash flow due to changing interest rates, and (iv) business risks. The formula is used as an early warning tool to identify companies that are potentially inadequately capitalized. The formula is intended to be used as a regulatory tool only and is not intended as a means to rank insurers generally. The NAIC modified the RBC factors in 2018 to reflect the lower U.S. statutory income tax rate that was enacted in 2017 which resulted in lower RBC ratios for our U.S. insurance subsidiaries, including our captive reinsurers, as of December 31, 2018. Although the RBC ratios for our insurance subsidiaries are lower than the prior year, the ratios continue to remain in line with our expectations and are significantly above the level that would require state regulatory action. The NAIC has also issued a proposal to implement a new and more granular RBC structure for fixed income asset capital charges. The proposed structure will expand the fixed income asset designations from six to 20 categories and will revise factor values. We do not anticipate that the new structure related to fixed income assets will be effective before year end 2019. We will continue to monitor the NAIC's activities on this issue.

The NAIC continues to review the state-based solvency regulation framework to identify opportunities to respond to national and international insurance regulatory and solvency developments. The topics of its review include capital requirements, governance and risk management, statutory accounting and financial reporting, and reinsurance. This ongoing review will likely result in significant changes to U.S. insurance regulation and solvency standards, including those for our U.S. insurance subsidiaries. One of the outcomes of the NAIC's review was the adoption of the NAIC Risk Management and Own Risk and Solvency Assessment (ORSA) Model Act which, following enactment at the state level, requires insurers to provide, at least annually, a group-level perspective on the risks of the current and future business plans and the sufficiency of capital to support those risks. All states where our traditional U.S. insurance subsidiaries are domiciled have enacted ORSA requirements, and we file an ORSA summary report annually with the applicable insurance regulators.

The NAIC has established a working group charged with developing a group capital calculation that can be used by regulators as a baseline quantitative measure in assessing the risks and financial position of insurance groups. The initial recommendation for calculation is an RBC aggregation approach that would utilize existing regulatory calculations for legal entities within the group. Items still under development include the scope of the group of legal entities that would be subject to the calculation as well as factors to be used for non-insurance entities and non-U.S. insurance entities within the group. It is too early to predict what, if any, impact this will have on our capital requirements.

The NAIC has adopted a valuation manual containing a principles-based approach to life insurance company reserves. The effective date to begin a three-year implementation period was January 2017 and applies only to new business. The adoption of this valuation manual has not had a material impact on our statutory reserves.

In 2012, the NAIC established a subgroup to study the insurance industry's use of captive reinsurers and special purpose vehicles to transfer insurance risk and is considering ways to promote uniformity in both the approval and supervision of such reinsurers. More recently, the NAIC adopted a proposal to subject certain captive reinsurers and special purpose vehicles to the same capital requirements as traditional insurers. As the NAIC and state insurance regulators continue to examine the use of captive insurance companies to finance reserves required under current regulations, we cannot predict the ultimate outcome of their work, or how long or extensively they will continue to focus on this issue. Although we believe it to be unlikely, a potential outcome of future NAIC decisions from its various committees, task forces, and working groups is that companies could be prohibited from using captive reinsurers. No changes in the use or regulation of captive reinsurers have been proposed by the NAIC, and we are unable to predict the extent of any changes that might be made. Accordingly, we expect to continue our strategy of using captive reinsurers to manage risks and enhance capital efficiency while monitoring the NAIC's study and proposed changes in regulations. See "Reinsurance" contained herein in this Item 1 for further discussion.

The PRA has statutory requirements, including capital adequacy and liquidity requirements and minimum solvency margins, to which Unum Limited must adhere as part of the provisions of Solvency II, an EU directive that prescribes capital requirements and risk management standards for the European insurance industry. Our European holding company is also subject to the Solvency II requirements relevant to insurance holding companies, while its subsidiaries, which includes Unum Limited, are subject to group supervision under Solvency II. The Unum European Economic Area (EEA) Group, which is comprised of the European holding company and its subsidiaries, received approval from the PRA to use its own internal model for calculating regulatory capital and also received approval for certain associated regulatory permissions including transitional relief as the Solvency II capital regime is implemented. Although there are currently no indications that the regulatory capital regime for our U.K. operations will change due to the U.K.'s decision to leave the EU, it remains too early to predict what, if any, impact this may have on existing capital requirements for our U.K. entities, but economic conditions may cause volatility in our solvency ratios.

The International Association of Insurance Supervisors (IAIS) is developing a Common Framework (ComFrame) for the supervision of internationally active insurance groups (IAIGs) that contemplates group-wide supervision across national boundaries, including uniform standards for insurer corporate governance and enterprise risk management, a framework for group capital adequacy assessment that accounts for group-wide risks, and the establishment of ongoing supervisory colleges. We do not qualify as an IAIG under the current criteria for designating an IAIG. However, we monitor the activities of the IAIS for the potential that ComFrame could apply to us in the future. The IAIS expects to implement an Insurance Capital Standard in the form of confidential reporting to supervisory colleges by the end of 2019. At this time, we cannot predict what, if any, additional capital requirements, compliance costs, or other requirements this proposed standard might impose on us, if adopted.

See further discussion in "Risk Factors" contained herein in Item 1A and "Liquidity and Capital Resources" contained herein in Item 7 and Note 15 of the "Notes to Consolidated Financial Statements" contained herein in Item 8.

Insurance Holding Company Regulation

We and our U.S. insurance subsidiaries (excluding captive reinsurers) are subject to regulation under the insurance holding company laws in the states in which our insurance subsidiaries are domiciled, which currently include Maine, Massachusetts, New York, South Carolina, and Tennessee. These laws generally require each insurance company that is domiciled in the state and a member of an insurance holding company system to register with the insurance department of that state and to furnish at least annually financial and other information about the operations of companies within the holding company system, including information concerning capital structure, ownership, management, financial condition, and certain intercompany transactions. Transactions between an insurer and affiliates in the holding company system generally must be fair and reasonable and, if material, require prior notice and approval by the domiciliary insurance regulator.

In addition, such laws and regulations restrict the amount of dividends that may be paid by our insurance subsidiaries to their respective shareholders, including our Company and certain of our intermediate holding company subsidiaries. See further discussion in "Risk Factors" contained herein in Item 1A and "Liquidity and Capital Resources - Cash Available from Subsidiaries" contained herein in Item 7.

There are a number of proposals to amend state insurance laws and regulations in ways that could affect us and our insurance subsidiaries. The NAIC has adopted or amended model laws on holding company regulation that provide for supervision of insurers at the corporate group level. The various proposals to implement group supervision include uniform standards for insurer corporate governance, group-wide supervision of insurance holding companies, adjustments to RBC calculations to account for group-wide risks, and additional regulatory and disclosure requirements for insurance holding companies, including a requirement that the ultimate controlling person of a U.S. insurer submit to the lead state insurance regulator an annual enterprise risk report, which identifies activities, circumstances, or events involving one or more affiliates of an insurer that, if not remedied properly, are likely to have a material adverse effect upon the financial condition or liquidity of the insurer or its insurance holding company system as a whole. The NAIC has adopted the Corporate Governance Annual Disclosure Model Act and the Corporate Governance Annual Disclosure Model Regulation, which require U.S. insurers to disclose detailed information regarding their governance practices. The model act and regulation must be adopted by individual state legislatures and insurance regulators in order to be effective in a particular state. At this time, among the states in which our insurance subsidiaries are domiciled, the model act and regulation are effective only in Maine, Massachusetts, and Tennessee. The NAIC adopted the Insurance Data Security Model Law, which creates a legal framework that requires insurance companies to establish cybersecurity programs designed to protect the private data of consumers. The law outlines planned cybersecurity testing, and the development of incident response plans for breach notification procedures. The model law must be adopted by individual state legislatures and insurance regulators in order to be effective in particular state. At this time, among the states in which our insurance subsidiaries are domiciled, the model law is effective only in South Carolina. The New York State Department of Financial Services has established similar regulations to this law which became effective in 2017 and the state of California has enacted the California Consumer Privacy Act of 2018.

The laws of most states, including the states in which our insurance subsidiaries are domiciled (or deemed to be commercially domiciled), require regulatory approval of a change in control of an insurance company or its holding company. Where these laws apply to us, there can be no effective change in control of our Company or of any of our insurance subsidiaries unless the person seeking to acquire control has filed a statement containing specified information with the appropriate insurance regulators and has obtained their prior approval of the proposed change. The usual measure for a presumptive change of control pursuant to these laws is the acquisition of 10 percent or more of the voting stock of an insurance company or its holding company, although this presumption is rebuttable. Consequently, a person acquiring 10 percent or more of the voting stock of an insurance company or its holding company without the prior approval of the insurance regulators in the state(s) of domicile of the insurance company(ies) sought to be acquired (or whose holding company is sought to be acquired) will be in violation of these laws. Such a person may also be subject to one or more of the following actions: (i) injunctive action requiring the disposition or seizure of those shares by the applicable insurance regulators; (ii) prohibition of voting of such shares; and (iii) other actions determined by the relevant insurance regulators. Further, many states' insurance laws require that prior notification be given to state insurance regulators of a change in control of a non-domiciled insurance company doing business in the state. These pre-notification statutes do not authorize the state insurance regulators to disapprove the change in control; however, they do authorize regulatory action in the affected state if particular conditions exist, such as undue market concentration. Any future transactions that would constitute a change in control of our Company or of any of our insurance subsidiaries may require prior notification in those states that have adopted pre-notification laws.

These laws may discourage potential acquisition proposals and may delay, deter, or prevent a change in control of our Company, including through transactions, and in particular unsolicited transactions, that some or all of our shareholders might consider to be desirable.

Federal Laws and Regulations

Enacted in 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank) effected comprehensive changes to the regulation of financial services in the United States. Dodd-Frank directed various government agencies and bodies to promulgate regulations implementing the law, many of which remain to be completed. Among other provisions, Dodd-Frank created a new framework for regulation of the over-the-counter derivatives markets, including requirements that certain swaps be executed through a centralized exchange or regulated facility and be cleared through a regulated clearinghouse. It also subjected us and major swap participants to capital and margin (i.e., collateral) requirements, which generally had the effect of increasing the costs of hedging and the credit risk posed by some counterparties.

Dodd-Frank also established the Federal Insurance Office (FIO) within the Department of the Treasury, with powers over most lines of insurance, and the Financial Stability Oversight Council (FSOC). The FIO is authorized to gather data and information to monitor aspects of the insurance industry, identify issues in the regulation of insurers about insurance matters, and preempt state insurance measures under certain circumstances. Although the FIO is prohibited from directly regulating the business of insurance, the FIO may also recommend enhanced regulations to state regulatory authorities or recommend to the FSOC that it designate an insurer as a "systemically important financial institution" (SIFI). An insurer designated as a SIFI could be subject to Federal Reserve supervision and heightened regulatory standards. We have not been designated as a SIFI, and at this time we believe it is unlikely that we would be designated as such. We continue to monitor the political, legislative and regulatory environment, where possible amendments to various provisions of Dodd-Frank are under discussion.

We are subject to the laws and regulations generally applicable to public companies, including the rules and regulations of the Securities and Exchange Commission and the New York Stock Exchange relating to public reporting and disclosure, accounting and financial reporting, corporate governance, and securities trading. Further, the Sarbanes-Oxley Act of 2002, and rules and regulations adopted under this regulation, have increased the requirements for us and other public companies in these and other areas.

The USA PATRIOT Act of 2001 (Patriot Act) contains anti-money laundering and financial transparency laws and mandates the implementation of various regulations applicable to broker-dealers and other financial services companies, including insurance companies. The Patriot Act seeks to promote cooperation among financial institutions, regulators and law enforcement entities in identifying parties that may be involved in terrorism or money laundering. Anti-money laundering laws outside of the United States contain some similar provisions. Additionally, other federal laws and regulations, including the Foreign Corrupt Practices Act and regulations issued by the Office of Foreign Asset's Controls, as well as the U.K.'s Bribery Act of 2010, have increased requirements relating to identifying customers, prohibiting transactions with certain organizations or individuals, watching for and reporting suspicious transactions, responding to requests for information by regulatory authorities and law enforcement agencies, sharing information with other financial institutions, and requiring the implementation and maintenance of internal practices, procedures, and controls.

We are subject to federal income, employment, excise and other taxes related to both our U.S. and our foreign operations. On December 22, 2017, the U.S. Federal government enacted a tax bill, H.R.1, An Act to Provide Reconciliation Pursuant to Titles II and V of the Concurrent Resolution on the Budget for Fiscal Year 2018, more commonly known as the Tax Cuts and Jobs Act (TCJA). The key provisions of the TCJA relevant to us are as follows:

- Establishes a corporate income tax rate of 21 percent;
- Creates a territorial tax system rather than a worldwide system, which will generally allow companies to repatriate future foreign source earnings without incurring additional U.S. taxes by providing a 100 percent exemption for the foreign source portion of dividends from certain foreign subsidiaries;
- Subjects undistributed and previously untaxed foreign earnings and profits to a one-time transition tax also referred to as a deemed repatriation toll charge;
- Creates a U.S. shareholder tax on certain foreign subsidiary income above a routine equity return on tangible depreciable business assets (Global Intangible Low-taxed Income);
- Decreases tax-deductible life and property and casualty insurance reserves;

- Increases the amount and amortization period of acquisition costs capitalized for tax purposes;
- Reduces the maximum deduction for net operating loss (NOL) carryforwards arising in companies other than non-life insurance companies in tax years beginning after 2017 to a percentage of the taxpayer's taxable income. It also allows any NOLs generated in tax years beginning after December 31, 2017 to be carried forward indefinitely and repeals carrybacks. NOL provisions for non-life insurance companies remain unchanged from current law;
- Allows businesses to immediately write off the cost of new investments in certain qualified depreciable assets made after September 27, 2017 subject to phase downs starting in 2023;
- Eliminates or reduces certain deductions (including deductions for certain compensation arrangements, certain payments made to governments for violations of law and certain legal settlements), exclusions and credits and adds other provisions that broaden the tax base; and
- Creates a new base erosion anti-abuse tax (BEAT) that subjects certain payments made by a U.S. company to a related foreign company to additional taxes.

See "Executive Summary" and "Liquidity and Capital Resources" contained herein in Item 7 and Notes 7 and 15 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for discussion of the impact to our financial position and results of operations as a result of these changes.

Federal tax laws and regulations are subject to change, and any such change could materially impact our federal taxes and reduce profitability as well as capital levels in our insurance subsidiaries. We continually monitor federal tax legislative and regulatory developments to understand their potential impact on our profitability.

For further discussion of regulation, refer to "Risk Factors" contained herein in Item 1A.

Geographic Areas

Adjusted operating revenue, which excludes net realized investment gains and losses, for our Unum International segment was approximately 6 percent of our consolidated adjusted operating revenue in 2018, 2017, and 2016. As of December 31, 2018, total assets equaled approximately 6 percent of consolidated assets and total liabilities equaled approximately 5 percent of consolidated liabilities for our Unum International segment. Fluctuations in the U.S. dollar relative to the local currencies of our Unum International segment will impact our reported operating results. See "Risk Factors" contained herein in Item 1A and "Quantitative and Qualitative Disclosures About Market Risk" contained herein in Item 7A for further discussion of fluctuations in foreign currency exchange rates. See "Reporting Segments" contained herein in this Item 1; "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained herein in Item 7; and Note 13 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion of Unum International's operating results.

Employees

At December 31, 2018, we had approximately 9,600 full-time employees.

Available Information

Our internet website address is www.unum.com. We make available, free of charge, on or through our website our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after filing such material with the Securities and Exchange Commission.

Executive Officers of the Registrant

Our executive officers, who are also executive officers of certain of our principal subsidiaries, were appointed by Unum Group's board of directors to serve until their successors are chosen and qualified or until their earlier resignation or removal.

Name	Age	Position
Richard P. McKenney	50	President and Chief Executive Officer and a Director
John F. McGarry	61	Executive Vice President and Chief Financial Officer
Lisa G. Iglesias	53	Executive Vice President, General Counsel
Michael Q. Simonds	45	Executive Vice President, President and Chief Executive Officer, Unum US
Timothy G. Arnold	56	Executive Vice President, President and Chief Executive Officer, Colonial Life
Peter G. O'Donnell	52	Executive Vice President, Chief Executive Officer, Unum International
Elizabeth A. Ahmed	44	Executive Vice President, People and Communications
Puneet Bhasin	56	Executive Vice President, Chief Information and Digital Officer
Breege A. Farrell	59	Executive Vice President, Chief Investment Officer

Mr. McKenney became President in April 2015 and Chief Executive Officer in May 2015. He served as Executive Vice President and Chief Financial Officer from August 2009 until April 2015, having joined the Company in July 2009. Before joining the Company, Mr. McKenney served as Executive Vice President and Chief Financial Officer of Sun Life Financial Inc., an international financial services company, from February 2007, having joined that company as Executive Vice President in September 2006.

Mr. McGarry became Executive Vice President and Chief Financial Officer in April 2015. He served as Executive Vice President, President and Chief Executive Officer, Closed Block Operations from August 2013 to April 2015, after having served as Executive Vice President, Individual Disability and Long-term Care Closed Block Operations from September 2012. He previously served as Executive Vice President, President and Chief Executive Officer, Unum UK from July 2010, and as Senior Vice President, Benefits, Individual Disability, and National Client Group Business, Unum US from January 2010. Prior to that, he served in various other capacities within Unum US, including as Senior Vice President, Benefits Operations and Risk Management from March 2008 to January 2010, and as Senior Vice President, Benefits Operations from January 2006 to March 2008. Mr. McGarry originally joined a Unum Group predecessor company in 1986.

Ms. Iglesias was named Executive Vice President, General Counsel upon joining the Company in January 2015. She served as Senior Vice President, General Counsel and Secretary of WellCare Health Plans, Inc., a managed care company, from February 2012 to December 2014, having first joined WellCare in February 2010 as Vice President, Securities and Assistant General Counsel. Prior to that, she served as General Counsel and Corporate Secretary for Nordstrom, Inc., a fashion specialty retailer, from 2007 to 2008, and as General Counsel and Secretary of Spherion Corporation, a recruiting and staffing company, from 1999 to 2007.

Mr. Simonds was named Executive Vice President, President and Chief Executive Officer, Unum US in July 2013, after having served as Senior Vice President and Chief Operating Officer, Unum US from June 2012. He previously served as Senior Vice President, Growth Operations, Unum US from July 2010, and as Senior Vice President and Chief Marketing Officer, Unum US from March 2008. Mr. Simonds originally joined a Unum Group predecessor company in 1994, left the Company in 2000 to further his education, and rejoined the Company in 2003 after serving as a consultant with McKinsey & Company, a global management consulting firm.

Mr. Arnold was named Executive Vice President, President and Chief Executive Officer, Colonial Life in January 2015, after having served as Executive Vice President, President, Colonial Life from July 2014. He previously served as Senior Vice President, Sales and Marketing, Colonial Life from August 2012, as Senior Vice President, Chief

Operations Officer, Colonial Life from July 2011, and as Senior Vice President, Integrated Underwriting, Unum US from May 2010. Mr. Arnold originally joined a Unum Group predecessor company in 1985.

Mr. O'Donnell serves as Executive Vice President, Chief Executive Officer, Unum International, having been named to this position in October 2018 when the reporting segment was previously known as Unum UK. He previously served as President and Chief Executive Officer, Unum UK, from September 2012, after having joined the Company as Unum Limited's Chief Financial Officer in 2010. Prior to joining Unum Limited, Mr. O'Donnell served as Director of Group Finance at Prudential plc, an international financial services company, from May 2008 to May 2010. He served as Finance director at Royal & SunAlliance plc, an international financial services company, from May 2005 to May 2008.

Ms. Ahmed was named Executive Vice President, People and Communications upon joining the Company in October 2018. She served as Executive Vice President, Chief Human Resources Officer, AmTrust Financial Services, Inc., a multinational insurance holding company, from May 2015 to October 2018. Prior to that, she served as Vice President of Human Resources at Equity Trust Company, a financial services company, from May 2012 to May 2015, and as Senior Vice President of Human Resources at PNC Bank, a diversified financial services institution, from August 2008 to May 2012.

Mr. Bhasin was named Executive Vice President, Chief Information and Digital Officer after joining the Company in March 2018. He served as Executive Vice President, Corporate Operations and Recycling at Waste Management, Inc., a waste management environmental services provider, from November 2015 to March 2017. While at Waste Management, he also served as Senior Vice President, Corporate Operations from November 2014, Chief Information Officer and Senior Vice President, Technology, Logistics and Customer Service from August 2012, and Senior Vice President and Chief Information Officer from December 2009.

Ms. Farrell was named Executive Vice President, Chief Investment Officer in August 2013, after having joined the Company as Senior Vice President and Chief Investment Officer in April 2011. Before joining the Company, she held a number of executive-level investment positions within The Allstate Corporation, a personal lines insurer, including as Senior Managing Director of Allstate Investments, LLC and certain affiliated companies from January 2010 to April 2011, and as Managing Director of these companies from August 2004 to January 2010.

ITEM 1A. RISK FACTORS

We face a wide range of risks, and our continued success depends on our ability to identify and appropriately manage our risk exposures. Discussed below are factors that may adversely affect our business, results of operations, or financial condition. Any one or more of the following factors may cause our actual results for various financial reporting periods to differ materially from those expressed in any forward-looking statements made by or on behalf of the Company, including those in this document or made by us elsewhere, such as in earnings release investor calls, investor conference presentations, or press releases. See "Cautionary Statement Regarding Forward-Looking Statements" contained herein on page 1.

Sustained periods of low interest rates in the long-term investment market may adversely affect our reported net investment income and the discount rates used in reserving for our insurance products and projecting our pension obligations, which may adversely affect our results of operations or financial condition.

Declines in interest rates and/or the continuance of the current level of low interest rates and yields on fixed income investments may cause the rates of return on our investment portfolio to decrease more than expected, leading to lower net investment income than assumed in the pricing and reserving for our insurance products. An interest, or discount, rate is used in calculating reserves for our insurance products. We set our reserve discount rate assumptions based on our current and expected future investment yield for assets supporting the reserves, considering current and expected future market conditions. If the discount rate assumed in our reserve calculations is higher than our future investment returns, our invested assets will not earn enough investment income to support our future claim payments. In that case, the reserves may eventually be insufficient, resulting in the need to increase our reserves and/or increase our capital contributions to our insurance subsidiaries, either of which could have a material adverse effect on our results of operations or financial condition.

Our net periodic benefit costs and the value of our benefit obligations for our pension plans are determined based on a set of economic and demographic assumptions that represent our best estimate of future expected experience. Major assumptions used in accounting for these plans include the expected discount (interest) rate and the long-term rate of return on plan assets. We set the discount rate assumption at the measurement date for each of our plans to reflect the yield of a portfolio of high quality fixed income corporate debt instruments matched against the timing and amounts of projected future benefits. A lower discount rate increases the present value of benefit obligations and increases our costs. Our expectations for the future investment returns on plan assets are based on a combination of historical market performance, current market conditions, and future capital market assumptions obtained from external consultants and economists. The actual rate of return on plan assets is determined based on the fair value of the plan assets at the beginning and end of the measurement period. Increases or decreases in long-term interest rates as well as equity market volatility will impact the fair value of our plan assets and may result in a decrease in the funded status of our pension plans and/or increased pension costs, which may adversely affect our results of operations, financial condition, or liquidity.

See "Reserves for Policy and Contract Benefits" contained herein in Item 1, "Critical Accounting Estimates" included in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained herein in Item 7, "Interest Rate Risk" contained herein in Item 7A, and Note 9 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion.

Actual experience may differ from our reserve assumptions which may adversely affect our results of operations or financial condition.

Historical results may not be indicative of future performance due to, among other things, changes in our mix of business, re-pricing of certain lines of business, or any number of economic cyclical effects on our business. Reserves, whether calculated under GAAP or statutory accounting principles, do not represent an exact calculation of future benefit liabilities but are instead estimates made by us using actuarial and statistical procedures. Actual experience may differ from our reserve assumptions. There can be no assurance that our reserves will be sufficient to fund our future liabilities in all circumstances. Future loss development may require reserves to be increased, which would adversely affect earnings in current and future periods. Life expectancies may continue to increase, which could lengthen the time a claimant receives disability or long-term care benefits and could result in a change in mortality assumptions and an increase in reserves for these and other long-tailed products. Adjustments to reserve amounts may also be required in the event of changes from the assumptions regarding future morbidity (the incidence of claims and the rate of recovery, including the effects thereon of inflation and other societal and economic factors); premium rate increases; persistency; policy benefit offsets, including those for social security and other government-based welfare benefits; and interest rates used in calculating the reserve amounts, which could have a material adverse effect on our results of operations or financial condition.

See "Reserves for Policy and Contract Benefits" contained herein in Item 1, "Executive Summary" and "Critical Accounting Estimates" included in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained herein in Item 7, and Notes 1 and 6 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion.

Unfavorable economic conditions may result in lower sales, lower premium growth and persistency, higher claims incidence, and longer claims duration, which may adversely affect our results of operations or financial condition.

We are affected by conditions in the capital markets and the general economy, primarily in the United States, the United Kingdom, Poland, and to a lesser extent, the broader global financial markets. Negative developments in the capital markets and/or the general economy could adversely affect our business and results of operations.

In particular, factors such as unemployment levels, consumer confidence levels, consumer spending, business investment, government spending, the volatility and strength of the capital markets, and inflation all affect the business and economic environment and, ultimately, the amount and profitability of our businesses. Given the nature of our products, in an economic environment characterized by higher unemployment, lower personal income, reduced consumer spending, and lower corporate earnings and investment, new product sales may be adversely affected. Our premium growth may also be negatively impacted by lower premium growth from existing customers due to lower salary growth and lower growth in the number of employees covered under an existing policy. In addition, during such periods we may experience higher claims incidence, longer claims duration, and/or an increase in policy lapses, any of which could have a material adverse effect on our results of operations or financial condition.

We and our insurance subsidiaries are subject to extensive supervision and regulation. Changes in laws and regulations that affect our industry or the customers to whom we sell our products may affect the cost or demand for our products, increase capital requirements for our insurance subsidiaries, and adversely affect our profitability, liquidity, or growth.

Our insurance subsidiaries are subject to extensive supervision and regulation in the United States and abroad. The primary purpose of insurance regulation is to protect policyholders, not stockholders. To that end, applicable laws establish regulatory authorities, including state insurance departments in the United States, the PRA in the United Kingdom, and the KNF in Poland, with broad administrative powers over many aspects of the insurance business. For example, our insurance subsidiaries may not be able to obtain or maintain necessary licenses, permits, authorizations, or accreditations, or may be able to do so only at great cost. In addition, we and our insurance subsidiaries may not be able to comply fully with, or obtain appropriate exemptions from, the wide variety of laws and regulations applicable to insurance companies and insurance holding companies. These laws and regulations can be complex and subject to differing interpretations and are regularly re-examined. Existing or future laws and regulations, and the manner in which they are interpreted or applied, may become more restrictive or otherwise adversely affect our operations. For example, they may restrict or prohibit the payment of dividends by our subsidiaries to us, restrict transactions between subsidiaries and/or between us and our subsidiaries, and may require contributions of capital by us to our insurance subsidiaries even if we are otherwise in compliance with stated requirements. Failure to comply with or to obtain appropriate exemptions under any applicable laws or regulations could result in restrictions on the ability of our insurance subsidiaries to do business in one or more of the jurisdictions in which they operate and could result in fines and other sanctions, which may have a material adverse effect on our business or results of operations.

It is possible that there will be heightened oversight of insurers by regulatory authorities in the jurisdictions in which our insurance subsidiaries are domiciled and operate. We cannot predict specific proposals that might be adopted, or what impact, if any, such proposals or, if enacted, such laws, could have on our business, results of operations, or financial condition. For instance, the NAIC or state regulators may adopt revisions to the RBC formula, the PRA may revise its capital adequacy requirements and minimum solvency margins, the IAIS may adopt capital requirements to which we could be subject, or rating agencies may incorporate higher capital thresholds into their quantitative analyses, thus requiring additional capital contributions by us to our insurance subsidiaries. Increased financial services regulation, which could include activities undertaken by the NAIC and regulatory authorities in the U.K., Poland, and the EU may impose greater quantitative requirements, supervisory review, and disclosure requirements and may impact the business strategies, capital requirements, and profitability of our insurance subsidiaries. The United Kingdom's Financial Ombudsman Service, which was established to help settle disputes between consumers and businesses providing financial services, and the FCA, which has rule-making, investigative, and enforcement powers to protect consumers, may hamper our ability to do business, which could have a material adverse effect on our U.K. operations.

We use affiliated captive reinsurers for the limited purpose of reinsuring risks attributable to specified policies issued or reinsured by our insurance subsidiaries in order to effectively manage risks in connection with certain blocks of our business as well as to enhance our capital efficiency. If we were required to discontinue use of the captive reinsurers or to alter the structure of the captive reinsurance arrangements, our ability to maintain current RBC ratios and/or our capital deployment activities could be adversely affected.

Changes in U.S. programs such as healthcare reform and financial services sector reform may compete with or diminish the need or demand for our products, particularly as it may affect our ability to sell our products through employers or in the workplace. The U.S. social security disability insurance program may not be sustainable, which may adversely affect the level of our disability claim payments and reserves. Legislative changes related to pension funding requirements could negatively impact our cash flows from operations and our profitability.

Changes in tax laws and other regulations or interpretations of such laws or regulations could unfavorably impact our corporate taxes. In addition, changes in tax laws could make some of our products less attractive to consumers.

Negotiations regarding the U.K.'s plans to leave the EU on March 29, 2019 are ongoing and the anticipated resolutions remain uncertain. The magnitude and longevity of potential negative economic impacts on the growth of our Unum UK business will depend on whether an agreement is reached between the U.K. and EU as a result of exit negotiations and, if reached, the nature of the agreement and the resulting response of the U.K. marketplace. We do not expect that the underlying operations of our U.K. business to be significantly impacted by the U.K.'s exit from the EU. The insurance policies issued by our U.K. insurance subsidiary are almost exclusively written in the U.K. and cover policyholders based in the U.K. These policies will not be affected by the U.K.'s exit nor will we need to obtain additional insurance licenses to be able to continue writing these policies. For the small amount of contracts and coverages provided to companies and individuals outside of the U.K., we have developed contingency plans that could be invoked following the U.K.'s exit. The employees that support our U.K. business reside in the U.K. and will not need to change residence status after the exit. We may experience volatility in the fair values of our investments in U.K. and EU-based issuers, but we do not expect a material increase in other-than-temporary impairments or defaults, nor do we believe this volatility will impact our ability to hold these investments. We may also experience higher claims incidence in the near term, which is generally correlated to periods of economic uncertainty. Additionally, it is possible that there are tax impacts associated with the exit such as revised or new tax regulations. The continued dampening of growth due to the current disruption and uncertainty in the U.K. economy may lead to lower near-term sales and premium growth. There are currently no indications that capital requirements for our U.K. operations will change, but economic conditions may cause volatility in our solvency ratios. Our reported consolidated financial results may be unfavorably impacted by the weakening of the British pound sterling relative to preceding periods.

Dodd-Frank directs various government agencies and bodies to promulgate regulations implementing the law, an ongoing process that continues to develop. As a result of the regulations implemented thus far, regulations directed at some derivative activities and the implementation of central clearing rules have increased the cost of some hedging activities primarily as a result of more restrictive collateral requirements. We cannot predict the requirements of the remaining regulations that might ultimately be adopted, whether existing requirements will be repealed or changed, or how or whether such regulations will affect our businesses, results of operations, cash flows, or financial condition, require us to raise additional capital, or result in a downgrade of our credit ratings.

Most group long-term and short-term disability plans we administer are governed by the Employee Retirement Income Security Act (ERISA). Changes to ERISA enacted by Congress or through judicial interpretations may adversely affect the risk to us of managing employee benefit plans, increase the premiums associated with such plans, and ultimately affect their affordability and our profitability.

The insurance departments in jurisdictions wherein our insurance subsidiaries conduct business may limit our ability to obtain rate increases under guaranteed renewable contracts or could require changes in rates and/or benefits to meet minimum loss ratio requirements which could negatively impact the profitability of our products. Many regulatory and governmental bodies have the authority to review our products and business practices and those of our agents and employees. These regulatory or governmental bodies may bring regulatory or other legal actions against us if, in their view, our practices are improper. These actions could result in substantial fines or restrictions on our business activities and could have a material adverse effect on our business or results of operations.

Regulatory examinations or investigations could result in, among other things, changes in our claims handling or other business practices, changes in procedures for the identification and payment to the states of benefits and other property that is not claimed by the owners, changes in the use and oversight of reinsurance, increases to reserving requirements, changes in governance and other oversight procedures, assessments by tax authorities or other governing agencies, fines, and other administrative action, which could injure our reputation, adversely affect our issuer credit ratings and financial strength ratings, place us at a competitive disadvantage in marketing or administering our products, impair our ability to sell or retain insurance policies, and/or have a material adverse effect on our results of operations or financial condition. Determination by regulatory authorities that we have engaged in improper conduct may also adversely affect our defense of various lawsuits.

See "Regulation" contained herein in Item 1 and Notes 7 and 14 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion.

A cyber attack or other security breach could disrupt our operations, result in the unauthorized disclosure or loss of confidential data, damage our reputation or relationships, and expose us to significant financial and legal liability, which may adversely affect our business, results of operations, or financial condition.

We store confidential information about our business and our policyholders, employees, agents and others on our information technology systems, including proprietary and personally identifiable information. As part of our normal business operations, we use this information and engage third-party providers, including outsourcing, cloud computing, and other business partners, that store, access, process, and transmit such information on our behalf. We devote significant resources and employ security measures to help protect our information technology systems and confidential information, and we have programs in place to detect, contain, and respond to information security incidents. However, because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently and may be difficult to detect for long periods of time, we and our third-party providers may be unable to anticipate these techniques or implement adequate preventative measures. In addition, hardware, software, or applications we develop or procure from third parties or through open source solutions may contain defects in design or manufacture or other problems that could unexpectedly compromise our information security. Unauthorized parties, whether within or outside our company, may disrupt or gain access to our systems, or those of third parties with whom we do business, through human error, misfeasance, fraud, trickery, or other forms of deceit, including break-ins, use of stolen credentials, social engineering, phishing, or other cyber attacks, computer viruses, malicious codes, and similar means of unauthorized and destructive tampering.

We and our third-party providers have experienced and likely will continue to experience information security incidents from time to time. Although known incidents have not had a material effect on our business or financial condition, there is no assurance that our security systems and measures will be able to prevent, mitigate, or remediate future incidents that could have such an effect. A successful penetration or circumvention of the security of our information technology systems, or those of third parties with whom we do business, could cause serious negative consequences for us, including significant disruption of our operations, unauthorized disclosure or loss of confidential information, harm to our brand or reputation, loss of customers and revenues, violations of privacy and other laws, and exposure to litigation, monetary damages, regulatory enforcement proceedings, fines, and potentially criminal proceedings and penalties. If we are unaware of the incident for some time after it occurs, our exposure could increase. In addition, the costs to address or remediate systems disruptions or security threats or vulnerabilities, whether before or after an incident, could be significant. As we continue to build our digital capabilities and focus on enhancing the customer experience, the amount of information that we retain and share with third parties is likely to grow, increasing the cost to prevent data security breaches and the cost and potential consequences of such breaches. An information technology systems failure could also interfere with our ability to comply with financial reporting and other regulatory requirements, exposing us to potential disciplinary action by regulators. Further, successful cyber-attacks at other large financial institutions or other market participants, whether or not we are affected, could lead to a general loss of customer and investor confidence in financial institutions that could negatively affect us.

Although we have insurance against some cyber risks and attacks, we may be subject to litigation and financial losses that exceed our policy limits, are subject to deductibles or are not covered under any of our current insurance policies.

The failure of our business recovery and incident management processes to resume our business operations in the event of a natural catastrophe, cyber attack, or other event could adversely affect our profitability, results of operations, or financial condition.

In the event of a disaster such as a natural catastrophe, an epidemic, a cyber attack, cyber security breach or other information technology systems failure, a terrorist attack, or war, unanticipated problems with our disaster recovery systems could have a material adverse impact on our ability to conduct business and on our results of operations and financial condition, particularly if those problems affect our information technology systems and destroy valuable data or result in a significant failure of our internal control environment. In addition, in the event that a significant number of our employees were unavailable in the event of a disaster, our ability to effectively conduct business could be severely compromised.

The failure of our information technology and/or disaster recovery systems for any reason could cause significant interruptions or malfunctions in our or our customers' operations and result in the loss, theft, or failure to maintain the security, confidentiality or privacy of sensitive data, including personal information relating to our customers. Such a failure could harm our reputation, subject us to regulatory sanctions, legal claims, and increased expenses, and lead to a loss of customers and revenues.

In addition to interest rate risk as previously discussed, we are exposed to other risks related to our investment portfolio which may adversely affect our results of operations, financial condition, or liquidity.

Default Risk

Our investment portfolio consists primarily of fixed maturity securities. These securities are issued by both domestic and foreign entities and are backed either by collateral or the credit of the underlying issuer. Factors such as an economic downturn or political change in the country of the issuer, a regulatory change pertaining to the issuer's industry, a significant deterioration in the cash flows of the issuer, unforeseen accounting irregularities or fraud committed by the issuer, widening risk spreads, ratings downgrades, a change in the issuer's marketplace or business prospects, or other events that adversely affect the issuers of these securities may result in the issuer defaulting on its obligations.

Our mortgage loan portfolio has default risk. Events or developments, such as economic conditions that impact the ability of tenants to pay their rents or limit the availability of refinancing, may have a negative effect on our mortgage loan portfolio. Events or developments that have a negative effect on any particular geographic region or sector may have a greater adverse effect on an investment portfolio to the extent that the portfolio is concentrated in that region or sector.

A default results in the recognition of an impairment loss on the investment. A default may also adversely affect our ability to collect principal and interest due to us. The probability of credit downgrades and defaults increases when the fixed income markets experience periods of volatility and illiquidity.

Credit Spread Risk

Our exposure to credit spreads, which is the yield above comparable U.S. Treasury securities, primarily relates to market price and cash flow variability associated with changes in credit spreads. A widening of credit spreads may unfavorably impact the net unrealized gain or loss position of the investment portfolio and may adversely impact liquidity. Credit spread tightening may reduce net investment income associated with new purchases of fixed income securities.

Valuation Risk

We report our fixed maturity securities and certain other financial instruments at fair value. Valuations may include inputs and assumptions that are less observable or require greater estimation, particularly during periods of market disruption, resulting in values which may be less than the value at which the investments may ultimately be sold. Further, rapidly changing and unprecedented credit and equity market conditions could materially impact the valuation of securities as reported in our financial statements, and the period to period changes in value could vary significantly. Decreases in value may have a material adverse effect on our results of operations or financial condition.

We evaluate our investment portfolio for impairments. There can be no assurance that we have accurately assessed the level of impairments taken. Additional impairments may need to be taken in the future, and historical trends may not be indicative of future impairments. Any event reducing the value of our securities other than on a temporary basis may have a material adverse effect on our business, results of operations, or financial condition.

Market Timing and Liquidity Risk

While we attempt to match our asset cash flows and durations with expected liability cash flows and durations to meet the funding requirements of our business, there may at times be a lack of appropriate investments in the market which can be acquired. In addition, we may, in certain circumstances, need to sell investments due to changes in regulatory or capital requirements, changes in tax laws, rating agency decisions, and/or unexpected changes in liquidity needs. There may also be a limited market for certain of our investments, such as our private placement fixed maturity securities, mortgage loans, and policy loans, which makes them more illiquid. In periods of market volatility or disruption, other of our securities may also experience reduced liquidity. If events occur wherein we need to sell securities in an unfavorable interest rate or credit environment or need to quickly sell securities which are illiquid, market prices may be lower than what we might realize under normal circumstances, with a resulting adverse effect on our results of operations, financial condition, or liquidity.

See "Critical Accounting Estimates" included in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained herein in Item 7 and Notes 1, 2, 3, and 4 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion of our investments and derivatives.

Competition may adversely affect our market share or profitability.

All of our businesses are highly competitive. We believe that the principal competitive factors affecting our business are price, the quality of our customer's experience regarding service and claims management, integrated product choices, enrollment capabilities, financial strength, and claims-paying ratings. We compete for new product sales, the retention of existing business, and the ability to attract and retain independent agents and brokers to market our products, all of which affect our profitability. All areas of the employee benefits markets are highly competitive due to the yearly renewable term nature of the group products and the large number of insurance companies offering products in this market. There is a risk that our customers may be able to obtain more favorable terms or improved technology solutions from competitors in lieu of renewing coverage with us, particularly if industry pricing levels do not align with our view of adequate premium rates. We are operating in a dynamic competitive environment of both traditional and non-traditional competitors, with changes in product offerings, enrollment capabilities, and technology solutions. The level and intensity of competition may also grow due to existing competitors becoming more aggressive, and an increase in merger and acquisition activity which may result in larger competitors with greater financial resources. There are many insurance companies which actively compete with us in our lines of business, and there is no assurance that we will be able to compete effectively against these companies and new competitors in the future. See "Competition" contained herein in Item 1 for further discussion.

A decrease in our financial strength or issuer credit ratings may adversely affect our competitive position, our ability to hedge our risks, and our cost of capital or ability to raise capital, which may adversely affect our results of operations, financial condition, or liquidity.

We compete based in part on the financial strength ratings provided by rating agencies. A downgrade of our financial strength ratings may adversely affect us and could potentially, among other things, adversely affect our relationships with distributors of our products and services and retention of our sales force, negatively impact persistency and new sales, and generally adversely affect our ability to compete. A downgrade in the issuer credit rating assigned to Unum Group can be expected to adversely affect our cost of capital and our ability to raise additional capital. If we are downgraded significantly, ratings triggers in our derivatives financial instrument contracts may result in our counterparties enforcing their option to terminate the derivative contracts. Such an event may have a material adverse effect on our financial condition or our ability to hedge our risks.

See "Ratings" contained herein in Item 1 and in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained herein in Item 7 for further discussion.

The failure to effectively execute upgrades to or replacements of information technology systems could adversely affect our business, results of operations, or financial condition.

We rely heavily on the effective operation of our information technology systems to administer our business and support the investments we are making to offer digital capabilities to enhance our customers' experience. Although we believe we have information technology systems which adequately support our business needs, we continually upgrade our existing information technology systems and acquire or develop new systems to keep pace with the rapidly changing business and technology environment. There are risks involved with upgrading or replacing information technology systems, including, but not limited to, data loss, data errors, and disruption to our operations. We seek to monitor and control our exposure to the risks arising out of these activities through our risk control framework which encompasses a variety of reporting systems, internal controls, management review processes, and other mechanisms.

Events that damage our reputation may adversely affect our business, results of operations, or financial condition.

There are many events which may harm our reputation, including, but not limited to, those discussed in this Item 1A regarding regulatory investigations, legal proceedings, and cyber or other information security incidents.

In addition, as an insurance company, we are paid to accept certain risks. Those who conduct our business, including executive officers and members of management, sales managers, investment professionals, and to some extent, independent agents and brokers, do so in part by making decisions that involve exposing us to risk. These include decisions such as maintaining effective underwriting and pricing discipline, maintaining effective claim management and customer service performance, managing our investment portfolio and derivatives trading activities, delivering effective technology solutions, complying with established sales practices, executing our capital management strategy, exiting a line of business and/or pursuing strategic growth initiatives, and other decisions. Although we employ controls and procedures designed to monitor business decisions and prevent us from taking excessive risks or unintentionally failing to comply with internal policies and practices such that errors occur, there can be no assurance that these controls and procedures will be effective. If our employees and business associates take excessive risks and/or fail to comply with internal policies and practices, the impact of those events may damage our market position and reputation.

Depending on the severity of the damage to our reputation, we may be unable to effectively compete for new products or retain our existing business, which could adversely affect our results of operations or financial condition. Damage to our reputation may also hinder our ability to raise new capital and/or increase our cost of capital. See "Regulation" contained herein in Item 1 and Note 14 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for additional information on regulatory matters and legal proceedings.

We provide a broad array of disability, long-term care, group life, and voluntary insurance products that are affected by many factors, and changes in any of those factors may adversely affect our results of operations, financial condition, or liquidity.

Disability Insurance

Disability insurance may be affected by a number of social, economic, governmental, competitive, and other factors. Changes in societal attitudes, such as work ethic, motivation, or stability, can significantly affect the demand for and underwriting results from disability products.

Both economic and societal factors can affect claim incidence and recoveries for disability insurance. Claim incidence and claim recovery rates may be influenced by, among other factors, the rate of unemployment and consumer confidence. Claim incidence and claim recovery rates may also be influenced by the emergence of new infectious diseases or illnesses. Claim durations may be extended by medical improvements which could extend life expectancies. The relationship between these and other factors and overall incidence is very complex and will vary due to contract design features and the degree of expertise within the insuring organization to price, underwrite, and adjudicate the claims.

Within the group disability market, pricing and renewal actions can be taken to react to higher claim rates. However, these actions take time to implement, and there is a risk that the market will not sustain increased prices. In addition, changes in economic and external conditions may not manifest themselves in claims experience for an extended period of time. The pricing actions available in the individual disability market differ among product classes. Our individual noncancelable disability policies, in which the policy is guaranteed to be renewable through the life of the policy at a fixed premium, do not permit us to adjust premiums on our in-force business. Guaranteed renewable contracts that are not noncancelable can be re-priced to reflect adverse experience, but rate changes cannot be implemented as quickly as in the group disability market.

Long-term Care Insurance

Long-term care insurance can be affected by a number of demographic, medical, economic, governmental, competitive, and other factors. Because long-term care insurance is a relatively new product for the insurance industry and is long-duration in nature, there is not as much historical data as is available for our other products. This creates a level of uncertainty in properly pricing the product and using appropriate assumptions when establishing reserves. Long-term care insurance is guaranteed renewable and can be re-priced to reflect adverse experience, but the re-pricing is subject to regulatory approval by our states of domicile and may also be subject to approval by jurisdictions in which our policyholders reside. The rate approval process can affect the length of time in which the re-pricing can be implemented, if at all, and the rate increases ultimately approved may be favorable or unfavorable relative to assumptions used to establish our reserves. We monitor our own experience and industry studies concerning morbidity, mortality, and policyholder terminations to understand emerging trends. Changes in actual experience relative to our expectations may adversely affect our profitability and reserves. Mortality continues to improve for the general population, and life expectancy has increased, which could lengthen the time a claimant receives long-term care benefits and may subject more policyholders to advanced aging and an associated increase in claims incidence. Medical advances may continue to have an impact on claim incidence and duration, both favorable and unfavorable. Due to the long duration of the product, the timing and/or amount of our investment cash flows are difficult to match to those of our maturing liabilities. Sustained periods of low or declining interest rates could result in increases in reserves and adversely affect our results of operations.

Group Life Insurance

Group life insurance may be affected by the characteristics of the employees insured, the amount of insurance employees may elect voluntarily, our risk selection process, our ability to retain employer groups with favorable risk characteristics, the geographical concentration of employees, and mortality rates. Claim incidence may also be influenced by unexpected catastrophic events such as terrorist attacks, natural disasters, and pandemic health events, which may also affect the cost of and availability of reinsurance coverage.

Voluntary Products

Voluntary products sold in the workplace may be affected by the characteristics of the employees insured, the level of employee participation and the amount of insurance the employees elect, our risk selection process, and our ability to retain employer groups with favorable risk characteristics. Our voluntary life insurance products generally include interest sensitive forms of insurance which contain a guaranteed minimum interest crediting rate. It is possible that our investment returns could be lower than the guaranteed crediting rate. The non-life contracts are guaranteed renewable and can be repriced to reflect adverse experience, but rate changes cannot be implemented as quickly as for group disability and group life products.

See "Reserves for Policy and Contract Benefits" contained herein in Item 1 and "Executive Summary" and "Critical Accounting Estimates" included in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained herein in Item 7 for further discussion.

Changes in accounting standards may materially affect our financial statements.

Our financial statements are subject to the application of generally accepted accounting principles, in the United States, the United Kingdom, and Poland, which are periodically revised and/or expanded. Accordingly, we are required to adopt new or revised accounting standards issued by recognized authoritative bodies, including the U.S. Financial Accounting Standards Board (FASB), the U.K. Accounting Standards Board (ASB), and the NAIC. Accounting standards issued by the FASB and ASB may be influenced by the International Accounting Standards Board (IASB). Future accounting standards we adopt, including the FASB's accounting standard update related to long-duration target improvements for insurance contracts, will change current accounting and disclosure requirements applicable to our financial statements. Such changes may have a material effect on our reported results of operations or financial condition.

See Note 1 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for additional information regarding accounting updates.

Our risk management program may leave us exposed to unidentified or unanticipated risk, which could negatively affect our business.

We have devoted significant resources to develop our enterprise risk management program, which has the objective of managing our strategic, market, credit, insurance, and operations risks, which ultimately impact our reputational risk. However, our program may not be comprehensive, and our methods for monitoring and managing risk may not fully predict or mitigate future exposures. See "Quantitative and Qualitative Disclosures About Market Risk" contained herein in Item 7A for further information about our risk management program.

Litigation and contingencies are common in our businesses and may result in financial losses and/or harm to our reputation.

We are, and in the future may be, defendants in a number of litigation matters, and the outcome of this litigation is uncertain. Some of these proceedings have been brought on behalf of various alleged classes of complainants. Plaintiffs in class action and other lawsuits against us may seek very large and/or indeterminate amounts, including punitive and treble damages. An estimated loss is accrued when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. An adverse outcome in one or more of these actions may, depending on the nature, scope and amount of the ruling, materially and adversely affect our results of operations or financial condition, encourage other litigation, and limit our ability to write new business, particularly if the adverse outcomes negatively impact certain of our ratings.

As part of our normal operations in managing claims, we are engaged in claim litigation where disputes arise as a result of a denial or termination of benefits. Typically those lawsuits are filed on behalf of a single claimant or policyholder, and in some of these individual actions punitive damages are sought, such as claims alleging bad faith in the handling of insurance claims. For our general claim litigation, we maintain reserves based on experience to satisfy judgments and settlements in the normal course. We expect that the ultimate liability, if any, with respect to general claim litigation, after consideration of the reserves maintained, will not be material to our financial condition. Nevertheless, given the inherent unpredictability of litigation, it is possible that an adverse outcome in certain claim litigation involving punitive damages may, from time to time, have a material adverse effect on our results of operations. We are unable to estimate a range of reasonably possible punitive losses.

See "Critical Accounting Estimates" included in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained herein in Item 7 and Note 14 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for additional information on legal proceedings.

Reinsurance may not be available or affordable, or reinsurers may be unwilling or unable to meet their obligations under our reinsurance contracts, which may adversely affect our results of operations or financial condition.

As part of our overall risk management and capital management strategies, we purchase reinsurance for certain risks underwritten by our various businesses. Market conditions beyond our control determine the availability and cost of reinsurance. Any decrease in the amount of reinsurance will increase our risk of loss and may impact the level of capital requirements for our insurance subsidiaries, and any increase in the cost of reinsurance will, absent a decrease in the amount of reinsurance, reduce our results of operations. Accordingly, we may be forced to incur additional expenses for reinsurance or may be unable to obtain sufficient reinsurance on acceptable terms, which may adversely affect our ability to write future business, result in the assumption of more risk with respect to the policies we issue, and increase our capital requirements. The collectibility of our reinsurance recoverable is primarily a function of the solvency of the individual reinsurers. We cannot provide assurance that our reinsurers will pay the reinsurance recoverables owed to us or that they will pay these recoverables on a timely basis. The insolvency of a reinsurer or the inability or unwillingness of a reinsurer to comply with the terms of a reinsurance contract may have an adverse effect on our results of operations or financial condition.

The effectiveness of our hedging programs may be affected by changes in the economic environment, changes in interest rates, capital market volatility, non-performance by our counterparties, changes in the level of required collateral, or regulation, which may adversely affect our results of operations, financial condition, or liquidity.

We use derivative financial instruments to help us manage certain risks related to our business operations, primarily interest rate risk, risk related to matching duration for our assets and liabilities, and foreign currency risk. Factors associated with derivative financial instruments could adversely affect our results of operations, financial condition, or liquidity. Ineffectiveness of our hedges due to changes in expected future events, such as the risk created by uncertainty in the economic environment or if our counterparties fail or refuse to honor their obligations under these derivative instruments, may have a material adverse effect on our results of operations or financial condition. Capital market turmoil may result in an increase in the risk of non-performance by our counterparties, many of which are financial institutions. Non-performance by our counterparties may force us to unwind hedges, and we may be unable to replace the hedge, thereby leaving the risk unhedged. Under the terms of our hedging contracts, we are required to post collateral and to maintain a certain level of collateral, which may adversely affect our liquidity and could subject us to the credit risk of the counterparty to the extent it holds such collateral. Changes in regulations may have an adverse effect on our ability to execute hedging strategies due to the increased economic cost of derivatives, primarily as a result of more restrictive collateral requirements. We are monitoring the developments surrounding the transition from the London Interbank Offered Rate (LIBOR) expected to occur in 2021 and the impact, if any, to our existing and future derivative financial instruments and our hedging programs.

Currency translation could materially impact our reported operating results.

The functional currency of our U.K. and Polish operations is the British pound sterling and the Polish zloty, respectively. Fluctuations in exchange rates have an effect on our reported financial results, which may be unfavorably impacted when the functional currency weakens. However, it is important to distinguish between translating and converting foreign currency. Except for a limited number of transactions, we do not actually convert our functional currency into dollars. As a result, we view foreign currency translation as a financial reporting item and not a reflection of operations or profitability in the U.K or Poland.

Unum Group depends on the ability of its subsidiaries to transfer funds to it so that it can meet its obligations and pay dividends. Our ability to transfer funds to Unum Group may be impaired by adverse financial results or a change in capital requirements. Accordingly, internal sources of capital and liquidity may not always be sufficient. If we need to seek external capital, adverse market conditions may affect our access to capital or our cost of capital.

Unum Group is a holding company for insurance and other subsidiaries and has no significant operations of its own. Our insurance subsidiaries are subject to insurance laws and regulatory limitations on the payment of dividends and on other transfers of funds or other assets to affiliates, including to Unum Group. The level of earnings and capital in our subsidiaries, as well as business conditions and rating agency considerations, could impact our insurance and other subsidiaries' ability to pay dividends or to make other transfers of funds to Unum Group, which could impair our ability to pay dividends to Unum Group's common stockholders, meet our debt and other payment obligations, and/or repurchase shares of Unum Group's common stock. The use of funds held by Unum Group as consideration in any acquisition could affect our capital plan and render those funds unavailable for other corporate purposes.

A change in demand for our insurance products or an increase in the incidence of new claims or the duration of existing claims could negatively impact our cash flows from operations. Deterioration in the credit market, which could delay our ability to sell our positions in certain of our fixed maturity securities in a timely manner, could also negatively impact our cash flows. Regulatory changes such as those discussed herein in this Item 1A may impose higher capital or reserve requirements on our insurance subsidiaries, increase collateral requirements for certain of our derivatives transactions, and/or implement other requirements which could unfavorably affect our liquidity. Without sufficient liquidity, our ability to maintain and grow our operations would be limited. If our internal sources of liquidity prove to be insufficient, we may be unable to successfully obtain additional financing and capital on favorable terms, or at all, which may adversely affect us.

If our financial results are unfavorable, we may need to increase our capital in order to maintain our credit ratings or satisfy regulatory requirements. Maintaining appropriate levels of statutory surplus is considered important not only by us but by insurance regulatory authorities in the U.S., the PRA in the U.K., the KNF in Poland, and the rating agencies that rate insurers' claims-paying abilities and financial strength. Failure to maintain certain levels of statutory surplus could result in increased regulatory scrutiny, action by regulatory authorities, or a downgrade by the rating agencies. Need for additional capital may limit a subsidiary's ability to distribute funds to our holding companies.

Obtaining financing for even a small amount of capital could be challenging in unfavorable market conditions and during periods of economic uncertainty. The markets may exert downward pressure on availability of liquidity and credit capacity for certain issuers. The availability of financing will depend on a variety of factors such as market conditions, the general availability of credit, the overall availability of credit to the financial services industry, our credit ratings and credit capacity, and the possibility that customers or lenders could develop a negative perception of our financial prospects. Similarly, our access to funds may be impaired if regulatory authorities or rating agencies take negative actions against us. Raising capital in unfavorable market conditions could increase our interest expense or negatively impact our shareholders through increased dilution of their common stock in Unum Group.

We rely on our credit facility as a potential source of liquidity. Our right to borrow funds under this facility is subject to financial covenants, negative covenants, and events of default. Our ability to borrow under this facility is also subject to the continued willingness and ability of the lenders to provide funds. Our failure to comply with the covenants in the credit facility or the failure of lenders to fund their lending commitments would restrict our ability to access this facility when needed, with a resulting adverse effect on our results of operations, financial condition, or liquidity.

We are also monitoring the developments surrounding the transition from LIBOR to determine the impact, if any, to our existing and future debt arrangements.

See "Regulation" contained herein in Item 1,"Liquidity and Capital Resources" included in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained herein in Item 7, and Notes 8 and 15 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion.

We have assets which may not be fully recoverable or realizable, which could adversely affect our results of operations or financial condition.

If our business does not perform well or as initially anticipated in our assumptions, we may be required to accelerate amortization or recognize an impairment loss on intangible assets or long-lived assets or to establish a valuation allowance against the deferred income tax asset.

We have intangible assets such as deferred acquisition costs (DAC), value of business acquired (VOBA), and goodwill. DAC and VOBA are amortized based primarily upon expected future premium income of the related insurance policies. Recoverability testing for DAC and VOBA is performed on an annual basis. Insurance contracts are grouped on a basis consistent with our manner of acquiring, servicing, and measuring profitability of the contracts. If recoverability testing indicates that either DAC and/or VOBA are not recoverable, the deficiency is charged to expense.

Goodwill is not amortized, but on an annual basis, or more frequently if necessary, we review the carrying amount of goodwill for indications of impairment, considering in that review the financial performance and other relevant factors. In accordance with accounting guidance, we test for impairment at either the operating segment level or one level below. In addition, certain events including, but not limited to, a significant adverse change in legal factors or the business environment, an adverse action by a regulator or rating agency, or unanticipated competition would cause us to review goodwill for impairment more frequently than annually.

Long-lived assets, including assets such as real estate and information technology software, also require impairment testing to determine whether changes in circumstances indicate that we may be unable to recover the carrying amount.

We assess our deferred tax assets to determine if they are realizable. Factors in our determination include the performance of the business, including the ability to generate future taxable income. If based on available information, it is more likely than not that the deferred income tax asset will not be realized, a valuation allowance is established with a corresponding charge to net income.

Charges such as accelerated amortization, impairment losses, or the establishment of valuation allowances could have a material adverse effect on our results of operations or financial condition.

See "Executive Summary" and "Critical Accounting Estimates" included in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained herein in Item 7 and Notes 1, 7, and 13 of the "Notes to Consolidated Financial Statements" contained herein in Item 8.

The continued threat of terrorism and ongoing military actions may adversely affect the value of certain assets in our investment portfolio, disrupt our operations, or result in higher claim costs.

The continued threat of terrorism, both within the U.S. and abroad, ongoing military actions, and heightened security measures in response to these types of threats may cause significant volatility in the global financial markets and result in loss of life, property damage, business disruption, and reduced economic activity. Some of the assets in our investment portfolio may be adversely affected by declines in the credit and equity markets and reduced economic activity caused by the continued threat of terrorism. Terrorist actions also could disrupt our operations centers in the U.S. or abroad. In addition, the occurrence of terrorist actions could result in higher claims under our insurance policies than anticipated. Beyond obtaining insurance coverage for our facilities, there are few, if any, commercial options through which to transfer the exposure from extreme events away from us. We purchase reinsurance protection against catastrophic disaster events, including terrorism. The continued threat of terrorism could result in increased reinsurance prices and reduced insurance coverage and potentially cause us to retain more risk than we otherwise would retain if we were able to obtain reinsurance at lower prices. See "Reinsurance" contained herein in Item 1 for further discussion.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None

ITEM 2. PROPERTIES

As of December 31, 2018, we owned approximately 2.3 million square feet of office space, comprised of five campuses located in Chattanooga, Tennessee; Portland, Maine; Columbia, South Carolina; Baton Rouge, Louisiana; and Dorking in the United Kingdom. In addition, as of December 31, 2018, we leased approximately 0.2 million square feet of office space in Worcester, Massachusetts and approximately 0.7 million square feet in various other locations throughout the United States, the United Kingdom, Ireland, and Poland. All of the properties owned or leased are used by one or more of all five reporting segments, depending on the location. We believe our properties and facilities are suitable and adequate for current operations.

ITEM 3. LEGAL PROCEEDINGS

Refer to Note 14 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for information on legal proceedings.

ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Common stock of Unum Group is traded on the New York Stock Exchange. The stock symbol is UNM. Quarterly dividends declared and paid per share of common stock are as follows:

2018	
4th Quarter	$0.26
3rd Quarter	0.26
2nd Quarter	0.23
1st Quarter	0.23

2017	
4th Quarter	$0.23
3rd Quarter	0.23
2nd Quarter	0.20
1st Quarter	0.20

Our board of directors has the authority to declare cash dividends on shares of our common stock. In determining dividends, the board takes into account a number of factors including our financial condition and results of operations, regulatory limitations on the payment of dividends from subsidiaries, cash requirements, general economic conditions, and other factors the board may deem relevant. For information on restrictions relating to our subsidiaries' ability to pay dividends to Unum Group and certain of its intermediate holding company subsidiaries, see "Liquidity and Capital Resources - Cash Available from Subsidiaries" contained herein in Item 7 and Note 15 of the "Notes to Consolidated Financial Statements" contained herein in Item 8. For information relating to compensation plans under which Unum Group's equity securities are authorized for issuance, see Item 12 contained herein.

As of February 15, 2019, there were 9,157 registered holders of common stock.

The following table provides information about our share repurchase activity for the fourth quarter of 2018:

	(a) Total Number of Shares Purchased	(b) Average Price Paid per Share (1)	(c) Total Number of Shares Purchased as Part of Publicly Announced Program (2)	(d) Approximate Dollar Value of Shares that May Yet Be Purchased Under the Program (2)
October 1 - October 31, 2018	438,628	$ 35.46	438,628	$ 634,410,786
November 1 - November 30, 2018	2,507,394	36.52	2,507,394	542,845,914
December 1 - December 31, 2018	1,258,211	34.08	1,258,211	499,965,321
Total	4,204,233		4,204,233	

(1) The average price paid per share excludes the cost of commissions.

(2) In May 2018, our board of directors authorized the repurchase of up to $750 million of Unum Group's common stock through November 24, 2019.

ITEM 6. SELECTED FINANCIAL DATA
(in millions of dollars, except share data)

	At or for the Year Ended December 31				
	2018	2017	2016	2015	2014
Income Statement Data					
Revenue					
Premium Income	$8,986.1	$8,597.1	$8,357.7	$8,082.4	$7,797.2
Net Investment Income	2,453.7	2,451.7	2,459.0	2,481.2	2,492.2
Net Realized Investment Gain (Loss)	(39.5)	40.3	24.2	(43.8)	16.1
Other Income	198.2	197.7	205.6	211.5	219.0
Total Revenue	11,598.5	11,286.8	11,046.5	10,731.3	10,524.5
Benefits and Expenses					
Benefits and Change in Reserves for Future Benefits[1]	8,020.4	7,055.7	6,941.8	6,782.8	7,310.8
Commissions	1,108.4	1,060.8	1,026.7	996.3	935.3
Interest and Debt Expense	167.3	159.9	166.0	152.8	167.5
Other Expenses[2]	1,674.6	1,606.4	1,564.3	1,561.1	1,568.9
Total Benefits and Expenses	10,970.7	9,882.8	9,698.8	9,493.0	9,982.5
Income Before Income Tax	627.8	1,404.0	1,347.7	1,238.3	542.0
Income Tax	104.4	409.8	416.3	371.2	139.9
Net Income	$523.4	$994.2	$931.4	$867.1	$402.1
Balance Sheet Data					
Assets	$61,875.6	$64,013.1	$61,941.5	$60,563.6	$62,422.5
Long-term Debt	$2,971.3	$2,738.4	$2,999.4	$2,449.4	$2,601.6
Accumulated Other Comprehensive Income (Loss)	$(814.2)	$127.5	$(51.0)	$16.1	$166.4
Other Stockholders' Equity	9,436.0	9,447.4	9,019.0	8,647.8	8,355.5
Total Stockholders' Equity	$8,621.8	$9,574.9	$8,968.0	$8,663.9	$8,521.9
Per Share Data					
Net Income					
Basic	$2.38	$4.39	$3.96	$3.51	$1.57
Assuming Dilution	$2.38	$4.37	$3.95	$3.50	$1.57
Stockholders' Equity	$40.19	$43.02	$39.02	$35.96	$33.78
Cash Dividends	$0.98	$0.86	$0.77	$0.70	$0.62
Weighted Average Common Shares Outstanding					
Basic (000s)	219,635.6	226,492.4	235,445.7	246,986.7	255,525.9
Assuming Dilution (000s)	220,058.6	227,335.2	235,979.2	247,854.7	256,652.8

32

[1] Includes reserve increases of $750.8 million and $698.2 million in 2018 and 2014, respectively, related to our long-term care closed block business. See Note 6 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion of the 2018 reserve increase.

[2] Includes the net change in deferred acquisition costs as well as compensation expense and other expenses. Includes $64.4 million in 2014 related to a settlement loss for a pension plan amendment.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The discussion and analysis presented in this section should be read in conjunction with the "Cautionary Statement Regarding Forward-Looking Statements" included below the Table of Contents, "Risk Factors" included in Item 1A, "Selected Financial Data" included in Item 6, and the Consolidated Financial Statements and notes thereto included in Item 8.

Executive Summary

2018 Operating Performance and Capital Management

For 2018, we reported net income of $523.4 million, or $2.38 per diluted common share, compared to net income of $994.2 million, or $4.37 per diluted common share, in 2017. Net income includes net realized investment gains and losses. Included in the 2018 results is a reserve increase related to our long-term care block of business of $750.8 million before tax and $593.1 million after tax, or $2.70 per diluted common share. Excluding these items, after-tax adjusted operating income for 2018 was $1,145.0 million, or $5.20 per diluted common share. Included in the 2017 results are a loss from a guaranty fund assessment related to an unaffiliated insurer that was declared insolvent of $20.6 million before tax and $13.4 million after tax, or $0.06 per diluted common share, a 2017 reserve increase related to unclaimed death benefits of $39.0 million before tax and $25.4 million after tax, or $0.11 per diluted common share, and a net tax benefit related to U.S. tax reform of $31.5 million, or $0.14 per diluted common share. Excluding these items, after-tax adjusted operating income for 2017 was $976.2 million, or $4.29 per diluted common share. See "Long-term Care Reserve Increase," "Unclaimed Death Benefits Reserve Increase," "U.S. Tax Reform," "Reconciliation of Non-GAAP and Other Financial Measures," and "Consolidated Operating Results" contained herein in this Item 7 for further discussion and a reconciliation of these items.

Our Unum US segment reported an increase in adjusted operating income of 0.5 percent in 2018 compared to 2017, with growth in premium income, partially offset by lower net investment income. Included in adjusted operating income for the fourth quarter of 2017 is a reserve release of $19.5 million in the individual disability product line resulting from our annual review of reserve adequacy, which reflects the recognition of updated morbidity assumptions in our disabled life reserves. The benefit ratio for our Unum US segment for 2018 was 67.2 percent, compared to 67.4 percent. Unum US sales decreased 1.3 percent in 2018 compared to 2017. Overall persistency was consistent with our expectations with favorable persistency in our group product lines and less favorable persistency in our supplemental and voluntary product lines.

Our Unum International segment reported an increase of 2.0 percent in adjusted operating income, as measured in U.S. dollars. Our Unum UK line of business reported a decrease of 3.0 percent in adjusted operating income compared to 2017, as measured in local currency, due primarily to lower net investment income, partially offset by an increase in premium income. The benefit ratio for our Unum UK line of business was 74.4 percent in both 2018 and 2017. Unum UK sales, as measured in local currency, decreased 6.4 percent in 2018 compared to 2017. Persistency was favorable relative to the prior year and is consistent with our expectations. The results of our Unum Poland line of business were not material to our 2018 results of operations.

Our Colonial Life segment reported an increase in adjusted operating income of 3.1 percent in 2018 compared to 2017 due to growth in premium income and net investment income. The 2018 benefit ratio for Colonial Life was 51.4 percent, which was consistent with 2017. Colonial Life sales increased 8.0 percent in 2018 compared to 2017. Persistency was unfavorable relative to the prior year but is consistent with our expectations.

Our Closed Block segment reported an increase in adjusted operating income of 1.3 percent in 2018 compared to 2017 due primarily to an increase in net investment income and overall favorable benefits experience, partially offset by lower premium income. Benefits experience for individual disability remains within our range of expectations and was favorable in 2018 compared to 2017. Benefits experience in our long-term care line of business, excluding the reserve increase, was consistent with our expectations.

Although our profit margins continue to be pressured by the impact of the low interest rate environment on our net investment income yields, our invested asset quality remains strong. The net unrealized gain on our fixed maturity securities was $2.7 billion at December 31, 2018, compared to $5.7 billion at December 31, 2017, with the decrease due to higher credit spreads and U.S. Treasury rates during 2018. The earned book yield on our investment portfolio was 5.15 percent for 2018 compared to a yield of 5.23 percent for 2017.

We believe our capital and financial positions are strong. At December 31, 2018, the RBC ratio for our traditional U.S. insurance subsidiaries, calculated on a weighted average basis using the NAIC Company Action Level formula, was approximately 370 percent, which is in line with our expectations but lower relative to the prior year as a result of the higher RBC factors adopted by the NAIC in 2018 in response to the lower U.S. statutory income tax rate. During 2018, we repurchased 8.7 million shares of Unum Group common stock under our share repurchase program, at a cost of approximately $351 million. Our weighted average common shares outstanding, assuming dilution, equaled 220.1 million for 2018 compared to 227.3 million for 2017, reflecting our capital management strategy of returning capital to shareholders through repurchases of our common stock. As of December 31, 2018, Unum Group and our intermediate holding companies held fixed maturity securities, short-term investments, and cash of $602 million.

Long-term Care Reserve Increase

Policy reserves for our long-term care block of business are determined using the gross premium valuation method and, prior to the third quarter of 2018, were valued based on assumptions established as of December 31, 2014, the date of our last assumption update under loss recognition. Gross premium valuation assumptions do not change after the date of loss recognition unless reserves are again determined to be deficient. We undertake a review of policy reserve adequacy annually during the fourth quarter of each year, or more frequently if appropriate, using best estimate assumptions as of the date of the review.

During the third quarter of 2018, we completed our annual review of policy reserve adequacy, which incorporated our most recent experience and included a review of all assumptions. The review utilized internal and external data and outside consulting firms for quality assurance and industry benchmarking. Based on our analysis, during the third quarter of 2018, we updated our reserve assumptions and determined that our policy and claim reserves should be increased by $750.8 million, or $593.1 million after-tax, to reflect our current estimate of future benefit obligations. This increase was primarily driven by the update to our liability and interest rate assumptions, particularly claims incidence and claim termination rates, which resulted in an increase to reserves of approximately $2.2 billion. Partially offsetting the increase was the update to our assumptions for premium rate increases which decreased reserves approximately $1.4 billion, resulting in the net increase to reserves of $750.8 million. See "Trends in Key Assumptions" contained herein in the "Critical Accounting Estimates" of this Item 7 for further discussion of the assumptions used in our long-term care reserve update.

2018 and 2016 Acquisitions of Business

In November 2018, we acquired 100 percent of the shares and voting interests in Jaimini Health, Inc. (Jaimini Health), a dental health maintenance organization. The acquisition of Jaimini Health will broaden our employee benefit dental offerings in the U.S., particularly in the state of California and is reported in our Unum US segment.

In October 2018, we acquired 100 percent of the shares and voting interests in Pramerica Zycie TUiR S.A. (which we have subsequently renamed Unum Zycie TUiR S.A. and refer to as Unum Poland), a financial protection benefits provider in Poland. This acquisition will expand our European presence, which we believe to be an attractive market for financial protection benefits.

In January 2018, we acquired 100 percent of the shares and voting interests in Leavelogic, Inc (Leavelogic), a leave management technology provider. The acquisition of Leavelogic will enhance our current leave management offerings by providing tools for employers and employees to better manage the family leave process and is reported in our Unum US segment.

In August 2016, we acquired 100 percent of the shares and voting interests in H&J Capital, L.L.C., parent of Starmount Life Insurance Company and AlwaysCare Benefits (which collectively we refer to as Starmount). Starmount Life Insurance Company is an independent provider of dental and vision insurance in the U.S. workplace, and AlwaysCare Benefits is a nationally licensed, third-party administrator. The acquisition of Starmount broadens

our employee benefit offerings in the U.S. Starmount's dental and vision products and new dental and vision products marketed by Unum US are reported in our Unum US segment within our supplemental and voluntary product lines. Colonial Life dental and vision products were introduced in 2018 and are reported in our Colonial Life segment within our accident, sickness, and disability product line.
See Note 13 of the " Notes to Consolidated Financial Statements” contained herein in Item 8 for further details.

Unclaimed Death Benefits (UDB) Reserve Increase

Beginning in 2011, a number of state regulators began requiring insurers to cross-check specified insurance policies with the Social Security Administration’s Death Master File to identify potential matches. If a potential match was identified, insurers were requested to determine if benefits were due, locate beneficiaries, and make payments where appropriate. We initiated this process where requested, and in 2012 we began implementing this process in all states on a forward-looking basis. In addition to implementing this on a forward-looking basis, in 2013 we began an initiative to search for potential claims from previous years. During 2013, we completed our assessment of benefits which we estimated would be paid under this initiative, and as such, established additional reserves for payment of these benefits.

Similar to other insurers, we have undergone an examination by a third party acting on behalf of a number of state treasurers concerning our compliance with the unclaimed property laws of the participating states. In the fourth quarter of 2017, we started the process to reach a Global Resolution Agreement with the third party regarding settlement of the examination, which we finalized in January of 2018. During the fourth quarter of 2017, we established reserves which reflected our estimate of the liability expected to be paid as we execute on the terms of the settlement. Claim reserves were increased $18.5 million for Unum US group life, $8.1 million for Unum US voluntary life, and $12.4 million for Colonial Life voluntary life, for a total reserve increase of $39.0 million before tax and $25.4 million after tax.

U.S. Tax Reform

On December 22, 2017, the U.S. Federal government enacted a tax bill, H.R.1, An Act to Provide Reconciliation Pursuant to Titles II and V of the Concurrent Resolution on the Budget for Fiscal Year 2018, more commonly known as the Tax Cuts and Jobs Act (TCJA). The TCJA, among other things, included a reduction to the U.S. corporate statutory tax rate from 35 percent to 21 percent and a tax on undistributed and previously untaxed foreign earnings and profits (Deemed Repatriation Tax) at reduced rates. As a result of these changes, we recognized a tax benefit of $97.9 million in 2017 related to the revaluation of our net deferred tax liabilities associated with our U.S. operations to the newly enacted U.S. corporate tax rate and a tax expense of $66.4 million resulting from the Deemed Repatriation Tax. See "Regulation" contained herein in Item 1 and Note 7 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further details.

U.K. Referendum

During 2016, the U.K. held a referendum and voted to leave the EU. The U.K. subsequently invoked Article 50 of the Treaty on European Union (EU) and is due to leave the EU on March 29, 2019. We expect to see continued dampening of growth in the U.K. as well as earnings volatility due to the current disruption and uncertainty in the U.K. economy. We may also experience volatility in the fair values of our investments in U.K. and EU-based issuers, but we do not expect a material increase in other-than-temporary impairments or defaults, nor do we believe this volatility will impact our ability to hold these investments. The magnitude and longevity of potential negative economic impacts on our growth will depend on whether an agreement is reached between the U.K. and EU as a result of exit negotiations and, if reached, the nature of the agreement and the resulting response of the U.K. marketplace. There are currently no indications that capital requirements for our U.K. operations will change, but economic conditions may cause volatility in our solvency ratios. Our reported consolidated financial results may continue to be impacted by fluctuations in the British pound sterling to dollar exchange rate. See "Regulation" contained herein in Item 1 and "Unum International Segment" contained herein this Item 7.

Consolidated Company Outlook for 2019

We believe our disciplined approach to providing financial protection products at the workplace puts us in a position of strength as we seek to capitalize on the growing and largely unfilled need for our products and services. We believe the need for our products and services remains strong, and we intend to continue protecting our solid margins and returns through our pricing and risk actions. Our strategy is underpinned by our core values and is centered on market growth through the expansion of our product portfolio, distribution system, and geographic footprint, and enhancing the customer experience through efficiency, simplification, and investment in digital capabilities.

Our outlook for 2019 is for continued solid premium growth trends in our core businesses, with stable persistency and a disciplined approach to sales growth. We expect to have generally stable benefits experience due to our focus on disciplined pricing, risk selection, and management of renewals. We will maintain our commitment to expense discipline and improving our operational efficiencies.

The low interest rate environment continues to place pressure on our profit margins. Our reported consolidated financial results may also continue to be unfavorably impacted by political and economic uncertainty in the U.K., specifically lower interest rates, wage inflation and employer spending, and claims volatility. We expect our effective tax rate for 2019 to be approximately 20 percent. The reduction in the corporate tax rate resulting from tax reform has improved the statutory earnings and cash generation of our insurance subsidiaries and our capital position remains strong.

We continue to analyze and employ strategies that we believe will help us navigate the current environment and allow us to maintain solid operating margins and significant financial flexibility to support the needs of our businesses, while also continuing to return capital to our shareholders and exploring merger and acquisition opportunities to enhance our business lines. We have substantial leverage to rising interest rates and an improving economy which generates payroll growth and wage inflation. We believe that consistent operating results, combined with the implementation of strategic initiatives and the effective deployment of capital, will allow us to meet our long-term financial objectives.

Further discussion is included in "Reconciliation of Non-GAAP Financial Measures," "Consolidated Operating Results," "Segment Results," "Investments," and "Liquidity and Capital Resources" contained herein in this Item 7 and in the "Notes to Consolidated Financial Statements" contained herein in Item 8.

Reconciliation of Non-GAAP and Other Financial Measures

We analyze our performance using non-GAAP financial measures. A non-GAAP financial measure is a numerical measure of a company's performance, financial position, or cash flows that excludes or includes amounts that are not normally excluded or included in the most directly comparable measure calculated and presented in accordance with GAAP. The non-GAAP financial measure of "after-tax adjusted operating income" differs from net income as presented in our consolidated operating results and income statements prepared in accordance with GAAP due to the exclusion of net realized investment gains and losses and certain other items as specified in the reconciliations below. We believe after-tax adjusted operating income is a better performance measure and better indicator of the profitability and underlying trends in our business.

Realized investment gains or losses depend on market conditions and do not necessarily relate to decisions regarding the underlying business of our segments. Our investment focus is on investment income to support our insurance liabilities as opposed to the generation of realized investment gains or losses. Although we may experience realized investment gains or losses which will affect future earnings levels, a long-term focus is necessary to maintain profitability over the life of the business since our underlying business is long-term in nature, and we need to earn the interest rates assumed in calculating our liabilities.

We may at other times exclude certain other items from our discussion of financial ratios and metrics in order to enhance the understanding and comparability of our operational performance and the underlying fundamentals. We exclude these items as we believe them to be infrequent or unusual in nature, but this exclusion is not an indication that similar items may not recur and does not replace net income or net loss as a measure of our overall profitability.

See "Executive Summary" contained herein in Item 7 and Notes 6, 7, and 14 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion regarding the impacts of the long-term care reserve increase, the TCJA, the unclaimed death benefit reserve increase, and the loss from a guaranty fund assessment, respectively.

A reconciliation of GAAP financial measures to our non-GAAP financial measures is as follows:

	Year Ended December 31					
	2018		2017		2016	
	(in millions)	per share *	(in millions)	per share *	(in millions)	per share *
Net Income	$523.4	$2.38	$994.2	$4.37	$931.4	$3.95
Excluding:						
Net Realized Investment Gain (Loss) (net of tax expense (benefit) of $(11.0); $15.0; $8.4)	(28.5)	(0.12)	25.3	0.11	15.8	0.07
Loss from Guaranty Fund Assessment (net of tax benefit of $-; $7.2; $-)	—	—	(13.4)	(0.06)	—	—
Unclaimed Death Benefits Reserve Increase (net of tax benefit of $-; $13.6; $-)	—	—	(25.4)	(0.11)	—	—
Net Tax Benefit from Impacts of TCJA	—	—	31.5	0.14	—	—
Long-term Care Reserve Increase (net of tax benefit of $157.7; $-; $-)	(593.1)	(2.70)	—	—	—	—
After-tax Adjusted Operating Income	$1,145.0	$5.20	$976.2	$4.29	$915.6	$3.88

* Assuming Dilution

We measure and analyze our segment performance on the basis of "adjusted operating revenue" and "adjusted operating income" or "adjusted operating loss", which differ from total revenue and income before income tax as presented in our consolidated statements of income due to the exclusion of net realized investment gains and losses and certain other items as specified in the reconciliations below. These performance measures are in accordance with GAAP guidance for segment reporting, but they should not be viewed as a substitute for total revenue, income before income tax, or net income.

A reconciliation of total revenue to "adjusted operating revenue" and income before income tax to "adjusted operating income" is as follows:

	Year Ended December 31		
	2018	2017	2016
	(in millions of dollars)		
Total Revenue	$11,598.5	$11,286.8	$11,046.5
Excluding:			
Net Realized Investment Gain (Loss)	(39.5)	40.3	24.2
Adjusted Operating Revenue	$11,638.0	$11,246.5	$11,022.3
Income Before Income Tax	$627.8	$1,404.0	$1,347.7
Excluding:			
Net Realized Investment Gain (Loss)	(39.5)	40.3	24.2
Loss from Guaranty Fund Assessment	—	(20.6)	—
Unclaimed Death Benefits Reserve Increase	—	(39.0)	—
Long-term Care Reserve Increase	(750.8)	—	—
Adjusted Operating Income	$1,418.1	$1,423.3	$1,323.5

Critical Accounting Estimates

We prepare our financial statements in accordance with GAAP. The preparation of financial statements in conformity with GAAP requires us to make estimates and assumptions that affect amounts reported in our financial statements and accompanying notes. Estimates and assumptions could change in the future as more information becomes known, which could impact the amounts reported and disclosed in our financial statements. The accounting estimates deemed to be most critical to our financial position and results of operations are those related to reserves for policy and contract benefits, deferred acquisition costs, valuation of investments, pension and postretirement benefit plans, income taxes, and contingent liabilities. For additional information, refer to our significant accounting policies in Note 1 of the "Notes to Consolidated Financial Statements" contained herein in Item 8.

Reserves for Policy and Contract Benefits

Reserves for policy and contract benefits are our largest liabilities and represent claims that we estimate we will eventually pay to our policyholders. The two primary categories of reserves are policy reserves for claims not yet incurred and claim reserves for claims that have been incurred or are estimated to have been incurred but not yet reported to us. Reserves for policy and contract benefits equaled $43.3 billion and $42.1 billion at December 31, 2018 and 2017, respectively, or approximately 81.3 percent and 77.4 percent of our total liabilities, respectively. Reserves ceded to reinsurers were $7.2 billion at both December 31, 2018 and 2017 and are reported as a reinsurance recoverable in our consolidated balance sheets.

Policy Reserves

Policy reserves are established in the same period we issue a policy and equal the difference between projected future policy benefits and future premiums, allowing a margin for expenses and profit. These reserves relate primarily to our non-interest sensitive products, including our individual disability and voluntary benefits products in our Unum US segment; individual disability and life products in our Unum International segment; disability and cancer and critical illness policies in our Colonial Life segment; and individual disability, long-term care, and other products in our Closed Block segment. The reserves are calculated based on assumptions that were appropriate at the date the policy was issued and are not subsequently modified unless the policy reserves become inadequate (i.e. loss recognition occurs).

- Persistency assumptions are based on our actual historical experience adjusted for future expectations.
- Claim incidence and claim resolution rate assumptions related to mortality and morbidity are based on actual experience or industry standards adjusted as appropriate to reflect our actual experience and future expectations.
- Discount rate assumptions are based on our current and expected net investment returns.

In establishing policy reserves, we use assumptions that reflect our best estimate while considering the potential for adverse variances in actual future experience, which results in a total policy reserve balance that has an embedded reserve for adverse deviation. We do not, however, establish an explicit and separate reserve as a provision for adverse deviation from our assumptions.

We perform loss recognition tests on our policy reserves annually, or more frequently if appropriate, using best estimate assumptions as of the date of the test, without a provision for adverse deviation. We group the policy reserves for each major product line within a segment when we perform the loss recognition tests. If the policy reserves determined using these best estimate assumptions are higher than our existing policy reserves net of any deferred acquisition cost balance, the existing policy reserves are increased or deferred acquisition costs are reduced to immediately recognize the deficiency. Thereafter, the policy reserves for the product line are calculated using the same method we used for the loss recognition testing, referred to as the gross premium valuation method, wherein we use our best estimate as of the gross premium valuation (loss recognition) date rather than the initial policy issue date to determine the expected future claims, commissions, and expenses we will pay and the expected future gross premiums we will receive.

Because the key policy reserve assumptions for policy persistency, mortality and morbidity, and discount rates are all locked in at policy issuance based on assumptions appropriate at that time, policy reserve assumptions are generally not changed due to a change in claim status from active to disabled subsequent to policy issuance. Depending on the funding mechanism, a full policy reserve is held during disability reflecting continued funding of the full policy reserve during a disability claim, or a fractional policy reserve is held reflecting that the individual policyholder would need to recover before he or she can again generate future claims for a separate occurrence. The policy reserves build up and release over time based on assumptions made at the time of policy issuance such that the reserve is eliminated as policyholders either reach the terminal age for coverage, die, or voluntarily lapse the policy. Policy reserves for Unum US, Unum International, and Colonial Life products are determined using the net level premium method as prescribed by GAAP. In applying this method, we use, as applicable by product type, morbidity and mortality incidence rate assumptions, claim resolution rate assumptions, and policy persistency assumptions, among others, to determine our expected future claim payments and expected future premium income. We then apply an interest, or discount, rate to determine the present value of the expected future claims and claim expenses we will pay and the expected future premiums we will receive, with a provision for profit allowed.

Policy reserves for our Closed Block segment include certain older policy forms for individual disability, individual and group long-term care, and certain other products, all of which are no longer actively marketed. The reserves for individual disability and individual and group long-term care are determined using the gross premium valuation method. Key assumptions are persistency, mortality and morbidity, claim incidence, claim resolution rates, commission rates, and maintenance expense rates. For long-term care, premium rate increases are also a key assumption. We apply an interest, or discount, rate to determine the present value of the expected future claims, commissions, and expenses we will pay as well as the expected future premiums we will receive, with no provision for future profit. The interest rate is based on our expected net investment returns on the investment portfolio supporting the reserves for these blocks of business. Under the gross premium valuation method, we do not include an embedded provision for the risk of adverse deviation from these assumptions. Gross premium valuation assumptions do not change after the date of loss recognition unless reserves are again determined to be deficient in the future.

Policy reserves for certain other products, excluding individual disability and individual and group long-term care, which are no longer actively marketed and are reported in our Closed Block segment represent $5.9 billion on a gross basis. We have ceded $5.1 billion of reserves related to the other products, which are primarily comprised of policy reserves, to reinsurers. The ceded reserve balance is reported in our consolidated balance sheets as a reinsurance recoverable. We continue to service a block of group pension products, which we have not ceded, and the policy reserves for these products are based on expected mortality rates and retirement rates. Expected future payments are discounted at interest rates reflecting the anticipated investment returns for the assets supporting the liabilities.

Claim Reserves

Claim reserves are established when a claim is incurred or is estimated to have been incurred but not yet reported (IBNR) to us and, as prescribed by GAAP, equals our long-term best estimate of the present value of the liability for future claim payments and claim adjustment expenses. A claim reserve is based on actual known facts regarding the claim, such as the benefits available under the applicable policy, the covered benefit period, the age, and, as appropriate, the occupation and cause of disability of the claimant, as well as assumptions derived from our actual historical experience and expected future changes in experience for factors such as the claim duration, discount rate, and policy benefit offsets, including those for social security and other government-based welfare benefits. Reserves for IBNR claims, similar to incurred claim reserves, include our assumptions for claim duration and discount rates, but because we do not yet know the facts regarding the specific claims, these reserves are also established based on historical incidence rate assumptions, including claim reporting patterns, the average cost of claims, and the expected volumes of incurred claims. Our incurred claim reserves and IBNR claim reserves do not include any provision for the risk of adverse deviation from our assumptions.

Claim reserves, unlike policy reserves, are subject to revision as current claim experience and projections of future factors affecting claim experience change. Each quarter we review our emerging experience to ensure that our claim reserves are appropriate. If we believe, based on our actual experience and our view of future events, that our long-term assumptions need to be modified, we adjust our reserves accordingly with a charge or credit to our current period income.

Multiple estimation methods exist to establish claim reserve liabilities, with each method having its own advantages and disadvantages. Available reserving methods utilized to calculate claim reserves include the tabular reserve method, the paid loss development method, the incurred loss development method, the count and severity method, and the expected claim cost method. No single method is better than the others in all situations and for all product lines. The estimation methods we have chosen are those that we believe produce the most reliable reserves.

We use a tabular reserve methodology on reported claims for our Unum US group long-term disability and individual disability claims as well as for our Closed Block individual disability and group and individual long-term care claims. Under the tabular reserve methodology, reserves for reported claims are based on certain characteristics of the actual reported claimants, such as age, length of time disabled, and medical diagnosis, as well as assumptions regarding claim duration, discount rate, and policy benefit offsets. We believe the tabular reserve method is the most accurate to calculate long-term liabilities and allows us to use the most available known facts about each claim. IBNR claim reserves for our long-term products are calculated using the count and severity method using historical patterns of the claims to be reported and the associated claim costs. For Unum US group short-term disability products, an estimate of the value of future payments to be made on claims already submitted, as well as on

IBNR claims, is determined in aggregate using a paid loss development method rather than on the individual claimant basis that we use for reported claims on long-term products. The average length of time between the event triggering a claim under a policy and the final resolution of those claims is much shorter for these products than for our long-term liabilities and results in less estimation variability.

Claim reserves for Unum US group life and accidental death and dismemberment products are related primarily to death claims reported but not yet paid, IBNR death claims, and a liability for waiver of premium benefits. The death claim reserve is based on the actual face amount to be paid, the IBNR reserve is calculated using the paid loss development method, and the waiver of premium benefits reserve is calculated using the tabular reserve methodology.

Claim reserves supporting the group and individual dental and vision products reported in our Unum US and Colonial Life segments have a short claim payout period. As a result, the reserves, which primarily represent IBNR and a small amount of claims pending payment, are calculated using the paid loss development method.

Claim reserves supporting our Unum International segment are calculated using generally the same methodology that we use for Unum US disability and group term life reserves. Claim reserves for our Unum UK group dependent life product are calculated using discounted cash flows, based on our assumptions for claim duration and discount rates. The assumptions used in calculating claim reserves for this segment are based on standard country-specific industry experience, adjusted for our own experience.

The majority of the Colonial Life segment lines of business have short-term benefits, which generally have less estimation variability than our long-term products because of the shorter claim payout period. Our claim reserves for Colonial Life's lines of business are predominantly determined using the incurred loss development method based on our own experience. The incurred loss development method uses the historical patterns of payments by loss date to predict future claim payments for each loss date. Where the incurred loss development method may not be appropriate, we estimate the incurred claims using an expected claim cost per policy or other measure of exposure. The key assumptions for claim reserves for the Colonial Life lines of business are: (1) the timing, rate, and amount of estimated future claim payments; and (2) the estimated expenses associated with the payment of claims.

The following table displays policy reserves, incurred claim reserves, and IBNR claim reserves by major product line, with the summation of the policy reserves and claim reserves shown both gross and net of the associated reinsurance recoverable. Incurred claim reserves represent the expected benefits payable under each incurred claim, along with other expenses associated with the payment of the claims. IBNR claim reserves include provisions for incurred but not reported claims and a provision for reopened claims for our disability products. The IBNR and reopened claim reserves for our disability products are developed and maintained in aggregate based on historical monitoring. Impacting year over year comparability of policy and claim reserves in the following chart is the 2018 long-term care reserve increase. See "Executive Summary" contained herein in this Item 7 and Note 6 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion.

(in millions of dollars)	December 31, 2018							
	Gross Policy Reserves	%	Claim Reserves Incurred	Claim Reserves IBNR	%	Total	Total Reinsurance Ceded	Total Net
Group Disability	$—	— %	$5,900.0	$670.8	28.4 %	$6,570.8	$ 71.0	$6,499.8
Group Life and Accidental Death & Dismemberment	52.9	0.3	750.7	217.8	4.2	1,021.4	7.1	1,014.3
Individual Disability	518.4	2.6	1,357.8	137.1	6.4	2,013.3	217.1	1,796.2
Voluntary Benefits	1,643.9	8.1	49.0	58.1	0.5	1,751.0	27.1	1,723.9
Dental and Vision	—	—	0.1	14.5	0.2	14.6	0.2	14.4
Unum US Segment	2,215.2	11.0	8,057.6	1,098.3	39.7	11,371.1	322.5	11,048.6
Unum International Segment	175.7	0.9	1,838.4	115.0	8.4	2,129.1	84.6	2,044.5
Colonial Life Segment	2,112.5	10.5	292.6	131.4	1.8	2,536.5	8.0	2,528.5
Individual Disability	332.2	1.6	9,085.0	199.6	40.1	9,616.8	1,646.6	7,970.2
Long-term Care	9,463.2	46.9	1,787.6	235.7	8.7	11,486.5	39.9	11,446.6
Other	5,869.5	29.1	187.6	120.2	1.3	6,177.3	5,119.8	1,057.5
Closed Block Segment	15,664.9	77.6	11,060.2	555.5	50.1	27,280.6	6,806.3	20,474.3
Subtotal	$20,168.3	100.0%	$21,248.8	$1,900.2	100.0%	43,317.3	7,221.4	36,095.9
Adjustment Related to Unrealized Investment Gains and Losses						3,220.3	261.4	2,958.9
Consolidated						$46,537.6	$ 7,482.8	$39,054.8

42

	December 31, 2017							
	Gross Policy Reserves	%	Claim Reserves Incurred	IBNR	%	Total	Total Reinsurance Ceded	Total Net
Group Disability	$—	— %	$6,047.0	$624.2	28.7 %	$6,671.2	$ 73.8	$6,597.4
Group Life and Accidental Death & Dismemberment	54.9	0.3	735.5	208.0	4.1	998.4	5.2	993.2
Individual Disability	533.4	2.8	1,318.0	137.6	6.3	1,989.0	207.5	1,781.5
Voluntary Benefits	1,566.7	8.3	46.7	61.0	0.5	1,674.4	27.3	1,647.1
Dental and Vision	—	—	0.7	11.3	0.1	12.0	0.3	11.7
Unum US Segment	2,155.0	11.4	8,147.9	1,042.1	39.7	11,345.0	314.1	11,030.9
Unum International Segment	18.1	0.1	1,918.3	108.3	8.7	2,044.7	87.0	1,957.7
Colonial Life Segment	1,989.4	10.5	288.3	137.2	1.8	2,414.9	8.5	2,406.4
Individual Disability	418.5	2.2	9,407.4	219.1	41.5	10,045.0	1,619.8	8,425.2
Long-term Care	8,414.3	44.5	1,494.8	150.9	7.1	10,060.0	40.3	10,019.7
Other	5,894.8	31.3	187.3	120.4	1.2	6,202.5	5,090.6	1,111.9
Closed Block Segment	14,727.6	78.0	11,089.5	490.4	49.8	26,307.5	6,750.7	19,556.8
Subtotal	$18,890.1	100.0%	$21,444.0	$1,778.0	100.0%	42,112.1	7,160.3	34,951.8
Adjustment Related to Unrealized Investment Gains and Losses						5,094.7	375.8	4,718.9
Consolidated						$47,206.8	$ 7,536.1	$39,670.7

Key Assumptions

The calculation of policy and claim reserves involves numerous assumptions, but the primary assumptions used to calculate reserves are (1) the discount rate, (2) the claim resolution rate, and (3) the claim incidence rate for policy reserves and IBNR claim reserves. Of these assumptions, our discount rate and claim resolution rate assumptions have historically had the most significant effects on our level of reserves because many of our product lines provide benefit payments over an extended period of time.

1. The discount rate, which is used in calculating both policy reserves and incurred and IBNR claim reserves, is the interest rate that we use to discount future claim payments to determine the present value. A higher discount rate produces a lower reserve. If the discount rate is higher than our future investment returns, our invested assets will not earn enough investment income to support our future claim payments. In this case, the reserves may eventually be insufficient. We set our assumptions based on our current and expected future investment yield of the assets supporting the reserves, considering current and expected future market conditions. If the investment yield on new investments that are purchased differs from the investment yield of the existing investment portfolio, it is likely that the discount rate assumption on claims will be adjusted to reflect the impact of the new investment yield.

2. The claim resolution rate, used for both policy reserves and incurred and IBNR claim reserves, is the probability that a disability or long-term care claim will close due to recovery or death of the insured. It is important because it is used to estimate how long benefits will be paid for a claim. Estimated resolution rates that are set too high will

result in reserves that are lower than they need to be to pay the claim benefits over time. Claim resolution assumptions involve many factors, including the cause of disability, the policyholder's age, the type of contractual benefits provided, and the time since initial disability. We primarily use our own claim experience to develop our claim resolution assumptions. These assumptions are established for the probability of death and the probability of recovery from disability. Our studies review actual claim resolution experience over a number of years, with more weight placed on our experience in the more recent years. We also consider any expected future changes in claim resolution experience.

3. The incidence rate, used for policy reserves and IBNR claim reserves, is the rate at which new claims are submitted to us. The incidence rate is affected by many factors, including the age of the insured, the insured's occupation or industry, the benefit plan design, and certain external factors such as consumer confidence and levels of unemployment. We establish our incidence assumption using a historical review of actual incidence results along with an outlook of future incidence expectations.

Establishing reserve assumptions is complex and involves many factors. Reserves, particularly for policies offering insurance coverage for long-term disabilities and long-term care, are dependent on numerous assumptions other than just those presented in the preceding discussion. The impact of internal and external events, such as changes in claims operational procedures, economic trends such as the rate of unemployment and the level of consumer confidence, the emergence of new diseases, new trends and developments in medical treatments, and legal trends and legislative changes, including changes to social security and other government-based welfare benefits programs which provide policy benefit offsets, among other factors, will influence claim incidence rates, claim resolution rates, and claim costs. In addition, for policies offering coverage for disability or long-term care at advanced ages, the level and pattern of mortality rates at advanced ages will impact overall benefit costs. Reserve assumptions differ by product line and by policy type within a product line. Additionally, in any period and over time, our actual experience may have a positive or negative variance from our long-term assumptions, either singularly or collectively, and these variances may offset each other. We test the overall adequacy of our reserves using all assumptions and with a long-term view of our expected experience over the life of a block of business rather than test just one or a few assumptions independently that may be aberrant over a short period of time. Therefore, while it is possible to evaluate the sensitivity of overall adequacy results in our reserves based upon a change in each individual assumption, the actual impacts of changes to a variety of underlying assumptions must be considered in the aggregate by product line in order to judge the overall potential implications to reserve adequacy. The following section presents an overview of our trend analysis for key assumptions and the results of variability in our assumptions, in aggregate, for the reserves which we believe are reasonably possible to have a material impact on our future financial results if actual claims yield a materially different amount than what we currently expect and have reserved for, either favorable or unfavorable.

Trends in Key Assumptions

Generally, we do not expect our mortality and morbidity claim incidence trends or our persistency trends to change significantly in the short-term, and to the extent that these trends do change, we expect those changes to be gradual over a longer period of time. We have historically experienced an increase in our group long-term disability morbidity claim incidence trends during and following a recessionary period and believe claim incidence trends may continue to somewhat follow general economic conditions and demographics of the general workforce.

Claim incidence rates for Unum US group long-term disability were generally consistent in 2018 compared to the prior year.

In 2018, both short-term and long-term interest rates increased. The long-term interest rates supporting the majority of our lines of business remain below historical norms. The assumptions we used to discount reserves during this period were slightly lower for certain of our product lines. Reserve discount rate assumptions for new policies and new claims are periodically adjusted to reflect our current and expected net investment returns. Changes in our average discount rate assumptions tend to occur gradually over a longer period of time because of the long-duration investment portfolios which support the reserves for the majority of our lines of business.

Our claim resolution rate assumption used in determining reserves is our expectation of the resolution rate we will experience over the life of the block of business and will vary from actual experience in any one period, both favorably and unfavorably. Claim resolution rates are very sensitive to operational and environmental changes and have a greater chance of significant variability in a shorter period of time than our other reserve assumptions. These rates are reviewed on a quarterly basis for the death and recovery components separately. Claim resolution rates in our Unum US group long-term disability product line and in our Closed Block individual disability product line have exhibited some variability over the last several years. Relative to the resolution rate we expect to experience over the life of the block of business, actual quarterly rates during 2018 and 2017 have varied between +10 and -13 percent in our Closed Block individual disability line of business. Actual quarterly rates during 2018 and 2017 have varied by +5 and -5 percent in our Unum US group long-term disability line of business. During 2018, claim resolution rates pertaining to overall mortality experience were relatively consistent with the levels of 2017 and 2016. On an annual basis for the years 2016 to 2018, our overall claim resolution rates were fairly consistent with or slightly favorable to our long-term assumptions.

We monitor and test our reserves for adequacy relative to all of our assumptions in the aggregate. In our estimation, scenarios based on reasonably possible variations in each of our reserve assumptions, when modeled together in aggregate, could produce potential results as illustrated in the chart below. The major contributor to the variance for both the Unum US group long-term disability line of business and the Closed Block individual disability line of business is the claim resolution rate.

	Potential impact, positive or negative, of variations in reserve assumptions on our December 31, 2018 claim reserve balance (in millions of dollars)	
Unum US group long-term disability	3.3%	$207
Closed Block individual disability	2.6%	$209

In addition to our Unum US group long-term disability and Closed Block individual disability lines of business, we consider variability in our reserve assumptions related to long-term care policy reserves. These reserves are held under the gross premium valuation method with assumptions established during the third quarter of 2018, the date of the latest loss recognition. Assumptions for policy reserves do not change after the date of loss recognition unless reserves are again determined to be deficient. As such, positive developments will result in the accumulation of reserve margin, while adverse developments would result in an additional reserve charge. Policy reserves for long-term care are based upon a number of key assumptions, and each assumption has various factors which may impact the long-term outcome. Key assumptions with respect to morbidity, mortality, claims incidence and resolutions, persistency, interest rates, and future premium rate increases must incorporate extended views of expectations for many years into the future. Reserves are highly sensitive to these estimates.

During the third quarter of 2018, we completed our annual review of policy reserve adequacy for our long-term care line of business, which incorporated our most recent experience and included a review of all assumptions. The review utilized internal and external data and outside consulting firms for quality assurance and industry benchmarking. Based on our analysis, we updated our reserve assumptions as discussed in the following paragraphs. In addition, we have also included a sensitivity analysis for these assumptions for both favorable and unfavorable deviations applied throughout the entire life of the block. This sensitivity analysis was completed as of the date of our assumption update announcement in the third quarter of 2018 and will not be updated unless reserves are again determined to be deficient in the future.

- We updated our active policy termination assumptions, which are affected by both policyholder mortality and lapses. We aligned our mortality assumptions with industry data based on a 2012 individual annuitant mortality industry table, adjusted for our experience in earlier policy durations. We also lowered our lapse assumptions for individual policies based on emerging company experience, which resulted in an ultimate lapse rate of 0.25 percent. A six percent unfavorable change in the active policy termination assumption would result in approximately a $330 million decrease to reserve margin and a six percent favorable change would result in approximately a $320 million increase to reserve margin.

- We updated our claims incidence assumptions to consider both the elevated claim levels that we have recently experienced as well as longer term experience based on our analysis of numerous claim factors, including variations by age, gender, product, premium funding method, and other factors. A 2.5 percent unfavorable change in the claim incidence assumption would result in approximately a $290 million decrease to reserve margin and a 2.5 percent favorable change would result in approximately a $300 million increase to reserve margin.

- We updated our claim termination assumptions, which are primarily affected by the death, and to a lesser extent, the recovery of the insured to largely reflect our experience. A three percent unfavorable change in the claim termination assumption would result in approximately a $370 million decrease to reserve margin and a three percent favorable change would result in approximately a $360 million increase to reserve margin.

- We have observed morbidity improvement in our own claims experience over a ten year period of approximately three percent per year, normalized for variables such as age and claim type. However, we believe that a longer-term view is the best way to evaluate this type of improvement. Accordingly, we updated our morbidity assumptions to reflect minor improvement, one percent per year, including a partially offsetting assumption of 0.6 percent per year mortality improvement. If no improvement occurs in the morbidity and mortality assumptions, reserve margin would decrease by approximately $1 billion. If a three percent per year improvement in the morbidity and mortality assumptions occurs, reserve margin would increase by approximately $1.6 billion.

- We updated our premium rate increase assumptions to reflect both our estimate of previously filed rate increases, informed by our historical approval rates, and our anticipated future rate filings. The impact of the update to the premium rate increase assumptions resulted in approximately a $1.4 billion decrease to reserves, of which approximately $700 million relates to currently outstanding requests pending approval with the remaining $700 million related to future rate increase submissions, with a focus on group policies, that will be completed and filed during the next several quarters. A ten percent change in the premium rate increase success rate assumption would result in an approximately $140 million change in reserve margin depending on whether the change was favorable or unfavorable.

- We updated our discount rate assumption to reflect our expectation for the low interest rate environment to persist and our expected impact on future long-term care new money yield rates. Our updated expectation for long-term care new money yield rates assumes a rate of 5.5 percent through 2021 and then a gradual increase to 6.25 percent by 2025, when we assume no further increase. A 0.25 percent change in the new money yield rate assumption would result in an approximately $250 million change in reserve margin depending on whether the change was favorable or unfavorable. Alternatively, a 0.25 percent change in the overall assumed discount rate, which includes the new money yield rate assumption, would impact the reserve margin within an approximate range of $450 million to $500 million, assuming all other factors held constant.

Key assumptions and related impacts are also heavily interrelated in both their outcome and in their effects on reserves. For example, changes in the view of morbidity and mortality might be mitigated by either potential future premium rate increases and/or morbidity improvements due to general improvement in health and/or medical breakthroughs. There is potentially a wide range of outcomes for each assumption and in totality.

We believe that these ranges provide a reasonable estimate of the possible changes in reserve balances for those product lines where we believe it is possible that variability in the assumptions, in the aggregate, could result in a material impact on our reserve levels, but we record our reserves based on our long-term best estimate. Because these product lines have long-term claim payout periods, there is a greater potential for significant variability in claim costs, either positive or negative. We closely monitor emerging experience and use these results to inform our view of long-term assumptions.

Deferred Acquisition Costs (DAC)

We defer incremental direct costs associated with the successful acquisition of new or renewal insurance contracts and amortize these costs over the life of the related policies. Deferred costs include certain commissions, other agency compensation, selection and policy issue expenses, and field expenses. Acquisition costs that do not vary with the production of new business, such as commissions on group products which are generally level throughout the life of the policy, are excluded from deferral.

Approximately 89.4 percent of our DAC relates to non-interest sensitive products, and we amortize DAC for these products in proportion to the premium income we expect to receive over the life of the policies. DAC related to interest sensitive policies is amortized over the lives of the policies in relation to the present value of estimated gross profits from surrender charges, mortality margins, investment returns, and expense margins. Key assumptions used in developing the future amortization of DAC are persistency, premium income, and for our interest sensitive products, mortality margins and investment returns. We use our own historical experience and expectation of the future performance of our businesses in determining our assumptions. For non-interest sensitive products, the estimated premium income in the early years of the amortization period is generally higher than in the later years due to the anticipated cumulative effect of policy persistency in the early years, which results in a greater proportion of the costs being amortized in the early years of the life of the policy. During 2018, our key assumptions used to develop the future amortization of acquisition costs deferred during 2018 did not change materially from those used in 2017.

Generally, we do not expect our key assumptions to change significantly in the short-term, and to the extent that these trends do change, we expect those changes to be gradual over a longer period of time.

The following are our current assumptions regarding the length of our amortization periods, the approximate DAC balance that remains at the end of years 3, 10, and 15 as a percentage of the cost initially deferred, and our DAC balances as of December 31, 2018 and 2017.

	Amortization Period	Balance Remaining as a % of Initial Deferral			DAC Balances at December 31	
		Year 3	Year 10	Year 15	2018	2017
					(in millions of dollars)	
Unum US						
Group Disability	6	26%	0%	0%	$100.3	$96.8
Group Life and Accidental Death & Dismemberment	6	28%	0%	0%	80.0	77.7
Supplemental and Voluntary:						
Individual Disability	20	71%	47%	20%	430.8	431.3
Voluntary Benefits	20	54%	19%	7%	619.7	596.2
Dental and Vision	4	29%	0%	0%	8.6	3.4
Unum International						
Group Long-term Disability	3	0%	0%	0%	2.4	3.2
Group Life	3	0%	0%	0%	1.1	1.3
Supplemental	21	58%	14%	4%	16.5	16.8
Colonial Life						
Accident, Sickness, and Disability	15	44%	11%	1%	530.1	494.0
Life	25	67%	29%	13%	293.9	252.5
Cancer and Critical Illness	19	57%	25%	10%	226.0	211.4
Totals					$2,309.4	$2,184.6

Amortization of DAC is adjusted to reflect actual experience for assumptions which deviate compared to the anticipated experience. Any deviations from projections may result in a change to the rate of amortization in the period such events occur. As an example, for our non-interest sensitive products, we may experience accelerated amortization if policies terminate earlier than projected, or we may experience a slower rate of amortization if policies persist longer than projected. Our actual experience has not varied materially from our assumptions during the last three years.

See Note 1 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion of our DAC accounting policy.

Fair Value of Investments

All of our fixed maturity securities, which are classified as available-for-sale, and all our unrestricted equity securities are reported at fair value. Our derivative financial instruments, including certain derivative instruments embedded in other contracts, are reported as either assets or liabilities and measured at fair value. We report our investments in private equity partnerships at our share of the partnerships' net asset value per share or its equivalent (NAV), as a practical expedient for fair value.

Fair value is 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 and therefore represents an exit price, not an entry price. The exit price objective applies regardless of our intent and/or ability to sell the asset or transfer the liability at the measurement date. We generally use valuation techniques consistent with the market approach, and to a lesser extent, the income approach. The market approach uses prices and other relevant information from market transactions involving identical or comparable assets or liabilities and the income approach converts future amounts, such as cash flows or earnings, to a single present amount, or a discounted amount. We believe the market approach valuation technique provides more observable data than the income approach, considering the types of investments we hold.

The degree of judgment utilized in measuring the fair value of financial instruments generally correlates to the level of pricing observability. Financial instruments with readily available active quoted prices or for which fair value can be measured from actively quoted prices in active markets generally have more pricing observability and less judgment utilized in measuring fair value. The market sources from which we obtain or derive the fair values of our assets and liabilities carried at market value include quoted market prices for actual trades, price quotes from third party pricing vendors, price quotes we obtain from outside brokers, matrix pricing, discounted cash flow, and observable prices for similar publicly traded or privately traded issues that incorporate the credit quality and industry sector of the issuer. Our fair value measurements could differ significantly based on the valuation technique and available inputs.

Inputs to valuation techniques refer broadly to the assumptions that market participants use in pricing assets or liabilities, including assumptions about risk, for example, the risk inherent in a particular valuation technique used to measure fair value and/or the risk inherent in the inputs to the valuation technique. We use observable and unobservable inputs in measuring the fair value of our financial instruments. Observable inputs are inputs that reflect the assumptions market participants would use in pricing the asset or liability developed based on market data obtained from independent sources. Unobservable inputs are inputs that reflect our own assumptions about the assumptions market participants would use in pricing the asset or liability developed based on the best information available in the circumstances.

Certain of our investments do not have readily determinable market prices and/or observable inputs or may at times be affected by the lack of market liquidity. For these securities, we use internally prepared valuations combining matrix pricing with vendor purchased software programs, including valuations based on estimates of future profitability, to estimate the fair value. Additionally, we may obtain prices from independent third-party brokers to aid in establishing valuations for certain of these securities. Key assumptions used by us to determine fair value for these securities include risk-free interest rates, risk premiums, performance of underlying collateral (if any), and other factors involving significant assumptions which may or may not reflect those of an active market.

As of December 31, 2018, the key assumptions we generally used to estimate the fair value of these types of securities included those listed below. Where appropriate, we have noted the assumption used for the prior period as well as the reason for the change.

- Risk-free interest rates of 2.51 percent for five-year maturities to 3.02 percent for 30-year maturities were derived from the December 31, 2018 yield curve for U.S. Treasury Bonds with similar maturities. This compares to interest rates of 2.21 percent for five-year maturities to 2.74 percent for 30-year maturities used at December 31, 2017.
- Baa corporate bond spread adjustments ranging from 1.23 percent to 2.68 percent were added to the risk-free rate to reflect additional credit risk and the lack of liquidity. We used spread adjustments ranging from 0.83 percent to 1.97 percent at December 31, 2017. The changes were based on observable market spreads. Newly issued private placement securities have historically offered yield premiums higher than a similar interest rate spread on comparable newly issued public securities.
- Additional basis points were added as deemed appropriate for foreign investments, certain industries, and individual securities in certain industries that are considered to be of greater risk.

As of December 31, 2018, approximately 11.7 percent of our fixed maturity securities were categorized as Level 1, 84.5 percent as Level 2, and 3.8 percent as Level 3. Level 1 is the highest category of the three-level fair value hierarchy classification wherein inputs are unadjusted and represent quoted prices in active markets for identical assets or liabilities. The Level 2 category includes assets or liabilities valued using inputs (other than those included in the Level 1 category) that are either directly or indirectly observable for the asset or liability through correlation with market data at the measurement date and for the duration of the instrument's anticipated life. The Level 3 category is the lowest category of the fair value hierarchy and reflects the judgment of management regarding what market participants would use in pricing assets or liabilities at the measurement date using unobservable inputs to extrapolate an estimated fair value.

Rapidly changing credit and equity market conditions can materially impact the valuation of securities, and the period to period changes in value can vary significantly.

See Note 2 of the "Notes to Consolidated Financial Statements" contained herein in Item 8.

Investment Impairments

One of the significant estimates related to investments is our impairment valuation. In determining when a decline in fair value below amortized cost of a fixed maturity security is other than temporary, we evaluate the following factors:

- Whether we expect to recover the entire amortized cost basis of the security
- Whether we intend to sell the security or will be required to sell the security before the recovery of its amortized cost basis
- Whether the security is current as to principal and interest payments
- The significance of the decline in value
- The time period during which there has been a significant decline in value
- Current and future business prospects and trends of earnings
- The valuation of the security's underlying collateral
- Relevant industry conditions and trends relative to their historical cycles
- Market conditions
- Rating agency and governmental actions
- Bid and offering prices and the level of trading activity
- Adverse changes in estimated cash flows for securitized investments
- Changes in fair value subsequent to the balance sheet date
- Any other key measures for the related security

We evaluate available information, including the factors noted above, both positive and negative, in reaching our conclusions. In particular, we also consider the strength of the issuer's balance sheet, its debt obligations and near term funding requirements, cash flow and liquidity, the profitability of its core businesses, the availability of marketable assets which could be sold to increase liquidity, its industry fundamentals and regulatory environment, and its access to capital markets. Although all available and applicable factors are considered in our analysis, our expectation of recovering the entire amortized cost basis of the security, whether we intend to sell the security, whether it is more likely than not we will be required to sell the security before recovery of its amortized cost, and whether the security is current on principal and interest payments are the most critical factors in determining whether impairments are other than temporary. The significance of the decline in value and the length of time during which there has been a significant decline are also important factors, but we generally do not record an impairment loss based solely on these two factors, since often other more relevant factors will impact our evaluation of a security.

While determining other-than-temporary impairments is a judgmental area, we utilize a formal, well-defined, and disciplined process to monitor and evaluate our fixed income investment portfolio, supported by issuer specific research and documentation as of the end of each period. The process results in a thorough evaluation of problem investments and the recording of losses on a timely basis for investments determined to have an other-than-temporary impairment.

We use a comprehensive rating system to evaluate the investment and credit risk of our mortgage loans and to identify specific properties for inspection and reevaluation. Mortgage loans are considered impaired when, based on current information and events, it is probable that we will be unable to collect all amounts due according to the contractual terms of the loan agreement. We establish an allowance for probable losses on mortgage loans based on a review of individual loans, considering the value of the underlying collateral, the value of which is periodically assessed. Mortgage loans are not reported at fair value in our consolidated balance sheets unless the mortgage loan is considered impaired, in which case the impairment is recognized as a realized investment loss in our consolidated statements of income.

There are a number of significant risks inherent in the process of monitoring our investments for impairments and determining when and if an impairment is other than temporary. These risks and uncertainties include the following possibilities:

- The assessment of a borrower's ability to meet its contractual obligations will change.
- The economic outlook, either domestic or foreign, may be less favorable or may have a more significant impact on the borrower than anticipated, and as such, the investment may not recover in value.
- New information may become available concerning the security, such as disclosure of accounting irregularities, fraud, or corporate governance issues.
- Significant changes in credit spreads may occur in the related industry.
- Significant increases in interest rates may occur and may not return to levels similar to when securities were initially purchased.
- Adverse rating agency actions may occur.

See Notes 1 and 3 of the "Notes to Consolidated Financial Statements" contained herein in Item 8.

Pension and Postretirement Benefit Plans

We sponsor several defined benefit pension and other postretirement benefit (OPEB) plans for our employees, including non-qualified pension plans. The U.S. qualified and non-qualified defined benefit pension plans comprise the majority of our total benefit obligation and benefit cost. We maintain a separate defined benefit plan for eligible employees in our U.K. operation. The U.S. defined benefit pension plans were closed to new entrants on December 31, 2013, the OPEB plan was closed to new entrants on December 31, 2012, and the U.K. plan was closed to new entrants on December 31, 2002.

Assumptions

Our net periodic benefit costs and the value of our benefit obligations for these plans are determined based on a set of economic and demographic assumptions that represent our best estimate of future expected experience. Major assumptions used in accounting for these plans include the expected discount (interest) rate, the long-term rate of return on plan assets, and mortality rates. We also use, as applicable, expected increases in compensation levels and a weighted average annual rate of increase in the per capita cost of covered benefits, which reflects a health care cost trend rate, and the U.K. pension plan also uses expected cost of living increases to plan benefits.

The assumptions chosen for our pension and OPEB plans are reviewed annually, using a December 31 measurement date for each of our plans unless we are required to perform an interim remeasurement. The discount rate, expected long-term rate of return, and mortality rate assumptions have the most significant effect on our net periodic benefit costs associated with these plans. In addition to the effect of changes in our assumptions, the net periodic cost or benefit obligation under our pension and OPEB plans may change due to factors such as plan amendments, actual experience being different from our assumptions, special benefits to terminated employees, and/or changes in benefits provided under the plans.

- Discount rate - This interest assumption is based on the yield derived from a portfolio of high quality fixed income corporate debt instruments that reasonably match the timing and amounts of projected future benefits for each of our retirement-related benefit plans. The rate is determined at the measurement date. A lower discount rate increases the present value of benefit obligations and increases our net periodic benefit cost.

- Long-term rate of return - This assumption is selected from a range of probable return outcomes from an analysis of the asset portfolio. The market-related value as it relates to our estimate of long-term rate of return equals the fair value of plan assets, determined as of the measurement date. The return on plan assets recognizes all asset gains and losses, including changes in fair value, through the measurement date. Our expectations for the future investment returns of the asset categories are based on a combination of historical market performance, evaluations of investment forecasts obtained from external consultants and economists, and current market yields. The expected return for the total portfolio is calculated based on the plan's strategic asset allocation. The actual rate of return on plan assets is determined based on the fair value of the plan assets at the beginning and the end of the period, adjusted for contributions and benefit payments. A lower long-term rate of return on plan assets increases our net periodic benefit cost.

Investment risk is measured and monitored on an ongoing basis through annual liability measurements, periodic asset/liability studies, and quarterly investment portfolio reviews. Risk tolerance is established through consideration of plan liabilities, plan funded status, and corporate financial condition. We believe our investment portfolios are well diversified by asset class and sector, with no undue risk concentrations in any one category. See Note 9 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion of the investment portfolios for our plans.

- Mortality rate - This assumption reflects our best estimate, as of the measurement date, of the life expectancies of plan participants in order to determine the expected length of time for benefit payments. We derive our assumptions from industry mortality tables.

The weighted average assumptions used in the measurement of our net periodic benefit costs for the years ended December 31 are as follows:

	Pension Benefits					
	U.S. Plans		U.K. Plan		OPEB	
Assumption	2019	2018	2019	2018	2019	2018
Discount Rate	4.40%	3.80%	2.90%	2.50%	4.40%	3.70%
Expected Long-term Rate of Return on Plan Assets	7.00%	6.75%	4.30%	3.90%	5.75%	5.75%

The following illustrates the sensitivity of the below items to a 50 basis point change in the discount rate or the expected long-term rate of return on plan assets:

($ in millions)	At or for the Year Ended December 31, 2018			
Assumption	Change	Net Periodic Benefit Cost, Before Tax	Benefit Obligation	Stockholders' Equity, After Tax
Discount Rate	+ 50 bp	$ (3.8)	$ (159.4)	$ 126.5
Discount Rate	- 50 bp	1.7	180.0	(141.2)
Expected Long-term Rate of Return on Plan Assets	+ 50 bp	(9.0)	N/A	N/A
Expected Long-term Rate of Return on Plan Assets	- 50 bp	9.0	N/A	N/A

Benefit Obligation and Fair Value of Plan Assets

During 2018, the fair value of plan assets in our U.S. qualified defined benefit pension plan decreased $127.7 million, or 8.1 percent due to an unfavorable return on assets which resulted in a loss of approximately 3.4 percent and the payment of benefits and expenses. The fair value of plan assets in our U.K. pension plan decreased £17.5 million, or 9.3 percent, due to an unfavorable return on assets which resulted in a loss of approximately 6.4 percent, as well as the payment of benefits and expenses. Although our rate of return on plan assets for 2018 did not meet our assumptions used in the measurement of our net periodic benefit costs, we believe our assumptions appropriately reflect the impact of the current economic environment and our expectations for the future investment returns based on the plan's asset allocation.

As of December 31, 2018, our pension and OPEB plans have an aggregate unrecognized net actuarial loss of $700.6 million and an unrecognized prior service credit of $2.3 million, which together represent the cumulative liability and asset gains and losses as well as the portion of prior service credits that have not been recognized in pension expense. The unrecognized net actuarial loss for our pension plans, which is $721.5 million at December 31, 2018, will be amortized over the average remaining life expectancy of the plan, which is approximately 24 years for the U.S. plan and 31 years for the U.K. plan, to the extent that it exceeds the 10 percent corridor, as described below. The unrecognized net actuarial gain of $20.9 million for our OPEB plan will be amortized over the average future working life of OPEB plan participants, estimated at three years, to the extent the loss is outside of the corridor. The corridor for the pension and OPEB plans is established based on the greater of 10 percent of the plan assets or 10 percent of the benefit obligation. At December 31, 2018, $479.3 million of the actuarial loss was outside of the corridor for the U.S. plans and £21.3 million was outside of the corridor for the U.K. plan. At December 31, 2018, $8.3 million of the actuarial gain was outside of the corridor for the OPEB plan.

The amortization of the unrecognized actuarial gain or loss and the unrecognized prior service credit is a component of our net periodic benefit cost and equaled $22.1 million, $19.6 million, and $15.8 million in 2018, 2017, and 2016, respectively.

The fair value of plan assets in our U.S. qualified defined benefit pension plan was $1,454.9 million at December 31, 2018, compared to $1,582.6 million at December 31, 2017. The plan was in an underfunded position of $294.2 million and $348.8

million at December 31, 2018 and December 31, 2017, respectively. This year-over-year change was due primarily to the decrease in period benefit obligations due to the increase in discount rate, partially offset by lower than expected asset returns.

The fair value of plan assets in our U.K. pension plan was £170.2 million at December 31, 2018, compared to £187.6 million at December 31, 2017. The U.K. pension plan was in an overfunded position of £4.7 million and £7.2 million at December 31, 2018 and 2017, respectively.

The fair value of plan assets in our OPEB plan was $10.1 million and $10.5 million at December 31, 2018 and 2017, respectively. These assets represent life insurance contracts to fund the life insurance benefit portion of our OPEB plan. Our OPEB plan represents a non-vested, non-guaranteed obligation, and current regulations do not require specific funding levels for these benefits, which are comprised of retiree life, medical, and dental benefits. It is our practice to use general assets to pay medical and dental claims as they come due in lieu of utilizing plan assets for the medical and dental benefit portions of our OPEB plan.

See Note 9 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion.

Income Taxes

We provide for federal, state, and foreign income taxes currently payable, as well as those deferred due to temporary differences between the financial reporting and tax bases of assets and liabilities. Our accounting for income taxes represents our best estimate of various events and transactions. The calculation of our tax liabilities involves dealing with uncertainties in the application of complex tax laws in a multitude of jurisdictions, both domestic and foreign. The amount of income taxes we pay is subject to ongoing audits in various jurisdictions, and a material assessment by a governing tax authority could affect profitability.

We record a valuation allowance to reduce deferred tax assets to the amount that is more likely than not to be realized. Significant judgment is required in determining valuation allowances. In evaluating the ability to recover deferred tax assets, we consider all available positive and negative evidence including past operating results, the existence of cumulative losses in the most recent years, forecasted earnings, future taxable income, and prudent and feasible tax planning strategies. In the event we determine that we most likely will not be able to realize all or part of our deferred tax assets in the future, an increase to the valuation allowance is charged to earnings in the period such determination is made. Likewise, if it is later determined that it is more likely than not that those deferred tax assets will be realized, the previously provided valuation allowance is reversed.

In establishing a liability for unrecognized tax benefits, assumptions are made in determining whether, and to what extent, a tax position may be sustained. GAAP prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of tax positions taken or expected to be taken in income tax returns. The evaluation of a tax position is a two step process. The first step is to determine whether it is more likely than not that a tax position will be sustained upon examination based on the technical merits of the position. The second step is to measure a position that satisfies the recognition threshold at the largest amount of benefit that is greater than 50 percent likely of being realized upon ultimate settlement. Tax positions that previously failed to meet the more likely than not threshold but that now satisfy the recognition threshold are recognized in the first subsequent financial reporting period in which that threshold is met. Previously recognized tax positions that no longer meet the more likely than not recognition threshold are derecognized in the first subsequent financial reporting period in which that threshold is no longer met. If a previously recognized tax position is settled for an amount that is different from the amount initially measured, the difference will be recognized as a tax benefit or expense in the period the settlement is effective.

Changes in tax laws, tax regulations, or interpretations of such laws or regulations, could have an impact on our provision for income tax and our effective tax rate, which could significantly affect the amounts reported in our financial statements. The TCJA did not significantly change our process for evaluating the above items.

In connection with the TCJA, we recognized a tax benefit of $97.9 million in 2017 related to the revaluation of our net deferred tax liabilities associated with our U.S. operations to the newly enacted U.S. corporate tax rate and a tax expense of $66.4 million resulting from the tax on undistributed and previously untaxed foreign earnings and profits. During 2018, we continued to refine our calculations during the one-year measurement period after the enactment date as allowed by SAB 118 and increased our provisional Repatriation Tax estimate by $11.5 million to $77.9 million.

See "Regulation" contained herein in Item 1. See Note 7 of the "Notes to Consolidated Financial Statements" contained herein in Item 8.

Contingent Liabilities

On a quarterly basis, we review relevant information with respect to litigation and contingencies to be reflected in our consolidated financial statements. An estimated loss is accrued when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. It is possible that our results of operations or cash flows in a particular period could be materially affected by an ultimate unfavorable outcome of pending litigation or regulatory matters depending, in part, on our results of operations or cash flows for the particular period. See Note 14 of the "Notes to Consolidated Financial Statements" contained herein in Item 8.

Accounting Developments

For information on new accounting standards and the impact, if any, on our financial position or results of operations, see Note 1 of the "Notes to Consolidated Financial Statements" contained herein in Item 8.

Consolidated Operating Results
(in millions of dollars)

	Year Ended December 31				
	2018	% Change	2017	% Change	2016
Revenue					
Premium Income	$8,986.1	4.5 %	$8,597.1	2.9 %	$8,357.7
Net Investment Income	2,453.7	0.1	2,451.7	(0.3)	2,459.0
Net Realized Investment Gain (Loss)	(39.5)	(198.0)	40.3	66.5	24.2
Other Income	198.2	0.3	197.7	(3.8)	205.6
Total Revenue	11,598.5	2.8	11,286.8	2.2	11,046.5
Benefits and Expenses					
Benefits and Change in Reserves for Future Benefits	8,020.4	13.7	7,055.7	1.6	6,941.8
Commissions	1,108.4	4.5	1,060.8	3.3	1,026.7
Interest and Debt Expense	167.3	4.6	159.9	(3.7)	166.0
Deferral of Acquisition Costs	(668.0)	6.4	(628.0)	6.0	(592.4)
Amortization of Deferred Acquisition Costs	565.5	7.3	527.1	6.9	493.0
Compensation Expense	885.9	3.9	852.3	1.6	839.1
Other Expenses	891.2	4.2	855.0	3.7	824.6
Total Benefits and Expenses	10,970.7	11.0	9,882.8	1.9	9,698.8
Income Before Income Tax	627.8	(55.3)	1,404.0	4.2	1,347.7
Income Tax	104.4	(74.5)	409.8	(1.6)	416.3
Net Income	$523.4	(47.4)	$994.2	6.7	$931.4

Fluctuations in exchange rates, particularly between the British pound sterling and the U.S. dollar for our U.K. operations, have an effect on our consolidated financial results. In periods when the pound weakens relative to the preceding period, translating pounds into dollars decreases current period results relative to the prior period. In periods when the pound strengthens, translating pounds into dollars increases current period results relative to the prior period.

The weighted average pound/dollar exchange rate for our Unum UK line of business was 1.336, 1.290, and 1.357 for the years ended 2018, 2017, and 2016, respectively. If the 2017 and 2016 results for our U.K. operations had been translated at the 2018 exchange rate, our adjusted operating revenue by segment would have been higher by approximately $23 million in 2017 and lower by approximately $9 million in 2016. Additionally, our adjusted operating income would have been higher by approximately $4 million in 2017 and lower by approximately $2 million in 2016. However, it is important to distinguish between translating and converting foreign currency. Except for a limited number of transactions, we do not actually convert pounds into dollars. As a result, we view foreign currency translation as a financial reporting item and not a reflection of operations or profitability in the U.K.

We continued to report year-over-year premium growth in 2018 and 2017 in each of our principal operating business segments, as measured in local currency, due to overall sales growth, the expansion of our dental and vision products, and generally stable persistency. Premium income continues to decline, as expected, in our Closed Block segment.

Net investment income increased slightly in 2018 relative to 2017 due primarily to an increase in the level of invested assets and higher miscellaneous investment income, partially offset by a decline in the yield on invested assets. Net investment income decreased slightly in 2017 relative to 2016 due primarily to a decrease in yield on invested assets and the unfavorable impact of the lower foreign currency exchange rate on translated financial results, mostly offset by an increase in the level of invested assets, higher income from inflation index-linked bonds in our Unum

International segment, and higher miscellaneous investment income.

We recognized $17.5 million of other-than-temporary impairment losses on fixed maturity securities in 2018 compared to losses of $8.1 million and $30.5 million in 2017 and 2016, respectively. Also included in net realized investment gains and losses were changes in the fair value of an embedded derivative in a modified coinsurance arrangement, which resulted in realized gains (losses) of $(15.2) million, $30.8 million, and $40.9 million in 2018, 2017, and 2016, respectively. See Notes 3 and 4 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion.

Overall benefits experience was unfavorable in 2018 relative to the prior periods, with a consolidated benefit ratio of 89.3 percent in 2018 compared to 82.1 percent in 2017 and 83.1 percent in 2016. Excluding the 2018 long term care reserve increase and the 2017 unclaimed death benefits reserve increase, the benefit ratios for 2018 and 2017 were 80.9 percent and 81.6 percent, respectively. The underlying benefits experience for each of our operating business segments is discussed more fully in "Segment Results" contained herein in this Item 7.

Commissions and the deferral of acquisition costs increased year-over-year in 2018 and 2017 due primarily to overall sales growth. The amortization of deferred acquisition costs increased year-over-year in 2018 and 2017 due to growth in the level of the deferred asset in our Unum US and Colonial Life segments.

Interest and debt expense was higher in 2018 relative to 2017 due primarily to a higher level of outstanding debt and a higher overall rate of interest. Interest and debt expense was lower in 2017 relative to 2016 due primarily to a lower level of outstanding debt, partially offset by a higher overall rate of interest. See Note 8 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion.

Other expenses, including compensation expense, increased in each of the years presented above. Excluding the loss from a guaranty fund assessment in 2017, the year-over-year premium growth rates mostly offset the growth rates in compensation and other expenses as we continue our focus on expense management and operating efficiencies, resulting in a generally stable other expense ratio relative to the prior years.

Our effective income tax rate for 2018 was 16.6 percent, compared to 29.2 percent in 2017 and 30.9 percent in 2016. The TCJA was enacted in December 2017 and stipulated a reduction of the U.S. statutory rate from 35 percent to 21 percent effective in 2018. Our 2018 effective tax rate differed from the U.S. statutory rate due to favorable tax credits and adjustments related to our prior year tax return. Our effective tax rate for 2017 was favorably impacted by the enactment of the TCJA, which reduced the net deferred tax liability related to our U.S. operations by $97.9 million in 2017 partially offset by a tax of $66.4 million Deemed Repatriation Tax. Our effective tax rate in 2016 differed from the U.S. statutory rate due to tax credits and foreign earnings taxed at lower rates than the U.S. statutory rate including a favorable impact of the enactment of an income tax rate reduction by the U.K. government. This enactment reduced the net deferred tax liability related to our U.K. operations by $4.5 million in 2016.

In describing our results, we may at times note certain items and exclude the impact on financial ratios and metrics to enhance the understanding and comparability of our operational performance and the underlying fundamentals, but this exclusion is not an indication that similar items may not recur. We also measure and analyze our segment performance on the basis of "adjusted operating revenue" and "adjusted operating income" or "adjusted operating loss", which differ from total revenue and income before income tax as presented in our consolidated statements of income due to the exclusion of net realized investment gains and losses and certain other items. These performance measures are in accordance with GAAP guidance for segment reporting, but they should not be viewed as a substitute for total revenue, income before income tax, or net income. See "Reconciliation of Non-GAAP Financial Measures" contained herein in this Item 7. See also "Segment Results" contained herein in this Item 7 for further discussion of operating and sales results for each of our segments and major product lines.

Consolidated Sales Results

Shown below are sales results for our three principal operating business segments.
(in millions)

	Year Ended December 31				
	2018	% Change	2017	% Change	2016
Unum US	$1,114.6	(1.3)%	$1,129.0	19.6 %	$943.8
Unum International	$87.0	1.3 %	$85.9	1.7 %	$84.5
Colonial Life	$561.3	8.0 %	$519.7	7.5 %	$483.6

Sales shown in the preceding chart generally represent the annualized premium income on new sales which we expect to receive and report as premium income during the next 12 months following or beginning in the initial quarter in which the sale is reported, depending on the effective date of the new sale. Sales do not correspond to premium income reported as revenue in accordance with GAAP. This is because new annualized sales premiums reflect current sales performance and what we expect to recognize as premium income over a 12 month period, while premium income reported in our financial statements is reported on an "as earned" basis rather than an annualized basis and also includes renewals and persistency of in-force policies written in prior years as well as current new sales.

Sales, persistency of the existing block of business, employment and salary growth, and the effectiveness of a renewal program are indicators of growth in premium income. Trends in new sales, as well as existing market share, also indicate the potential for growth in our respective markets and the level of market acceptance of price levels and new product offerings. Sales results may fluctuate significantly due to case size and timing of sales submissions.

See "Segment Results" as follows for a discussion of sales by segment.

Segment Results

Our reporting segments are comprised of the following: Unum US, Unum International, Colonial Life, Closed Block, and Corporate. Financial information for each of our reporting segments is as follows.

Unum US Segment

The Unum US segment includes group long-term and short-term disability insurance, group life and accidental death and dismemberment products, and supplemental and voluntary lines of business, which are comprised of individual disability, voluntary benefits, and dental and vision products.

Unum US Operating Results

Shown below are financial results for the Unum US segment. In the sections following, financial results and key ratios are also presented for the major lines of business within the segment.
(in millions of dollars, except ratios)

	Year Ended December 31				
	2018	% Change	2017	% Change	2016
Adjusted Operating Revenue					
Premium Income	$5,736.4	5.4 %	$5,443.5	3.9 %	$5,240.9
Net Investment Income	778.7	(4.0)	811.2	(2.1)	828.7
Other Income	118.5	4.7	113.2	(0.1)	113.3
Total	6,633.6	4.2	6,367.9	3.0	6,182.9
Benefits and Expenses					
Benefits and Change in Reserves for Future Benefits	3,856.5	4.4	3,693.4	1.9	3,624.3
Commissions	620.6	5.0	590.8	1.8	580.4
Deferral of Acquisition Costs	(344.0)	5.7	(325.5)	3.6	(314.1)
Amortization of Deferred Acquisition Costs	315.1	7.3	293.6	6.7	275.2
Other Expenses	1,170.8	3.4	1,132.7	2.7	1,102.9
Total	5,619.0	4.3	5,385.0	2.2	5,268.7
Income Before Income Tax and Net Realized Investment Gains and Losses	1,014.6	3.2	982.9	7.5	914.2
UDB Reserve Increase	—	N.M.	26.6	N.M.	—
Adjusted Operating Income	$1,014.6	0.5	$1,009.5	10.4	$914.2
Operating Ratios (% of Premium Income):					
Benefit Ratio	67.2 %		67.8 %		69.2 %
Benefit Ratio Excluding UDB Reserve Increase			67.4 %		
Other Expense Ratio	20.4 %		20.8 %		21.0 %
Income Ratio			18.1 %		
Adjusted Operating Income Ratio	17.7 %		18.5 %		17.4 %

N.M. = not a meaningful percentage

Unum US Group Disability Operating Results

Shown below are financial results and key performance indicators for Unum US group disability.

(in millions of dollars, except ratios)

	Year Ended December 31				
	2018	% Change	2017	% Change	2016
Adjusted Operating Revenue					
Premium Income					
Group Long-term Disability	$1,766.2	0.9 %	$1,749.6	1.3 %	$1,726.6
Group Short-term Disability	706.3	10.4	639.8	2.2	626.1
Total Premium Income	2,472.5	3.5	2,389.4	1.6	2,352.7
Net Investment Income	432.7	(6.0)	460.5	(4.0)	479.5
Other Income	109.0	10.9	98.3	7.9	91.1
Total	3,014.2	2.2	2,948.2	0.9	2,923.3
Benefits and Expenses					
Benefits and Change in Reserves for Future Benefits	1,880.7	2.9	1,828.5	(1.9)	1,863.8
Commissions	186.5	2.5	181.9	2.1	178.2
Deferral of Acquisition Costs	(48.2)	2.8	(46.9)	1.1	(46.4)
Amortization of Deferred Acquisition Costs	44.7	12.0	39.9	11.1	35.9
Other Expenses	612.2	4.3	587.0	2.6	572.1
Total	2,675.9	3.3	2,590.4	(0.5)	2,603.6
Adjusted Operating Income	$338.3	(5.4)	$357.8	11.9	$319.7
Operating Ratios (% of Premium Income):					
Benefit Ratio	76.1 %		76.5 %		79.2 %
Other Expense Ratio	24.8 %		24.6 %		24.3 %
Adjusted Operating Income Ratio	13.7 %		15.0 %		13.6 %
Persistency:					
Group Long-term Disability	90.9 %		89.9 %		91.0 %
Group Short-term Disability	87.2 %		86.6 %		87.7 %

Year Ended December 31, 2018 Compared with Year Ended December 31, 2017

Premium income increased compared to 2017, driven primarily by growth in the in-force block due to higher prior period sales and improved persistency. Net investment income was lower relative to 2017 due to a decrease in the level of invested assets and a decline in yield on invested assets, partially offset by higher miscellaneous investment income. Other income is comprised primarily of fees from administrative services products.

Benefits experience was favorable compared to 2017 due primarily to favorable claim recovery experience in our group long-term disability product line, partially offset by higher claims incidence in certain of our group short-term disability products.

Commissions and the deferral of acquisition costs were higher compared to 2017 due to prior period sales growth. The amortization of deferred acquisition costs increased relative to 2017 due to growth in the level of the deferred asset. Our other expense ratio for 2018 increased compared to 2017 due primarily to an increase in operational investments in our business balanced with our continued focus on expense management and operating efficiencies.

We had goodwill of $8.9 million at December 31, 2018, none of which is currently believed to be at risk for future impairment.

Year Ended December 31, 2017 Compared with Year Ended December 31, 2016

Premium income increased compared to 2016, driven primarily by growth in the in-force block due to higher sales, partially offset by lower persistency. Net investment income was lower relative to 2016 due to a decline in yield and a lower level of invested assets, partially offset by higher miscellaneous investment income. Other income is comprised primarily of fees from administrative services products.

Benefits experience was favorable compared to 2016 due primarily to continued favorable claims incidence trends in our group long-term disability product line and lower prevalence rates in our group short-term disability product line. Partially offsetting the favorable claims experience was a 50 basis point decrease in the discount rate for group long-term disability claim incurrals which we implemented in the fourth quarter of 2016.

Commissions and the deferral of acquisition costs were higher compared to 2016 due to sales growth. The amortization of deferred acquisition costs increased relative to 2016 due to growth in the level of the deferred asset. Our other expense ratio for 2017 increased slightly compared to 2016 due to the continued investment in the growth of our business balanced with our continued focus on expense management and operating efficiencies.

Unum US Group Life and Accidental Death and Dismemberment Operating Results

Shown below are financial results and key performance indicators for Unum US group life and accidental death and dismemberment.

(in millions of dollars, except ratios)

	Year Ended December 31				
	2018	% Change	2017	% Change	2016
Adjusted Operating Revenue					
Premium Income					
Group Life	$1,583.7	7.9 %	$1,467.5	4.1 %	$1,410.0
Accidental Death & Dismemberment	156.3	6.0	147.5	5.1	140.3
Total Premium Income	1,740.0	7.7	1,615.0	4.2	1,550.3
Net Investment Income	106.5	(3.1)	109.9	(3.1)	113.4
Other Income	4.7	(2.1)	4.8	6.7	4.5
Total	1,851.2	7.0	1,729.7	3.7	1,668.2
Benefits and Expenses					
Benefits and Change in Reserves for Future Benefits	1,237.7	5.8	1,169.8	5.1	1,112.6
Commissions	141.1	7.5	131.3	3.5	126.8
Deferral of Acquisition Costs	(38.2)	5.5	(36.2)	1.4	(35.7)
Amortization of Deferred Acquisition Costs	35.9	12.5	31.9	9.2	29.2
Other Expenses	214.6	(1.3)	217.4	1.8	213.5
Total	1,591.1	5.1	1,514.2	4.7	1,446.4
Income Before Income Tax and Net Realized Investment Gains and Losses	260.1	20.7	215.5	(2.8)	221.8
UDB Reserve Increase	—	N.M.	18.5	N.M.	—
Adjusted Operating Income	$260.1	11.2	$234.0	5.5	$221.8
Operating Ratios (% of Premium Income):					
Benefit Ratio	71.1 %		72.4 %		71.8 %
Benefit Ratio Excluding UDB Reserve Increase			71.3 %		
Other Expense Ratio	12.3 %		13.5 %		13.8 %
Income Ratio			13.3 %		
Adjusted Operating Income Ratio	14.9 %		14.5 %		14.3 %
Persistency:					
Group Life	91.2 %		88.0 %		90.7 %
Accidental Death & Dismemberment	89.9 %		87.2 %		90.3 %

N.M. = not a meaningful percentage

Year Ended December 31, 2018 Compared with Year Ended December 31, 2017

Premium income increased compared to 2017 with growth in the in-force block due to prior period sales growth and favorable persistency. Net investment income was lower compared to 2017 due to a decline in yield on invested assets, partially offset by an increase in the level of invested assets and higher miscellaneous investment income.

Benefits experience was favorable compared to 2017 due to the previously discussed 2017 reserve increase for unclaimed death benefits in our group life product line and favorable 2018 experience in our accidental death and dismemberment product line. Excluding the 2017 reserve increase, benefits experience was generally consistent with the prior year.

Commissions and the deferral of acquisition costs were higher compared to 2017 due to prior period sales growth. The amortization of deferred acquisition costs increased relative to 2017 due to growth in the level of the deferred asset. The other expense ratio improved compared to 2017 due to growth in premium income and a continued focus on expense management and operating efficiencies balanced with continued investment in the growth of our business.

Year Ended December 31, 2017 Compared with Year Ended December 31, 2016

Premium income increased compared to 2016 with growth in the in-force block due to higher sales, partially offset by a decline in persistency. Net investment income was lower compared to 2016 due to a decline in yield and a lower level of invested assets, partially offset by higher miscellaneous investment income.

Benefits experience was unfavorable compared to 2016 due to the 2017 reserve increase for unclaimed death benefits in the group life product line. Excluding this reserve increase, benefits experience was favorable due primarily to favorable average claim size in our group life product line, partially offset by higher incidence in the accidental death and dismemberment product line.

Commissions and the deferral of acquisition costs were higher compared to 2016 due to sales growth. The amortization of deferred acquisition costs increased relative to 2016 due to growth in the level of the deferred asset. The other expense ratio was favorable to 2016 due to growth in premium income and a continued focus on expense management and operating efficiencies.

Unum US Supplemental and Voluntary Operating Results
Shown below are financial results and key performance indicators for Unum US supplemental and voluntary product lines.
(in millions of dollars, except ratios)

	Year Ended December 31				
	2018	% Change	2017	% Change	2016
Adjusted Operating Revenue					
Premium Income					
Individual Disability	$425.4	1.2 %	$420.2	(12.5)%	$480.3
Voluntary Benefits	895.7	5.5	849.4	6.6	796.5
Dental and Vision	202.8	19.6	169.5	177.4	61.1
Total Premium Income	1,523.9	5.9	1,439.1	7.6	1,337.9
Net Investment Income	239.5	(0.5)	240.8	2.1	235.8
Other Income	4.8	(52.5)	10.1	(42.9)	17.7
Total	1,768.2	4.6	1,690.0	6.2	1,591.4
Benefits and Expenses					
Benefits and Change in Reserves for Future Benefits	738.1	6.2	695.1	7.3	647.9
Commissions	293.0	5.5	277.6	0.8	275.4
Deferral of Acquisition Costs	(257.6)	6.3	(242.4)	4.5	(232.0)
Amortization of Deferred Acquisition Costs	234.5	5.7	221.8	5.6	210.1
Other Expenses	344.0	4.8	328.3	3.5	317.3
Total	1,352.0	5.6	1,280.4	5.1	1,218.7
Income Before Income Tax and Net Realized Investment Gains and Losses	416.2	1.6	409.6	9.9	372.7
UDB Reserve Increase	—	N.M.	8.1	N.M.	—
Adjusted Operating Income	$416.2	(0.4)	$417.7	12.1	$372.7
Operating Ratios (% of Premium Income):					
Benefit Ratios:					
Individual Disability	50.6 %		47.2 %		52.9 %
Voluntary Benefits	42.8 %		44.6 %		44.3 %
Voluntary Benefits Excluding UDB Reserve Increase			43.6 %		
Dental and Vision	68.5 %		69.6 %		66.6 %
Other Expense Ratio	22.6 %		22.8 %		23.7 %
Income Ratio			28.5 %		
Adjusted Operating Income Ratio	27.3 %		29.0 %		27.9 %
Persistency:					
Individual Disability	90.3 %		91.0 %		91.1 %
Voluntary Benefits	75.9 %		77.5 %		76.9 %
Dental and Vision	84.5 %		85.4 %		84.6 %

N.M. = not a meaningful percentage

Year Ended December 31, 2018 Compared with Year Ended December 31, 2017

Premium income increased compared to 2017 driven by higher sales, including dental and vision where we continue to expand its distribution, partially offset by unfavorable persistency. Net investment income was slightly lower compared to 2017 due to a decline in yield on invested assets and lower miscellaneous investment income, partially offset by a higher level of invested assets. Other income is comprised primarily of surrender fees in our voluntary benefits product line, which continue to decline as our interest sensitive life products mature.

Benefits experience for the individual disability product line compared to 2017 was less favorable due to a prior year reserve release of $19.5 million resulting from our 2017 annual reserve adequacy update that did not recur and unfavorable claims activity, partially offset by favorable mortality experience in 2018. Benefits experience for voluntary benefits was favorable compared to 2017 due primarily to the previously discussed 2017 reserve increase for unclaimed death benefits. Excluding this reserve increase, benefits experience was favorable across most of our voluntary product lines. Benefits experience for the dental and vision product line was favorable compared to 2017 and was within our expectations.

Commissions and the deferral of acquisition costs were higher compared to 2017 due primarily to sales growth. The amortization of deferred acquisition costs increased year over year due to growth in the level of the deferred asset. Our other expense ratio improved relative to 2017 due to growth in premium income and our continued focus on expense management and operating efficiencies balanced with an increase in operational investments in our business.

We had goodwill of $271.1 million at December 31, 2018, none of which is currently believed to be at risk for future impairment.

Year Ended December 31, 2017 Compared with Year Ended December 31, 2016

Premium income increased compared to 2016 driven by growth in the dental and vision product line associated with the acquisition of Starmount during the third quarter of 2016 as well as growth in the voluntary benefits product line due to higher sales. Premium income for our individual disability product line declined compared to 2016 due to the impact of a reinsurance agreement we entered into during the fourth quarter of 2016 whereby we ceded 30 percent of the risk for certain blocks of our individual disability business on a non-proportional modified coinsurance basis. Excluding the impact of this agreement, premium income for our individual disability product line increased relative to 2016, driven by higher sales.

Net investment income was higher compared to 2016 due to an increase in the level of invested assets and higher miscellaneous investment income, partially offset by a decline in yield. Other income decreased relative to 2016 due primarily to the expected decline in surrender fees as our interest sensitive life products mature.

Benefits experience was favorable for the individual disability product line compared to 2016 due primarily to lower claim volumes and a reserve release of $19.5 million resulting from our annual reserve adequacy update, partially offset by the impact to our benefit ratio from the reinsurance agreement we entered into during the fourth quarter of 2016. Benefits experience for voluntary benefits was unfavorable compared to 2016 due primarily to the 2017 reserve increase for unclaimed death benefits. Excluding this reserve increase, benefits experience was favorable driven primarily by a continued shift in product mix and favorable claims experience, primarily in our critical illness product line. The dental and vision product line will typically have a higher benefit ratio than the other product lines reported in our supplemental and voluntary line of business, but did experience less favorable claims experience relative to 2016.

Commissions were slightly higher compared to 2016 due primarily to sales growth in the dental and vision and voluntary benefits product lines, mostly offset by commissions ceded in the individual disability product line related to the fourth quarter of 2016 reinsurance agreement. The deferral of acquisition costs increased relative to 2016 due primarily to sales growth in our voluntary benefits and dental and vision product lines. Amortization of deferred acquisition costs increased year over year due to growth in the level of the deferred asset and less favorable persistency in our individual disability product line. Our other expense ratio improved relative to 2016 due to growth in premium income as well as expense allowances received related to the individual disability product line reinsurance agreement and our continued focus on expense management and operating efficiencies.

Sales
(in millions of dollars)

	Year Ended December 31						
	2018	% Change		2017	% Change		2016
Sales by Product							
Group Disability and Group Life and AD&D							
Group Long-term Disability	$243.8	1.2	%	$240.8	10.6	%	$217.8
Group Short-term Disability	138.7	(14.6	)	162.5	41.8		114.6
Group Life and AD&D	282.4	(9.0	)	310.5	15.0		270.1
Subtotal	664.9	(6.9	)	713.8	18.5		602.5
Supplemental and Voluntary							
Individual Disability	77.2	13.7		67.9	4.3		65.1
Voluntary Benefits	303.1	3.6		292.5	11.8		261.7
Dental and Vision	69.4	26.6		54.8	N.M		14.5
Subtotal	449.7	8.3		415.2	21.7		341.3
Total Sales	$1,114.6	(1.3	)	$1,129.0	19.6		$943.8
Sales by Market Sector							
Group Disability and Group Life and AD&D							
Core Market (< 2,000 employees)	$395.1	(5.2	)%	$416.9	10.3	%	$378.1
Large Case Market	269.8	(9.1	)	296.9	32.3		224.4
Subtotal	664.9	(6.9	)	713.8	18.5		602.5
Supplemental and Voluntary	449.7	8.3		415.2	21.7		341.3
Total Sales	$1,114.6	(1.3	)	$1,129.0	19.6		$943.8

N.M. = not a meaningful percentage

Year Ended December 31, 2018 Compared with Year Ended December 31, 2017

Group sales decreased compared to 2017 due to lower sales to new and existing customers in both the core market segment, which we define as employee groups with fewer than 2,000 employees, and in the large case market segment. The sales mix in the group market sector for 2018 was approximately 59 percent core market and 41 percent large case market.

Individual disability sales, which are primarily concentrated in the multi-life market, increased compared to 2017 due to higher sales to both new and existing customers. Voluntary benefits sales increased compared to 2017, primarily driven by higher sales to existing customers in both the core and large case markets, partially offset by lower sales to new customers in the large case market. Dental and vision sales increased compared to 2017 driven by higher sales to both new and existing customers resulting from our continued expansion.

Year Ended December 31, 2017 Compared with Year Ended December 31, 2016

Group sales increased compared to 2016 due to higher sales to new customers in both the core market segment and in the large case market segment. The sales mix in the group market sector for 2017 was approximately 58 percent core market and 42 percent large case market.

Individual disability sales increased compared to 2016 due to higher sales to new customers. Voluntary benefits sales increased compared to 2016, primarily driven by higher sales in both the core and large case markets. Also contributing to supplemental and voluntary sales in 2017 compared to 2016 were higher sales of the dental and vision products resulting from the Starmount acquisition in the third quarter of 2016.

Segment Outlook

We remain committed to offering consumers a broad set of financial protection benefit products at the worksite. During 2019, we will continue to invest in a unique customer experience defined by simplicity, empathy, and deep industry expertise through the re-design of our processes and the increased utilization of digital capabilities and technology to enhance enrollment, underwriting, and claims processing. We will continue to focus on the expansion of products, which includes dental and vision, medical stop-loss, and leave management services, while also introducing new voluntary benefits products. Additionally, we will focus on client expansion, consumer engagement, and collaborative partnerships, all underpinned by strong risk management. We believe our active client management and differentiated integrated customer experience across our product lines will continue to enable us to grow our market.

We anticipate stable adjusted operating income growth in 2019, with disciplined sales and premium growth, consistent risk management, and improving operational efficiency. We believe our underlying profitability will remain strong throughout the year, driven primarily by our continued product mix shift, expense efficiencies, and consistent operating effectiveness.

The low interest rate environment continues to place pressure on our profit margins by impacting net investment income yields as well as discount rates on our insurance liabilities. Our net investment income may be unfavorably impacted by fluctuations in miscellaneous investment income and lower asset levels resulting from improved capital efficiency. As part of our continued pricing discipline and our reserving methodology, we continuously monitor emerging interest rate experience and adjust our pricing and reserve discount rates, as appropriate. We expect that our underwriting results in 2019 will continue at a level generally consistent with 2018. We continuously monitor key indicators to assess our risks and attempt to adjust our business plans accordingly.

Unum International Segment

The Unum International segment is comprised of our operations in both the United Kingdom and Poland and includes insurance for group long-term disability, group life, and supplemental lines of business which include dental, individual disability, critical illness, and our Unum Poland products. Unum International's products are sold primarily through field sales personnel and independent brokers and consultants.

Operating Results

Shown below are financial results and key performance indicators for the Unum International segment.

(in millions of dollars, except ratios)

	Year Ended December 31				
	2018	% Change	2017	% Change	2016
Adjusted Operating Revenue					
Premium Income					
Group Long-term Disability	$358.9	5.5 %	$340.3	(4.2)%	$355.2
Group Life	110.8	7.5	103.1	(2.5)	105.7
Supplemental	99.1	42.4	69.6	1.8	68.4
Total Premium Income	568.8	10.9	513.0	(3.1)	529.3
Net Investment Income	117.2	(2.5)	120.2	1.8	118.1
Other Income	0.4	(42.9)	0.7	N.M.	0.2
Total	686.4	8.3	633.9	(2.1)	647.6
Benefits and Expenses					
Benefits and Change in Reserves for Future Benefits	419.8	9.9	381.9	3.9	367.4
Commissions	39.1	10.1	35.5	(8.7)	38.9
Deferral of Acquisition Costs	(8.1)	15.7	(7.0)	(14.6)	(8.2)
Amortization of Deferred Acquisition Costs	8.2	(9.9)	9.1	(6.2)	9.7
Other Expenses	113.5	10.5	102.7	(7.6)	111.2
Total	572.5	9.6	522.2	0.6	519.0
Adjusted Operating Income	$113.9	2.0	$111.7	(13.1)	$128.6

N.M. = not a meaningful percentage

Foreign Currency Translation

The functional currency of Unum UK and Unum Poland is the British pound sterling and the Polish zloty, respectively. Unum UK's and Unum Poland's premium income, net investment income, claims, and expenses are received or paid in the functional currency, and we hold functional currency-denominated assets to support Unum UK's and Unum Poland's functional currency-denominated policy reserves and liabilities. We translate Unum UK's and Unum Poland's functional currency-denominated financial statement items into dollars for our consolidated financial reporting. We translate income statement items using an average exchange rate for the reporting period, and we translate balance sheet items using the exchange rate at the end of the period. We report unrealized foreign currency translation gains and losses in accumulated other comprehensive income in our consolidated balance sheets.

Fluctuations in exchange rates have an effect on Unum UK's and Unum Poland's reported financial results and our consolidated financial results. In periods when the functional currency strengthens relative to the preceding period, translation increases current period results relative to the prior period. In periods when the functional currency weakens, translation decreases current period results relative to the prior period.

Goodwill

We had total goodwill of $42.6 million for the Unum International segment at December 31, 2018, none of which is currently believed to be at risk for future impairment.

Unum UK Operating Results

Shown below are financial results and key performance indicators for the Unum UK product lines.
(in millions of pounds, except ratios)

	Year Ended December 31				
	2018	% Change	2017	% Change	2016
Adjusted Operating Revenue					
Premium Income					
Group Long-term Disability	£269.0	1.9 %	£264.0	0.8 %	£262.0
Group Life	83.0	3.8	80.0	2.6	78.0
Supplemental	61.3	13.7	53.9	6.7	50.5
Total Premium Income	413.3	3.9	397.9	1.9	390.5
Net Investment Income	86.5	(7.3)	93.3	6.9	87.3
Other Income	—	(100.0)	0.5	N.M.	0.1
Total	499.8	1.6	491.7	2.9	477.9
Benefits and Expenses					
Benefits and Change in Reserves for Future Benefits	307.4	3.8	296.2	9.3	270.9
Commissions	27.1	(1.8)	27.6	(4.5)	28.9
Deferral of Acquisition Costs	(5.0)	(7.4)	(5.4)	(11.5)	(6.1)
Amortization of Deferred Acquisition Costs	6.1	(12.9)	7.0	(2.8)	7.2
Other Expenses	80.2	0.6	79.7	(3.0)	82.2
Total	415.8	2.6	405.1	5.7	383.1
Adjusted Operating Income	£84.0	(3.0)	£86.6	(8.6)	£94.8
Weighted Average Pound/Dollar Exchange Rate	1.336		1.290		1.357
Operating Ratios (% of Premium Income):					
Benefit Ratio	74.4 %		74.4 %		69.4 %
Other Expense Ratio	19.4 %		20.0 %		21.0 %
Adjusted Operating Income Ratio	20.3 %		21.8 %		24.3 %
Persistency:					
Group Long-term Disability	87.8 %		87.4 %		89.5 %
Group Life	88.5 %		84.1 %		81.3 %
Supplemental	93.1 %		91.0 %		89.9 %

N.M. = not a meaningful percentage

Year Ended December 31, 2018 Compared with Year Ended December 31, 2017

Premium income was higher compared to 2017 due primarily to growth in the in-force block driven by higher persistency and rate increases in our group long-term disability product line.

Net investment income was lower compared to 2017 due primarily to a lower yield on our fixed-rate bonds, partially offset by a higher level of invested assets and higher investment income from inflation index-linked bonds, which we invest in to support the claim reserves associated with certain of our group policies that provide for inflation index-linked increases in benefits. The increase in net investment income attributable to these index-linked bonds was offset by an increase in the reserves for future claims payments related to inflation index-linked group long-term disability and group life policies.

Benefits experience was consistent with 2017 as favorable claims recoveries in our group long-term disability product line were offset by unfavorable claims activity in our group life and supplemental product lines and the impact of inflation-linked increases in benefits.

Commissions and the deferral of acquisition costs were lower relative to 2017 driven by lower sales. The amortization of acquisition costs was lower in 2018 compared to 2017 due to a decline in the deferred asset. The other expense ratio was lower relative to 2017 due to higher premiums and our continued focus on expense management and operating efficiencies.

Year Ended December 31, 2017 Compared with Year Ended December 31, 2016

Premium income was higher compared to 2016 due primarily to growth in the in-force block, resulting from sales growth and stable persistency.

Net investment income increased compared to 2016 due primarily to higher investment income from inflation index-linked bonds and the growth in the level of invested assets, partially offset by a decline in yield on our fixed-rate bonds. The increase in net investment income attributable to these index-linked bonds was mostly offset by an increase in the reserves for future claims payments related to the inflation index-linked group long-term disability and group life policies.

Overall benefits experience was unfavorable compared to 2016 due primarily to a higher average claim size and unfavorable claim incidence in our group long-term disability product line, partially offset by favorable claim incidence in our group life product line. Also contributing to the less favorable benefits experience was the impact of inflation-linked increases in benefits and an 80 basis point decrease in the discount rate on new claim incurrals implemented in the first quarter of 2017 across several of our products.

Commissions were lower compared to 2016 due to certain commissions costs in 2016 that did not recur in 2017. The deferral of acquisition costs was lower compared to 2016 due to lower deferrable commissions and operating expenses. The amortization of acquisition costs was lower in 2017 compared to 2016 due to a decline in the deferred asset. The other expense ratio was lower relative to 2016 due to higher premiums and our continued focus on expense management and operating efficiencies.

Sales
(in millions of dollars and pounds)

	Year Ended December 31				
	2018	% Change	2017	% Change	2016
Unum International Sales by Product					
Group Long-term Disability	$44.7	(5.1)%	$47.1	(6.2)%	$50.2
Group Life	21.5	(11.9)	24.4	2.5	23.8
Supplemental	20.8	44.4	14.4	37.1	10.5
Total Sales	$87.0	1.3%	$85.9	1.7%	$84.5
Unum International Sales by Market Sector					
Group Long-term Disability and Group Life					
Core Market (< 500 employees)	$36.6	20.4%	$30.4	(27.6)%	$42.0
Large Case Market	29.6	(28.0)	41.1	28.4	32.0
Subtotal	66.2	(7.4)	71.5	(3.4)	74.0
Supplemental	20.8	44.4	14.4	37.1	10.5
Total Sales	$87.0	1.3	$85.9	1.7	$84.5
Unum UK Sales by Product					
Group Long-term Disability	£33.5	(8.5)%	£36.6	(1.6)%	£37.2
Group Life	16.2	(14.3)	18.9	6.2	17.8
Supplemental	12.8	13.3	11.3	46.8	7.7
Total Sales	£62.5	(6.4)	£66.8	6.5	£62.7
Unum UK Sales by Market Sector					
Group Long-term Disability and Group Life					
Core Market (< 500 employees)	£27.6	16.9%	£23.6	(24.4)%	£31.2
Large Case Market	22.1	(30.7)	31.9	34.0	23.8
Subtotal	49.7	(10.5)	55.5	0.9	55.0
Supplemental	12.8	13.3	11.3	46.8	7.7
Total Sales	£62.5	(6.4)	£66.8	6.5	£62.7

The following discussion of sales results relates only to our Unum UK product lines and is based on functional currency.

Year Ended December 31, 2018 Compared with Year Ended December 31, 2017

Group long-term disability sales decreased compared to 2017 due to lower sales to new customers in the large case market, partially offset by higher sales to both new and existing customers in our core market, or employee groups with fewer than 500 employees, and higher sales to existing customers in our large case market.

Group life sales decreased compared to 2017 due to lower sales to new and existing customers in our large case market, partially offset by an increase in sales to new and existing customers in our core market.

Supplemental sales increased compared to 2017 due primarily to an increase in the group critical illness product line, partially offset by a decline in dental product sales.

Year Ended December 31, 2017 Compared with Year Ended December 31, 2016

Group long-term disability sales decreased compared to 2016 due to lower sales to new customers in our core market and to existing customers in our large case market, mostly offset by higher sales to new customers in our large case market.

Group life sales increased compared to 2016 due to higher sales to new and existing customers in our large case market, partially offset by a decline in sales to new and existing customers in our core market.

Supplemental sales increased compared to 2016 due primarily to an increase in the group critical illness and dental product lines, partially offset by a decline in individual disability sales.

Segment Outlook

We are committed to driving growth in the Unum International segment, and during 2019, we will build on those capabilities that we believe will generate growth and profitability in our businesses. Expanding our Unum UK group long-term disability market position remains a significant opportunity and priority. Completing the integration of our Unum Poland business and growing that business through the expansion of its product offerings is also a significant priority and opportunity. Other key priorities in 2019, specifically for our Unum UK business, include the continued disciplined implementation of price increases across interest sensitive product lines, which has been successful in offsetting pressure from lower interest rates and heightened disability claims experience, while maintaining solid persistency results and continuing to follow a disciplined approach to new sales activity in the competitive pricing environment. We intend to build upon the strong sales momentum we have seen in our group critical illness and dental products through increased participation rates as well as accelerate growth in our group life line of business. We have simplified our processes and operations to deliver efficiencies and further improvements to customer service and remain focused on risk discipline. The investments that we have made in the operating model for our UK business have significantly improved our operational effectiveness and we plan to reinvest a portion of these expense savings to build marketing and digital capabilities, which we believe will drive sustainable growth through the development of new distribution capabilities and reaching new customers.

Negotiations regarding the U.K.'s formal notice to withdraw from the EU are continuing to generate uncertainty in the U.K. economy. The magnitude and longevity of potential negative economic impacts on our growth will depend on the agreements reached by the U.K. and EU as a result of exit negotiations and the resulting response of the U.K. marketplace, but we believe we are well positioned to capitalize on future growth opportunities as these negotiations are resolved and the operating environment improves. Overall, we expect the economic conditions experienced in

2018 to continue into 2019 for the U.K., with lower economic growth, wage inflation, and interest rates presenting challenges in the short to medium term.

We expect the current environment to continue to have a negative impact on our growth expectations in the near-term and may also lead to a higher rate of claim incidence, lower levels of claim recoveries, or lower claim discount rates. As part of our continued pricing discipline and our reserving strategy, we continuously monitor emerging interest rate experience and adjust our pricing and reserve discount rates, as appropriate. We will likely continue to experience volatility in net investment income and our benefit ratio due to fluctuations in the level of inflation in the U.K., however, we do not expect this to have a significant impact on adjusted operating income. There are no indications currently that capital requirements for our U.K. operations will change, but economic conditions may in the near term cause volatility in our solvency ratios. We continuously monitor key indicators to assess our risks and attempt to adjust our business plans accordingly to respond to external challenges.

Colonial Life Segment

The Colonial Life segment includes insurance for accident, sickness, and disability products, which includes our expanded dental and vision products, life products, and cancer and critical illness products issued primarily by Colonial Life & Accident Insurance Company and marketed to employees, on both a group and an individual basis, at the workplace through an independent contractor agency sales force and brokers.

Operating Results

Shown below are financial results and key performance indicators for the Colonial Life segment.

(in millions of dollars, except ratios)

	Year Ended December 31				
	2018	% Change	2017	% Change	2016
Adjusted Operating Revenue					
Premium Income					
Accident, Sickness, and Disability	$929.3	5.1 %	$884.2	6.5 %	$830.0
Life	328.4	9.3	300.4	9.7	273.8
Cancer and Critical Illness	346.1	5.9	326.8	4.3	313.3
Total Premium Income	1,603.8	6.1	1,511.4	6.7	1,417.1
Net Investment Income	151.2	4.3	144.9	2.4	141.5
Other Income	1.2	9.1	1.1	(8.3)	1.2
Total	1,756.2	6.0	1,657.4	6.3	1,559.8
Benefits and Expenses					
Benefits and Change in Reserves for Future Benefits	824.9	4.6	788.6	8.6	726.4
Commissions	364.6	5.8	344.5	9.9	313.6
Deferral of Acquisition Costs	(315.9)	6.9	(295.5)	9.4	(270.1)
Amortization of Deferred Acquisition Costs	242.2	7.9	224.4	7.8	208.1
Other Expenses	305.2	7.9	282.8	5.7	267.6
Total	1,421.0	5.7	1,344.8	8.0	1,245.6
Income Before Income Tax and Net Realized Investment Gains and Losses	335.2	7.2	312.6	(0.5)	314.2
UDB Reserve Increase	—	N.M.	12.4	N.M.	—
Adjusted Operating Income	$335.2	3.1	$325.0	3.4	$314.2
Operating Ratios (% of Premium Income):					
Benefit Ratio	51.4 %		52.2 %		51.3 %
Benefit Ratio Excluding UDB Reserve Increase			51.4 %		
Other Expense Ratio	19.0 %		18.7 %		18.9 %
Income Ratio			20.7 %		
Adjusted Operating Income Ratio	20.9 %		21.5 %		22.2 %
Persistency:					
Accident, Sickness, and Disability	74.2 %		75.1 %		75.6 %
Life	83.6 %		84.4 %		85.0 %
Cancer and Critical Illness	82.4 %		82.7 %		82.9 %

N.M. = not a meaningful percentage

Year Ended December 31, 2018 Compared with Year Ended December 31, 2017

Premium income increased in 2018 relative to 2017 as a result of sales growth. Net investment income increased relative to the prior year due to an increase in the level of invested assets and higher miscellaneous investment income, partially offset by a decline in yield on invested assets.

Benefits experience was favorable in 2018 compared to 2017 due to the previously discussed 2017 reserve increase for unclaimed death benefits. Excluding this reserve increase, benefits experience was consistent with 2017.

Commissions and the deferral of acquisition costs were higher relative to 2017 due to sales growth. The amortization of deferred acquisition costs increased compared to the prior year due primarily to growth in the level of the deferred asset. The other expense ratio was higher relative to 2017 due to costs related to our territory expansion initiatives, investments in our business, and the roll-out of our dental and vision products.

We had goodwill of $27.7 million at December 31, 2018, none of which is currently believed to be at risk for future impairment.

Year Ended December 31, 2017 Compared with Year Ended December 31, 2016

Premium income increased in 2017 relative to 2016 as a result of sales growth and overall stable persistency. Net investment income increased relative to 2016 due to an increase in the level of invested assets, partially offset by a decline in yield and lower miscellaneous investment income.

Benefits experience was less favorable in 2017 compared to 2016 due to the 2017 reserve increase for unclaimed death benefits. Excluding the reserve increase, benefits experience was generally consistent with 2016, with marginally less favorable experience in each line of business.

Commissions and the deferral of acquisition costs were higher relative to 2016 due to overall sales growth. The amortization of deferred acquisition costs increased compared to 2016 due primarily to growth in the level of the deferred asset. The other expense ratio improved relative to 2016 due to growth in premium income and our continued focus on operating effectiveness and expense management.

Sales

Certain prior year amounts below were reclassified to conform to current year presentation.
(in millions of dollars)

	Year Ended December 31				
	2018	% Change	2017	% Change	2016
Sales by Product					
Accident, Sickness, and Disability	$355.0	9.8 %	$323.2	4.1 %	$310.6
Life	111.9	3.9	107.7	14.6	94.0
Cancer and Critical Illness	94.4	6.3	88.8	12.4	79.0
Total Sales	$561.3	8.0	$519.7	7.5	$483.6
Sales by Market Sector					
Commercial					
Core Market (< 1,000 employees)	$349.0	11.3 %	$313.5	7.6 %	$291.3
Large Case Market	95.5	5.1	90.9	17.4	77.4
Subtotal	444.5	9.9	404.4	9.7	368.7
Public Sector	116.8	1.3	115.3	0.3	114.9
Total Sales	$561.3	8.0	$519.7	7.5	$483.6

Year Ended December 31, 2018 Compared with Year Ended December 31, 2017

Sales were higher in 2018 compared to 2017 due to growth in both new and existing customer account sales and the expansion of our dental and vision products. Commercial market sales increased primarily due to higher new and existing customer account sales in the core market, which we define as accounts with fewer than 1,000 employees, and higher existing sales in the large case market. The slight increase in our public sector market for 2018 was primarily driven by an increase in existing customer account sales, partially offset by a decrease in new account sales. The number of new accounts increased 9.8 percent in 2018 compared to 2017, while the average new case size decreased 4.0 percent.

Year Ended December 31, 2017 Compared with Year Ended December 31, 2016

Sales were higher in 2017 due to growth in both new and existing customer account sales. Commercial market sales increased due to higher new and existing customer account sales in both the core market and the large case market. The slight increase in our public sector market for 2017 was primarily driven by higher new customer account sales. The number of new accounts increased 9.1 percent in 2017 compared to 2016, and the average new case size increased 1.1 percent.

Segment Outlook

We remain committed to providing employees and their families with simple, modern, and personal benefit solutions. During 2019, we will continue to focus on expanding our distribution system through the growth and development of our agency sales force and establishing effective broker partnerships. We will also invest in new solutions and digital capabilities to enhance the customer experience for our business partners and further improve productivity. We will seek to capitalize on the expansion of our new dental products, which we believe will open doors for new cases while also allowing for further cross-selling opportunities to existing clients. We will continue to focus on accelerating growth during 2019 through territory expansion, territory growth, persistency investments, and increased participation rates. We believe our distribution system, customer service capabilities, the expansion of our new dental products, and ability to serve all market sizes position us well for future growth.

We expect to see continued favorable sales, premium, and adjusted operating earnings growth trends in 2019. We also anticipate a decline in the operating expense ratio as we continue to balance operating efficiencies with the continued investments in our future growth. The lower interest rate environment will continue to have an unfavorable impact on our profit margins, and volatility in miscellaneous investment income is likely to continue. We expect our annual benefit ratio for 2019 to be generally consistent with the level of 2018. While we believe our underlying profitability will remain strong, current economic conditions and increasing competition in the voluntary workplace market are seen as external risks to achievement of our business plans. We continuously monitor key indicators to assess our risks and attempt to adjust our business plans accordingly.

Closed Block Segment

The Closed Block segment consists of individual disability, group and individual long-term care, and other insurance products no longer actively marketed. Individual disability in this segment generally consists of policies we sold prior to the mid-1990s and entirely discontinued selling in 2004, other than update features contractually allowable on existing policies. We discontinued offering individual long-term care in 2009 and group long-term care in 2012. Other insurance products include group pension, individual life and corporate-owned life insurance, reinsurance pools and management operations, and other miscellaneous product lines.

Operating Results

Shown below are financial results and key performance indicators for the Closed Block segment.
(in millions of dollars, except ratios)

	Year Ended December 31				
	2018	% Change	2017	% Change	2016
Adjusted Operating Revenue					
Premium Income					
Individual Disability	$420.8	(10.8)%	$471.8	(9.6)%	$521.9
Long-term Care	648.3	(0.1)	648.7	0.7	643.9
All Other	8.0	(8.0)	8.7	89.1	4.6
Total Premium Income	1,077.1	(4.6)	1,129.2	(3.5)	1,170.4
Net Investment Income	1,377.1	1.7	1,354.0	0.1	1,352.2
Other Income	75.4	(5.5)	79.8	(7.2)	86.0
Total	2,529.6	(1.3)	2,563.0	(1.7)	2,608.6
Benefits and Expenses					
Benefits and Change in Reserves for Future Benefits	2,919.2	33.2	2,191.8	(1.4)	2,223.7
Commissions	84.1	(6.6)	90.0	(4.1)	93.8
Interest and Debt Expense	6.9	3.0	6.7	(2.9)	6.9
Other Expenses	144.7	(3.9)	150.6	(2.7)	154.7
Total	3,154.9	29.3	2,439.1	(1.6)	2,479.1
Income (Loss) Before Income Tax and Net Realized Investment Gains and Losses	(625.3)	N.M.	123.9	(4.3)	129.5
Long-term Care Reserve Increase	750.8	N.M.	—	—	—
Adjusted Operating Income	$125.5	1.3	$123.9	(4.3)	$129.5
Interest Adjusted Loss Ratios:					
Individual Disability	80.4 %		82.4 %		83.6 %
Long-term Care	(206.8)%		91.1 %		91.1 %
Long-term Care Excluding Reserve Increase	91.0 %				
Operating Ratios (% of Premium Income):					
Other Expense Ratio	13.4 %		13.3 %		13.2 %
Income (Loss) Ratio	(58.1)%				
Adjusted Operating Income Ratio	11.7 %		11.0 %		11.1 %
Persistency:					
Individual Disability	88.3 %		89.6 %		90.9 %
Long-term Care	95.8 %		95.9 %		94.8 %

N.M. = not a meaningful percentage

Year Ended December 31, 2018 Compared with Year Ended December 31, 2017

Premium income for individual disability decreased compared to 2017 due to policy terminations and maturities. Premium income for long-term care was generally consistent with the prior year, with rate increases offsetting policy terminations. We continue to file requests with various state insurance departments for premium rate increases on certain of our individual and group long-term care policies which reflect assumptions as of the date of filings. In states for which a rate increase is submitted and approved, we routinely provide customers options for coverage changes or other approaches that might fit their current financial and insurance needs.

Net investment income was higher relative to 2017 primarily due to an increase in the level of invested assets and higher miscellaneous investment income, partially offset by a decline in yield on invested assets. Other income, which includes the underlying results and associated net investment income of certain blocks of individual disability reinsured business, continues to decline due to expected terminations and maturities.

Individual disability benefits experience was favorable relative to 2017 due primarily to lower claims incidence and a lower average size of new claims. The interest adjusted loss ratio for long-term care, excluding the previously discussed reserve increase, was not comparable to 2017 due to the update in our assumptions during the third quarter of 2018, but was generally consistent with our expectations in the second half of 2018, with an interest adjusted loss ratio of 85.4 percent.

The other expense ratio was slightly higher than 2017 due to the expected decline in premium income for individual disability, partially offset by our continued focus on expense management and operating efficiencies.

Year Ended December 31, 2017 Compared with Year Ended December 31, 2016

Premium income for individual disability decreased compared to 2016 due to expected policy terminations and maturities. Premium income for long-term care increased slightly due to rate increases.

Net investment income was slightly higher relative to 2016 due to a higher level of invested assets, partially offset by a lower yield and lower miscellaneous investment income. Other income declined due to expected terminations and maturities.

Individual disability benefits experience was favorable relative to 2016 due to lower new claim volumes and a reduction in the claim reserve discount rate taken in 2016 to recognize the impact on future portfolio yields from increased levels experienced for bond tenders and calls. Long-term care benefits experience was consistent with 2016 as unfavorable policyholder terminations, due primarily to mortality experience, offset by the impact of a large group case moving to an individual policy ported status during 2016. Also impacting benefits experience relative to 2016 was unfavorable mortality experience in our group pension product.

The other expense ratio was slightly higher than 2016 due to the expected decline in premium income for individual disability, partially offset by our continued focus on expense management and operating efficiencies.

Segment Outlook

During 2019, we will continue to execute on our well-defined strategy of implementing long-term care premium rate increases, efficient capital management, improved financial analysis, and operational effectiveness. Despite continued premium rate increases in our long-term care business, we expect overall premium income and adjusted operating revenue to decline over time as these closed blocks of business wind down. We will likely experience volatility in net investment income due to fluctuations of miscellaneous investment income and the increased allocation towards alternative assets in the long-term care product line portfolio. We continuously monitor key indicators to assess our risks and attempt to adjust our business plans accordingly.

Profitability of our long-tailed products is affected by claims experience related to mortality and morbidity, resolutions, investment returns, premium rate increases, and persistency. We believe that the interest adjusted loss ratios for the individual disability and long-term care lines of business will be relatively flat over the long term, but these product lines may continue to experience quarterly volatility, particularly in the near term for our long-term care product lines as our claim block matures and as we continue the implementation of premium rate increases. Specific to our long-term care line of business, which is in loss recognition and should report levels of benefits plus operating expenses that equal the gross premium reported, we expect the long term interest adjusted loss ratio to be in the 85 to 90 percent range with some quarterly volatility. Claim resolution rates, which measure the resolution of claims from recovery, deaths, settlements, and benefit expirations, are very sensitive to operational and external factors and can be volatile. Our claim resolution rate assumption used in determining reserves is our expectation of the resolution rate we will experience over the life of the block of business and will vary from actual experience in any one period. It is possible that variability in any of our reserve assumptions, including, but not limited to, interest rates, mortality, morbidity, resolutions, premium rate increases, benefit change elections, and persistency, could result in a material impact on the adequacy of our reserves, including adjustments to reserves established under loss recognition.

Corporate Segment

The Corporate segment includes investment income on corporate assets not specifically allocated to a line of business, interest expense on corporate debt other than non-recourse debt, and certain other corporate income and expenses not allocated to a line of business.

Operating Results
(in millions of dollars)

	Year Ended December 31				
	2018	% Change	2017	% Change	2016
Adjusted Operating Revenue					
Net Investment Income	$29.5	37.9 %	$21.4	15.7 %	$18.5
Other Income	2.7	(6.9)	2.9	(40.8)	4.9
Total	32.2	32.5	24.3	3.8	23.4
Interest and Other Expenses	203.3	6.1	191.7	2.8	186.4
Loss Before Income Tax and Net Realized Investment Gains and Losses	(171.1)	(2.2)	(167.4)	(2.7)	(163.0)
Loss from Guaranty Fund Assessment	—	N.M.	20.6	N.M.	—
Adjusted Operating Loss	$(171.1)	(16.6)	$(146.8)	9.9	$(163.0)

N.M. = not a meaningful percentage

Year Ended December 31, 2018 Compared with Year Ended December 31, 2017

Net investment income was higher relative to 2017 due primarily to an increase in the level of invested assets and a higher yield.

Interest and other expenses were higher relative to 2017 due primarily to a higher level of outstanding debt, a higher overall rate of interest, increased acquisition-related expenses, and certain restructuring costs. Interest and other expenses for 2017 includes a $20.6 million loss incurred in 2017 from a guaranty fund assessment related to an unaffiliated insurer that was declared insolvent. See Note 14 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion on the loss from a guaranty fund assessment.

Year Ended December 31, 2017 Compared with Year Ended December 31, 2016

Net investment income was higher relative to 2016 due primarily to a higher yield on invested assets, partially offset by a lower asset level.

Interest and other expenses were higher relative to 2016 due primarily to the 2017 guaranty fund assessment and an increase in the amortization of prior period actuarial losses for our pension and other postretirement benefit plans, partially offset by lower levels of outstanding debt and expenses incurred in 2016 related to the acquisition of Starmount.

Segment Outlook

We expect to continue to generate excess capital on an annual basis through the statutory earnings in our insurance subsidiaries, aided in part by the reduction in the corporate tax rate resulting from tax reform. We believe we are well positioned with flexibility to preserve our capital strength while also continuing to return capital to our shareholders.

78

Investments
Overview

Our investment portfolio is well diversified by type of investment and industry sector. We have established an investment strategy that we believe will provide for adequate cash flows from operations and allow us to hold our securities through periods where significant decreases in fair value occur. We believe our emphasis on risk management in our investment portfolio, including credit and interest rate management, has positioned us well and generally reduced the volatility in our results.

We have a formal investment policy that includes overall quality and diversification objectives and establishes limits by asset class, investment rating, and single issuer. The majority of our investments are in investment-grade publicly traded securities. This ensures the desired liquidity and preserves the capital value of our portfolios, although due to the long-term nature of our insurance liabilities we are also able to invest in less liquid investments to obtain superior returns within the limits of our investment policy. Our asset mix guidelines and limits are established by us, reviewed by the risk and finance committee of Unum Group's board of directors, and approved by the boards of directors of our insurance subsidiaries. We review our policies and guidelines annually, or more frequently if deemed necessary, and recommend adjustments as appropriate.

See "Critical Accounting Estimates" contained herein in this Item 7 for further discussion of our valuation of investments.
Fixed Maturity Securities
The fair values and associated unrealized gains and losses of our fixed maturity securities portfolio, by industry classification, are as follows:

Fixed Maturity Securities - By Industry Classification
As of December 31, 2018
(in millions of dollars)

Classification	Fair Value	Net Unrealized Gain (Loss)	Fair Value of Fixed Maturity Securities with Gross Unrealized Loss	Gross Unrealized Loss	Fair Value of Fixed Maturity Securities with Gross Unrealized Gain	Gross Unrealized Gain
Basic Industry	$2,839.3	$67.7	$1,288.3	$80.2	$1,551.0	$147.9
Capital Goods	4,139.6	233.8	1,266.8	74.6	2,872.8	308.4
Communications	2,819.6	202.6	904.4	58.0	1,915.2	260.6
Consumer Cyclical	1,366.1	50.6	592.1	28.6	774.0	79.2
Consumer Non-Cyclical	6,449.6	241.2	2,741.6	205.5	3,708.0	446.7
Energy	4,498.4	270.3	1,373.0	103.4	3,125.4	373.7
Financial Institutions	3,076.4	117.2	1,234.5	48.6	1,841.9	165.8
Mortgage/Asset-Backed	1,582.7	58.9	283.1	8.3	1,299.6	67.2
Sovereigns	983.7	157.9	70.4	4.8	913.3	162.7
Technology	1,554.6	(2.8)	870.0	35.8	684.6	33.0
Transportation	2,050.3	137.5	693.2	29.9	1,357.1	167.4
U.S. Government Agencies and Municipalities	4,238.6	415.0	529.5	15.3	3,709.1	430.3
Public Utilities	7,412.8	786.6	1,065.8	63.4	6,347.0	850.0
Total	$43,011.7	$2,736.5	$12,912.7	$756.4	$30,099.0	$3,492.9

The following two tables show the length of time our investment-grade and below-investment-grade fixed maturity securities had been in a gross unrealized loss position as of December 31, 2018 and at the end of the prior four quarters. The relationships of the current fair value to amortized cost are not necessarily indicative of the fair value to amortized cost relationships for the securities throughout the entire time that the securities have been in an unrealized loss position nor are they necessarily indicative of the relationships after December 31, 2018. The increase in the unrealized loss on fixed maturity securities during 2018 was due to an increase in credit spreads and U.S. Treasury rates.

Unrealized Loss on Investment-Grade Fixed Maturity Securities
Length of Time in Unrealized Loss Position
(in millions of dollars)

	2018				2017
	December 31	September 30	June 30	March 31	December 31
Fair Value < 100% >= 70% of Amortized Cost					
<= 90 days	$52.1	$ 25.9	$56.0	$79.8	$ 20.8
> 90 <= 180 days	36.0	61.7	149.1	40.5	9.5
> 180 <= 270 days	90.2	158.2	40.3	30.5	—
> 270 days <= 1 year	200.0	43.9	38.8	—	1.2
> 1 year <= 2 years	94.5	95.7	51.3	44.8	32.1
> 2 years <= 3 years	50.5	9.7	2.0	2.9	1.7
> 3 years	1.7	1.9	1.2	0.2	—
Sub-total	525.0	397.0	338.7	198.7	65.3
Fair Value < 70% >= 40% of Amortized Cost					
<= 90 days	1.6	—	—	—	1.2
> 180 <= 270 days	—	—	13.9	—	—
> 270 days <= 1 year	—	14.2	—	—	—
> 1 year <= 2 years	2.9	—	—	—	—
Sub-total	4.5	14.2	13.9	—	1.2
Total	$529.5	$ 411.2	$352.6	$198.7	$ 66.5

Unrealized Loss on Below-Investment-Grade Fixed Maturity Securities
Length of Time in Unrealized Loss Position
(in millions of dollars)

	2018				2017
	December 31	September 30	June 30	March 31	December 31
Fair Value < 100% >= 70% of Amortized Cost					
<= 90 days	$39.7	$ 2.3	$6.4	$19.8	$ 4.7
> 90 <= 180 days	19.0	6.9	29.3	13.6	1.5
> 180 <= 270 days	11.1	19.5	14.8	2.9	0.4
> 270 days <= 1 year	52.8	11.5	4.7	—	0.7
> 1 year <= 2 years	27.1	13.8	10.3	10.5	2.7
> 2 years <= 3 years	4.8	1.9	9.5	13.1	13.1
> 3 years	31.6	24.4	22.5	26.6	19.6
Sub-total	186.1	80.3	97.5	86.5	42.7
Fair Value < 70% >= 40% of Amortized Cost					
> 1 year <= 2 years	0.7	—	—	—	—
> 2 years <= 3 years	11.3	—	5.0	7.9	7.3
> 3 years	17.8	5.1	—	—	7.0
Sub-total	29.8	5.1	5.0	7.9	14.3
Fair Value < 40% of Amortized Cost					
> 3 years	11.0	—	—	—	—
Sub-total	11.0	—	—	—	—
Total	$226.9	$ 85.4	$102.5	$94.4	$ 57.0

At December 31, 2018, we held two below-investment grade fixed maturity securities with a gross unrealized loss greater than $10.0 million. One security is related to a global pharmaceutical company and had a fair value of $61.5 million and a gross unrealized loss of $15.5 million. The other security is related to a U.S. based oil and natural gas producer and had a fair value of $5.0 million and a gross unrealized loss of $11.0 million. We also held one investment grade fixed maturity security at December 31, 2018 related to a large U.S. based utility with a fair value of $99.5 million and a gross unrealized loss of $7.3 million which, in January 2019, filed for reorganization under Chapter 11 in the U.S. Bankruptcy Court and was downgraded to below-investment grade. We intend to and have the ability to continue to hold these securities to maturity and believe that the declines in fair value are temporary.

We had no individual realized investment losses of $10.0 million or greater from other-than-temporary impairments during 2018 or 2017 and no individual realized investment losses of $10.0 million or greater from the sale of fixed maturity securities during 2018, 2017, or 2016.

During 2016, we recognized an other-than-temporary impairment loss of $11.6 million on fixed maturity securities issued by a large U.S.-based energy company. At the time of the impairment loss, the company had a high debt-to-equity ratio, and its projected liquidity had decreased significantly as a result of the declines in oil prices and the likelihood that prices may stay at depressed levels for an extended period of time. The company has assets it can sell, but liquidation may be difficult in the current environment. Additionally, the lower oil prices resulted in the company's banks significantly reducing the availability on the company’s revolving line of credit. At the time of the impairment loss, these securities had been in an unrealized loss position for a period of greater than one year but less than two years.

At December 31, 2018, our mortgage/asset-backed securities had an average life of 6.38 years, effective duration of 5.06 years, and a weighted average credit rating of Aaa. The mortgage/asset-backed securities are valued on a monthly basis using valuations supplied by the brokerage firms that are dealers in these securities as well as independent pricing services. One of the risks involved in investing in mortgage/asset-backed securities is the uncertainty of the timing of cash flows from the underlying loans due to prepayment of principal with the possibility of reinvesting the funds in a lower interest rate environment. We use models which incorporate economic variables and possible future interest rate scenarios to predict future prepayment rates. The timing of prepayment cash flows may also cause volatility in our recognition of investment income. We recognize investment income on these securities using a constant effective yield based on projected prepayments of the underlying loans and the estimated economic life of the securities. Actual prepayment experience is reviewed periodically, and effective yields are recalculated when differences arise between prepayments originally projected and the actual prepayments received and currently projected. The effective yield is recalculated on a retrospective basis, and the adjustment is reflected in net investment income.

We have no exposure to subprime mortgages, "Alt-A" loans, or collateralized debt obligations in our investment portfolios. We have not invested in mortgage-backed derivatives, such as interest-only, principal-only, or residuals, where market values can be highly volatile relative to changes in interest rates. The credit quality of our mortgage-backed securities portfolio has not been negatively impacted by the issues in the market concerning subprime mortgage loans. The change in value of our mortgage-backed securities portfolio has moved in line with that of prime agency-backed mortgage-backed securities.

As of December 31, 2018, the amortized cost and fair value of our below-investment-grade fixed maturity securities was $3,236.8 million and $3,038.6 million, respectively. Below-investment-grade securities are inherently riskier than investment-grade securities since the risk of default by the issuer, by definition and as exhibited by bond rating, is higher. Also, the secondary market for certain below-investment-grade issues can be highly illiquid. Additional downgrades may occur, but we do not anticipate any liquidity problems resulting from our investments in below-investment-grade securities, nor do we expect these investments to adversely affect our ability to hold our other investments to maturity.

Fixed Maturity Securities - Foreign Exposure

Our investments in issuers in foreign countries are chosen for specific portfolio management purposes, including asset and liability management and portfolio diversification across geographic lines and sectors to minimize non-market risks. In our approach to investing in fixed maturity securities, specific investments within approved countries and industry sectors are evaluated for their market position and specific strengths and potential weaknesses. For each security, we consider the political, legal, and financial environment of the sovereign entity in which an issuer is domiciled and operates. The country of domicile is based on consideration of the issuer's headquarters, in addition to location of the assets and the country in which the majority of sales and earnings are derived. We do not have exposure to foreign currency risk, as the cash flows from these investments are either denominated in currencies or hedged into currencies to match the related liabilities. We continually evaluate our foreign investment risk exposure.

Our monitoring is heightened for investments in certain countries due to our concerns over the current economic and political environments, and we believe these investments are more vulnerable to potential credit problems.
At December 31, 2018, we had minimal exposure in those countries and had no direct exposure to financial institutions of those countries.

Mortgage Loans

Our mortgage loan portfolio was $2,295.0 million and $2,213.2 million on an amortized cost basis at December 31, 2018 and 2017, respectively. Our mortgage loan portfolio is comprised entirely of commercial mortgage loans. We believe our mortgage loan portfolio is well diversified geographically and among property types. The incidence of problem mortgage loans and foreclosure activity continues to be low. Due to conservative underwriting, we expect the level of problem loans to remain low relative to the industry. We held one impaired mortgage loan at December 31, 2018 with a net realizable value of $3.4 million, net of a valuation allowance of $0.2 million. We held no impaired mortgage loans at December 31, 2017.

Derivative Financial Instruments

We use derivative financial instruments primarily to manage reinvestment, duration, foreign currency, and credit risks. Historically, we have utilized current and forward interest rate swaps and options on forward interest rate swaps and U.S. Treasury rates, current and forward currency swaps, forward treasury locks, currency forward contracts, forward contracts on specific fixed income securities, and credit default swaps. Our credit exposure on derivatives, which is limited to the value of those contracts in a net gain position, including accrued interest receivable less collateral held, was $0.9 million at December 31, 2018. We held $24.0 million of cash collateral from our counterparties at December 31, 2018. The carrying value of fixed maturity securities posted as collateral to our counterparties was $33.4 million at December 31, 2018. We had nine hundred thousand cash collateral posted to our counterparties at December 31, 2018. We believe that our credit risk is mitigated by our use of multiple counterparties, all of which have an investment-grade credit rating, and by our use of cross-collateralization agreements.

Other

Our exposure to non-current investments, defined as foreclosed real estate and invested assets which are delinquent as to interest and/or principal payments, totaled $36.0 million and $32.9 million on a fair value basis at December 31, 2018 and 2017, respectively.

See Notes 3 and 4 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion of our investments and our derivative financial instruments.

Liquidity and Capital Resources

Overview

Our liquidity requirements are met primarily by cash flows provided from operations, principally in our insurance subsidiaries. Premium and investment income, as well as maturities and sales of invested assets, provide the primary sources of cash. Debt and/or securities offerings provide additional sources of liquidity. Cash is applied to the payment of policy benefits, costs of acquiring new business (principally commissions), operating expenses, and taxes, as well as purchases of new investments.

We have established an investment strategy that we believe will provide for adequate cash flows from operations. We attempt to match our asset cash flows and durations with expected liability cash flows and durations to meet the funding requirements of our business. However, deterioration in the credit market may delay our ability to sell our positions in certain of our fixed maturity securities in a timely manner and adversely impact the price we receive for such securities, which may negatively impact our cash flows. Furthermore, if we experience defaults on securities held in the investment portfolios of our insurance subsidiaries, this will negatively impact statutory capital, which could reduce our insurance subsidiaries' capacity to pay dividends to our holding companies. A reduction in dividends to our holding companies could force us to seek external financing to avoid impairing our ability to pay dividends to our stockholders or meet our debt and other payment obligations.

Our policy benefits are primarily in the form of claim payments, and we have minimal exposure to the policy withdrawal risk associated with deposit products such as individual life policies or annuities. A decrease in demand for our insurance products or an increase in the incidence of new claims or the duration of existing claims could negatively impact our cash flows from operations. However, our historical pattern of benefits paid to revenues is generally consistent, even during cycles of economic downturns, which serves to minimize liquidity risk.

The liquidity requirements of the holding company Unum Group include common stock dividends, interest and debt service, acquisitions, and ongoing investments in our businesses. Unum Group's liquidity requirements are met by assets held by Unum Group and our intermediate holding companies, dividends from primarily our insurance subsidiaries, and issuance of common stock, debt, or other capital securities and borrowings from existing credit facilities, as needed. As of December 31, 2018, Unum Group and our intermediate holding companies held fixed maturity securities, short-term investments, and cash of $602 million. Fixed maturity securities consisted primarily of mortgage/asset-backed securities with an average maturity of 5.9 years. Short-term investments consisted primarily of commercial paper. No significant restrictions exist on our ability to use or access funds in any of our U.S. or foreign intermediate holding companies. As a result of the TCJA, future amounts repatriated from our foreign subsidiaries are eligible for a 100 percent exemption from U.S. income tax but may be subject to tax on foreign currency gain or loss. See "Regulation" contained herein in Item 1 for further discussion regarding the TCJA and, specifically, a transition tax on undistributed and previously untaxed foreign earnings and profits at reduced rates.

As part of our capital deployment strategy, we repurchase shares of Unum Group's common stock, as authorized by our board of directors. Our current share repurchase program was approved by our board of directors in May 2018 and authorizes the repurchase of up to $750 million of common stock through November 2019, with the pace of repurchase activity to depend upon various factors such as the level of available cash, alternative uses for cash, and our stock price. During 2018, we repurchased 8.7 million shares at a cost of approximately $350 million. The dollar value of shares remaining under the current repurchase program was approximately $500 million at December 31, 2018. See Note 10 of the "Notes to Consolidated Financial Statements" contained herein in Item 8.

Cash Available from Subsidiaries

Unum Group and certain of its intermediate holding company subsidiaries depend on payments from subsidiaries to pay dividends to stockholders, to pay debt obligations, and/or to pay expenses. These payments by our insurance and non-insurance subsidiaries may take the form of dividends, operating and investment management fees, and/or interest payments on loans from the parent to a subsidiary.

Restrictions under applicable state insurance laws limit the amount of dividends that can be paid to a parent company from its insurance subsidiaries in any 12-month period without prior approval by regulatory authorities. For life insurance companies domiciled in the U.S., that limitation generally equals, depending on the state of domicile, either ten percent of an insurer's statutory surplus with respect to policyholders as of the preceding year end or the statutory net gain from operations, excluding realized investment gains and losses, of the preceding year. The payment of dividends to a parent company from a life insurance subsidiary is generally further limited to the amount of unassigned funds.

Certain of our domestic insurance subsidiaries cede blocks of business to Northwind Reinsurance Company (Northwind Re) and Fairwind Insurance Company (Fairwind), both of which are affiliated captive reinsurance subsidiaries domiciled in the United States with Unum Group as the ultimate parent. The ability of Northwind Re and Fairwind to pay dividends to their respective parent companies will depend on their satisfaction of applicable regulatory requirements and on the performance of the business reinsured by Northwind Re and Fairwind.

The ability of Unum Group and certain of its intermediate holding company subsidiaries to continue to receive dividends from their insurance subsidiaries also depends on additional factors such as RBC ratios and capital adequacy and/or solvency requirements, funding growth objectives at an affiliate level, and maintaining appropriate capital adequacy ratios to support desired ratings. The impacts of the decrease in the U.S. corporate tax rate due to the TCJA resulted in both the reduction of our admitted deferred tax assets at December 31, 2017, and a decrease in our RBC ratios at December 31, 2018 as a result of the NAIC's modification of the RBC factors in 2018. Although the RBC ratios for our U.S. insurance subsidiaries are lower, the RBC ratios are in line with our expectations and are significantly above the level that would require state regulatory action.

Unum Group and/or certain of its intermediate holding company subsidiaries may also receive dividends from our U.K. subsidiaries, the payment of which may be subject to applicable insurance company regulations and capital guidance in the U.K. Unum Limited is subject to the requirements of Solvency II, a European Union (EU) directive, which prescribes capital requirements and risk management standards for the European insurance industry. Our European holding company is also subject to the Solvency II requirements relevant to insurance holding companies, while its subsidiaries (the Unum European Economic Area (EEA) Group), which includes Unum Limited, are subject to group supervision under Solvency II. The Unum EEA Group received approval from the U.K. Prudential Regulation Authority to use its own internal model for calculating regulatory capital and also received approval for certain associated regulatory permissions including transitional relief as the Solvency II capital regime continues to be implemented. There are currently no indications that capital requirements for the Unum EEA Group will change as a result of the U.K.'s exit from the EU, but economic conditions may in the near term cause volatility in our solvency ratios.

The payment of dividends to the parent company from our subsidiaries also requires the approval of the individual subsidiary's board of directors.

The amount available during 2018 for the payment of ordinary dividends from Unum Group's traditional U.S. insurance subsidiaries, which excludes our captive reinsurers, was approximately $797 million, of which $670.5 million was declared and paid. The traditional U.S. insurance subsidiaries also paid extraordinary dividends of $89.8 million in 2018. The amount available during 2018 from Unum Limited was approximately £200 million, of which £115.0 million was declared and paid to one of our U.K. holding companies. During 2018, Northwind Re paid dividends of $98.0 million to Northwind Holdings. Fairwind paid no dividends during 2018.

During 2019, we intend to maintain a level of capital in our insurance subsidiaries above the applicable capital adequacy requirements and minimum solvency margins. Although we may not utilize the entire amount of available dividends, based on applicable restrictions under current law, approximately $995 million is available, without prior approval by regulatory authorities, during 2019 for the payment of dividends from Unum Group's traditional U.S. insurance subsidiaries, which excludes our captive reinsurers. Approximately £140 million is available for the payment of dividends from Unum Limited during 2019, subject to regulatory approval.

Insurance regulatory restrictions do not limit the amount of dividends available for distribution from non-insurance subsidiaries except where the non-insurance subsidiaries are held directly or indirectly by an insurance subsidiary and only indirectly by Unum Group.

Funding for Employee Benefit Plans

We made contributions of $69.3 million and £3.1 million to our U.S. and U.K. defined contribution plans, respectively, in 2018 and expect to make contributions of approximately $75 million and £3 million during 2019. We made a de minimis amount of contributions to our U.S. qualified defined benefit pension plan and no contribution to our U.K. defined benefit pension plan during 2018. We do not expect to make any contributions to either plan during 2019. We have met all minimum pension funding requirements set forth by the Employee Retirement Income Security Act. We have estimated our future funding requirements under the Pension Protection Act of 2006 and under applicable U.K. law and do not believe that any future funding requirements will cause a material adverse effect on our liquidity. See Note 9 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion of our employee benefit plans.

Debt

There are no significant financial covenants associated with any of our outstanding debt obligations. We continually monitor our debt covenants to ensure we remain in compliance. We have not observed any current trends that would cause a breach of any debt covenants.

Maturities, Purchases, and Retirement of Debt

In 2018, our $200.0 million 7.00% senior unsecured notes matured.

Northwind Holdings made principal payments on its floating rate, senior secured notes of $60.0 million, in both 2018 and 2017, and $64.0 million in 2016.

In 2017, we purchased and retired the remaining $3.4 million of principal on our senior secured floating rate notes acquired through our purchase of Starmount.

In 2016, our $350.0 million 7.125% senior unsecured notes matured.

Issuance of Debt

In 2018, we issued $300.0 million of 6.25% junior subordinated notes due 2058. The notes are redeemable at or above par on or after June 15, 2023 and rank equally in the right of payment with our other junior subordinated debt securities.

In 2016, we issued a total of $600.0 million aggregate principal amount of senior notes: (i) $350.0 million aggregate principal amount of senior notes due in 2021 with an annual coupon rate of 3.00%, and (ii) $250.0 million aggregate principal amount of senior notes due in 2042 with an annual coupon rate of 5.75%, pursuant to a reopening of the $250.0 million aggregate principal amount outstanding of our 5.75% senior notes due 2042 issued in 2012. Both issuances are callable at or above par and rank equally in right of payment with all of our other unsecured and unsubordinated debt. A portion of the net proceeds of the offering were used for repayment of the debt which matured in 2016.

Credit Facility

In 2016, we amended the terms of our five-year, $400 million unsecured revolving credit facility, which was previously set to expire in 2018, to extend through March 2021. Under the terms of the agreement, we may request that the credit facility be increased up to $600 million. Borrowings under the credit facility are for general corporate uses and are subject to financial covenants, negative covenants, and events of default that are customary. The credit facility provides for borrowing at an interest rate based either on the prime rate or LIBOR. In addition, the credit facility provides for the issuance of letters of credit subject to certain terms and limitations. At December 31, 2018, letters of credit totaling $2.1 million had been issued from the credit facility, but there was no borrowed amount outstanding. Our credit facility's financial covenants contain provisions regarding our leverage and net worth. We do not anticipate any violation of these covenants. However, if economic conditions worsen and we incur unexpected losses, we could violate certain of the financial covenants imposed by the credit facility and lose access to available funds or lines of credit through the facility. While maintenance of the unsecured, revolving credit facility provides a valuable source of contingent liquidity, we believe operating cash flows are sufficient to support our short-term liquidity needs.

Shelf Registration

We filed a shelf registration with the Securities and Exchange Commission in 2017 to issue various types of securities, including common stock, preferred stock, debt securities, depository shares, stock purchase contracts, units and warrants. The shelf registration enables us to raise funds from the offering of any securities covered by the shelf registration as well as any combination thereof, subject to market conditions and our capital needs.

See Note 8 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for additional information on our debt.

Commitments

The following table summarizes contractual obligations and our reinsurance recoverable by period as of December 31, 2018:
(in millions of dollars)

	Total	In 1 Year or Less	After 1 Year up to 3 Years	After 3 Years up to 5 Years	After 5 Years
Payments Due					
Long-term Debt	$5,363.5	$162.3	$1,034.8	$254.2	$3,912.2
Policyholder Liabilities	45,275.4	4,714.2	7,280.8	5,543.9	27,736.5
Pension and OPEB	783.5	19.4	38.4	112.4	613.3
Payables for Collateral on Investments	128.5	128.5	—	—	—
Miscellaneous Liabilities	864.8	672.4	35.0	9.6	147.8
Operating Leases	157.7	30.4	48.5	30.5	48.3
Purchase Obligations	572.7	537.9	29.1	5.7	—
Total	$53,146.1	$6,265.1	$8,466.6	$5,956.3	$32,458.1
Receipts Due					

Reinsurance Recoverable	$7,957.3	$345.5	$660.8	$616.2	$6,334.8

Long-term debt includes contractual principal and interest payments and therefore exceeds the amount shown in the consolidated balance sheets.

Policyholder liability maturities and the related reinsurance recoverable represent the projected payout of the current in-force policyholder liabilities and the expected cash inflows from reinsurers for liabilities ceded and therefore incorporate uncertainties as to the timing and amount of claim payments. We utilize extensive liability modeling to project future cash flows from the in-force business. The primary assumptions used to project future cash flows are claim incidence rates for mortality and morbidity, claim resolution rates, persistency rates, and interest rates. These cash flows are discounted to determine the current value of the projected claim payments. The timing and amount of payments on policyholder liabilities may vary significantly from the projections above.

Pensions and OPEB commitments relate to our defined benefit pension and postretirement plans for our employees, including our non-qualified pension plan. Pension plan obligations, other than the non-qualified plan, represent our contributions to the pension plans and are projected based on the expected future minimum contributions as required under current U.S. and U.K. legislative funding requirements. Non-qualified pension plan and other postretirement benefit obligations represent the expected benefit payments related to these plans which we expect to pay, as incurred, from our general assets.

Payables for collateral on investments include obligations to return unrestricted cash collateral to our securities lending and derivative counterparties and obligations to repay advances from regional Federal Home Loan Banks (FHLBs). The amounts presented in the preceding chart include contractual interest payments and therefore exceed what is reported in the consolidated balance sheets.

Miscellaneous liabilities include commissions due and accrued, deferred compensation liabilities, contingent considerations, state premium taxes payable, amounts due to reinsurance companies, legally binding commitments to fund investments, and various other liabilities that represent contractual obligations. Obligations where the timing of the payment is uncertain are included in the one year or less category.

See "Critical Accounting Estimates" contained herein in this Item 7 and Notes 3, 4, 6, 8, 9, 13, and 14 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for additional information on our various commitments and obligations.

Off-Balance Sheet Arrangements

Operating leases include noncancelable obligations on certain office space, equipment, and software. Purchase obligations include commitments of $515.6 million to fund certain of our investments. These are included in the preceding table based on the expiration date of the commitments. The funds are due upon satisfaction of contractual notice from appropriate external parties and may or may not be funded. Also included are obligations with outside parties for computer data processing services, software maintenance agreements, and consulting services. The aggregate obligation remaining under these agreements was $57.1 million at December 31, 2018.

As part of our regular investing strategy, we receive collateral from unaffiliated third parties through transactions which include both securities lending and also short-term agreements to purchase securities with the agreement to resell them at a later specified date. For both types of transactions, we require that a minimum of 102 percent of the fair value of the securities loaned or securities purchased under repurchase agreements be maintained as collateral. Generally, cash is received as collateral under these agreements. In the event that securities are received as collateral, we are not permitted to sell or re-post them. We also post our fixed maturity securities as collateral to unaffiliated third parties through transactions including both securities lending and also short-term agreements to sell securities with the agreement to repurchase them at a later specified date. See "Transfers of Financial Assets" as follows for further discussion.

To help limit the credit exposure of derivatives, we enter into master netting agreements with our counterparties whereby contracts in a gain position can be offset against contracts in a loss position. We also typically enter into bilateral, cross-collateralization agreements with our counterparties to help limit the credit exposure of the derivatives. These agreements require the counterparty in a loss position to submit acceptable collateral with the other counterparty in the event the net loss position meets or exceeds an agreed upon amount. Our credit exposure on derivatives, which is limited to the value of those contracts in a net gain position, including accrued interest receivable less collateral held, was $0.9 million at December 31, 2018. We held cash collateral from our counterparties of $24.0 million at December 31, 2018 and had posted fixed maturity securities with a carrying value of $33.4 million as collateral to our counterparties.

See Notes 3, 4, and 14 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for additional information.

Transfers of Financial Assets

Our investment policy permits us to lend fixed maturity securities to unaffiliated financial institutions in short-term securities lending agreements, which increases our investment income with minimal risk. We account for all of our securities lending agreements and repurchase agreements as secured borrowings. We had $0.1 million of securities lending agreements outstanding which were collateralized by cash at December 31, 2018 and were reported as payables for collateral on investments in our consolidated balance sheets. The cash received as collateral was reinvested in short-term investments. The average balance during the year ended December 31, 2018 was $12.2 million, and the maximum amount outstanding at any month end was $29.9 million. In addition, at December 31, 2018, we had $171.4 million of off-balance sheet securities lending agreements which were collateralized by securities that we were neither permitted to sell nor control. The average balance of these off-balance sheet transactions during the year ended December 31, 2018 was $145.9 million, and the maximum amount outstanding at any month end was $219.4 million.

We had no repurchase agreements outstanding at December 31, 2018, nor did we utilize any repurchase agreements during 2018. Our use of repurchase agreements and securities lending agreements can fluctuate during any given period and will depend on our liquidity position, the availability of long-term investments that meet our purchasing criteria, and our general business needs.

Certain of our U.S. insurance subsidiaries are members of regional Federal Home Loan Banks (FHLB). As of December 31, 2018, we owned $24.1 million of FHLB common stock and had obtained $104.0 million in advances from the regional FHLBs for the purpose of purchasing fixed maturity securities.

See Note 3 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for additional information.

Consolidated Cash Flows
(in millions of dollars)

	Year Ended December 31		
	2018	2017	2016
Net Cash Provided by Operating Activities	$1,536.5	$1,164.1	$1,121.6
Net Cash Used by Investing Activities	(930.1)	(499.3)	(715.5)
Net Cash Used by Financing Activities	(589.8)	(687.8)	(418.6)
Net Change in Cash and Bank Deposits	$16.6	$(23.0)	$(12.5)

Operating Cash Flows
Operating cash flows are primarily attributable to the receipt of premium and investment income, offset by payments of claims, commissions, expenses, and income taxes. Premium income growth is dependent not only on new sales, but on policy renewals and growth of existing business, renewal price increases, and persistency. Investment income growth is dependent on the growth in the underlying assets supporting our insurance reserves and capital and on the earned yield. The level of commissions and operating expenses is attributable to the level of sales and the first year acquisition expenses associated with new business as well as the maintenance of existing business. The level of paid claims is affected partially by the growth and aging of the block of business and also by the general economy, as previously discussed in the operating results by segment.

The variance in the change in insurance reserves and liabilities to reconcile net income to net cash provided by operating activities as reported in our consolidated statements of cash flows for 2018 compared to the prior two years was due primarily to the 2018 reserve increase for our long-term care line of business.

Investing Cash Flows
Investing cash inflows consist primarily of the proceeds from the sales and maturities of investments. Investing cash outflows consist primarily of payments for purchases of investments. Our investment strategy is to match the cash flows and durations of our assets with the cash flows and durations of our liabilities to meet the funding requirements of our business. When market opportunities arise, we may sell selected securities and reinvest the proceeds to improve the yield and credit quality of our portfolio. We may at times also sell selected securities and reinvest the proceeds to

improve the duration matching of our assets and liabilities and/or re-balance our portfolio. As a result, sales before maturity may vary from period to period. The sale and purchase of short-term investments is influenced by proceeds received from issuance of debt, our securities lending program, and by the amount of cash which is at times held in short-term investments to facilitate the availability of cash to fund the purchase of appropriate long-term investments, repay maturing debt, and/or to fund our capital deployment program. Our 2018 cash outflows include a combined purchase amount of $145.4 million, net of cash acquired, for all of our acquisitions during the year. Our 2016 cash outflows include $129.2 million related to our purchase of Starmount.

See Notes 3 and 13 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further information.

Financing Cash Flows

Financing cash flows consist primarily of borrowings and repayments of debt, repurchase of common stock, and dividends paid to stockholders.

During 2018, our $200.0 million 7.00% senior unsecured notes matured. During 2017, we purchased and retired the remaining $3.4 million of principal on our senior secured floating rate notes acquired through our purchase of Starmount. During 2016, we repaid $350.0 million principal upon maturity of our 7.125% notes. We made principal payments of $60.0 million in both 2018 and 2017 and $64.0 million in 2016, on our senior secured non-recourse notes issued by Northwind Holdings.

During 2018, we issued $300.0 million of 6.25% junior subordinated notes due 2058 and received total proceeds of $290.7 million. During 2016, we issued $350.0 million of 3.00% unsecured senior notes due in 2021 and $250.0 million of 5.75% unsecured senior notes due in 2042 and received total proceeds of $609.1 million, excluding the associated debt issuance costs and discounts.

Cash used to repurchase shares of Unum Group's common stock during 2018, 2017, and 2016 was $356.2 million, $401.8 million, and $405.2 million, respectively. During 2018, 2017, and 2016 we paid dividends of $215.6 million, $196.0 million, and $182.6 million, respectively, to holders of Unum Group's common stock.

See "Debt" contained herein in this Item 7, and Notes 8 and 10 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further information.

Ratings

AM Best, Fitch, Moody's, and S&P are among the third parties that assign issuer credit ratings to Unum Group and financial strength ratings to our insurance subsidiaries. We compete based in part on the financial strength ratings provided by rating agencies. A downgrade of our financial strength ratings can be expected to adversely affect us and could potentially, among other things, adversely affect our relationships with distributors of our products and services and retention of our sales force, negatively impact persistency and new sales, particularly large case group sales and individual sales, and generally adversely affect our ability to compete. A downgrade in the issuer credit rating assigned to Unum Group can be expected to adversely affect our cost of capital or our ability to raise additional capital.

The table below reflects the outlook as well as the issuer credit ratings for Unum Group and the financial strength ratings for each of our traditional insurance subsidiaries as of the date of this filing.

	AM Best	Fitch	Moody's	S&P
Outlook	Stable	Negative	Stable	Stable
Issuer Credit Ratings	bbb	BBB	Baa2	BBB
Financial Strength Ratings				
Provident Life and Accident Insurance Company	A	A	A2	A
Provident Life and Casualty Insurance Company	A	A	NR	NR
Unum Life Insurance Company of America	A	A	A2	A
First Unum Life Insurance Company	A	A	A2	A
Colonial Life & Accident Insurance Company	A	A	A2	A

The Paul Revere Life Insurance Company	A	A	A2	A
Starmount Life Insurance Company	A-	NR	NR	NR
Unum Insurance Company	A-	A	A2	NR
Unum Limited	NR	NR	NR	A-

NR = not rated

We maintain an ongoing dialogue with the four rating agencies that evaluate us in order to inform them of progress we are making regarding our strategic objectives and financial plans as well as other pertinent issues. A significant component of our communications involves our annual review meeting with each of the four agencies. We hold other meetings throughout the year regarding our business, including, but not limited to, quarterly updates.

Fitch, Moody's, and S&P affirmed their ratings for our domestic insurance subsidiaries and issuer credit ratings for Unum Group during 2018. Fitch also revised their outlook to negative from stable, citing the adverse reserve development in our long-term care business. There have been no other changes in any of the rating agencies' outlook statements or ratings during 2018 or in 2019 prior to the date of this filing.

Agency ratings are not directed toward the holders of our securities and are not recommendations to buy, sell, or hold our securities. Each rating is subject to revision or withdrawal at any time by the assigning rating organization, and each rating should be regarded as an independent assessment, not conditional on any other rating. Given the dynamic nature of the ratings process, changes by these or other rating agencies may or may not occur in the near-term. Although the outlook for capital requirements has become more clear, there remains some uncertainty in the industry on how rating agencies will incorporate recently announced NAIC RBC formula changes in response to tax reform. We continue to work closely with the rating agencies on these changes. In the event that we are unable to meet the rating agency specific guideline values to maintain our current ratings, including but not limited to maintenance of our capital management metrics at the threshold values stated and maintenance of our financial flexibility and operational consistency, we could be placed on a negative credit watch, with a potential for a downgrade to both our issuer credit ratings and our financial strength ratings.

See "Ratings" contained herein in Item 1 and "Risk Factors" contained herein in Item 1A for further discussion.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are subject to various market risk exposures, including interest rate risk and foreign exchange rate risk. The following discussion regarding our risk management activities includes forward-looking statements that involve risk and uncertainties. Estimates of future performance and economic conditions are reflected assuming certain changes in market rates and prices were to occur (sensitivity analysis). Caution should be used in evaluating our overall market risk from the information presented below, as actual results may differ. See "Risk Factors" contained herein in Item 1A, "Investments" contained herein in Item 7, and Notes 2, 3, and 4 of the "Notes to Consolidated Financial Statements" contained herein in Item 8 for further discussion of the qualitative aspects of market risk, including derivative financial instrument activity.

Interest Rate Risk

Our exposure to interest rate changes results from our holdings of financial instruments such as fixed rate investments, derivatives, and interest sensitive liabilities. Fixed rate investments include fixed maturity securities, mortgage loans, policy loans, and short-term investments. Fixed maturity securities include U.S. and foreign government bonds, securities issued by government agencies, public utility bonds, corporate bonds, mortgage-backed securities, and redeemable preferred stock, all of which are subject to risk resulting from interest rate fluctuations. Certain of our financial instruments, fixed maturity securities and derivatives, are carried at fair value in our consolidated balance sheets. The fair value of these financial instruments may be adversely affected by changes in interest rates. A rise in interest rates may decrease the net unrealized gain related to these financial instruments, but may improve our ability to earn higher rates of return on new purchases of fixed maturity securities. Conversely, a decline in interest rates may increase the net unrealized gain, but new securities may be purchased at lower rates of return. Although changes in fair value of fixed maturity securities and derivatives due to changes in interest rates may impact amounts reported in our consolidated balance sheets, these changes will not cause an economic gain or loss unless we sell investments, terminate derivative positions, determine that an investment is other than temporarily impaired, or determine that a derivative instrument is no longer an effective hedge.

Other fixed rate investments, such as mortgage loans and policy loans, are carried at amortized cost and unpaid balances, respectively, rather than fair value in our consolidated balance sheets. These investments may have fair values substantially higher or lower than the carrying values reflected in our balance sheets. A change in interest rates could impact our financial position if we sold our mortgage loan investments at times of low market value. A change in interest rates would not impact our financial position at repayment of policy loans, as ultimately the cash surrender values or death benefits would be reduced for the carrying value of any outstanding policy loans. Carrying amounts for short-term investments approximate fair value, and we believe we have minimal interest rate risk exposure from these investments.

We believe that the risk of being forced to liquidate investments or terminate derivative positions is minimal, primarily due to the level of capital at our insurance subsidiaries, the level of cash and marketable securities at our holding companies, and our investment strategy which we believe provides for adequate cash flows to meet the funding requirements of our business. We may in certain circumstances, however, need to sell investments due to changes in regulatory or capital requirements, changes in tax laws, rating agency decisions, and/or unexpected changes in liquidity needs.

Although our policy benefits are primarily in the form of claim payments and we therefore have minimal exposure to the policy withdrawal risk associated with deposit products such as individual life policies or annuities, the fair values of liabilities under all insurance contracts are taken into consideration in our overall management of interest rate risk, which minimizes exposure to changing interest rates through the matching of investment cash flows with amounts due under insurance contracts. Changes in interest rates and individuals' behavior affect the amount and timing of asset and liability cash flows. We actively manage our asset and liability cash flow match and our asset and liability duration match to limit interest rate risk. Due to the long duration of our long-term care product, the timing and/or amount of our investment cash flows may not match those of our maturing liabilities. We model and test asset and liability portfolios to improve interest rate risk management and net yields. Testing the asset and liability portfolios under various interest rate and economic scenarios enables us to choose what we believe to be the most appropriate investment strategy, as well as to limit the risk of disadvantageous outcomes. We use this analysis in determining hedging strategies and utilizing derivative financial instruments. We use current and forward interest rate swaps, options on forward interest rate swaps, and forward treasury locks to hedge interest rate risks and to match asset durations and cash flows with corresponding liabilities.

Debt is not carried at fair value in our consolidated balance sheets. If we modify or replace existing debt instruments at current market rates, we may incur a gain or loss on the transaction. We believe our debt-related risk to changes in interest rates is relatively minimal. In the near term, we expect that our need for external financing is small, but changes in our business could increase our need.

We measure our financial instruments' market risk related to changes in interest rates using a sensitivity analysis. This analysis estimates potential changes in fair values as of December 31, 2018 and 2017 based on a hypothetical immediate increase of 100 basis points in interest rates from year end levels. The selection of a 100 basis point immediate parallel change in interest rates should not be construed as our prediction of future market events, but only as an illustration of the potential effect of such an event.

The hypothetical potential changes in fair value of our financial instruments at December 31, 2018 and 2017 are shown as follows:

	December 31, 2018			
(in millions of dollars)	Notional		Hypothetical	
	Amount of Derivatives	Fair Value	FV + 100 BP	Change in FV
Assets				
Fixed Maturity Securities (1)		$43,011.7	$39,532.1	$(3,479.6)
Mortgage Loans		2,317.4	2,179.6	(137.8)
Policy Loans, Net of Reinsurance Ceded		381.8	354.2	(27.6)
Liabilities				
Unrealized Adjustment to Reserves, Net of Reinsurance Ceded and Deferred Acquisition Costs (2)		$(2,986.8)	$(470.7)	$2,516.1
Long-term Debt		(3,069.2)	(2,866.2)	203.0

Derivatives (1)				
Swaps	$799.2	$(7.1)	$(29.1)	$(22.0)
Embedded Derivative in Modified Coinsurance Arrangement		(31.1)	(32.5)	(1.4)

91

(in millions of dollars)	December 31, 2017 Notional Amount of Derivatives	Fair Value	Hypothetical FV + 100 BP	Change in FV
Assets				
Fixed Maturity Securities (1)		$45,457.8	$41,706.3	$(3,751.5)
Mortgage Loans		2,306.2	2,175.6	(130.6)
Policy Loans, Net of Reinsurance Ceded		370.0	342.4	(27.6)
Liabilities				
Unrealized Adjustment to Reserves, Net of Reinsurance Ceded and Deferred Acquisition Costs (2)		$(4,770.3)	$(2,645.8)	$2,124.5
Long-term Debt		(3,048.7)	(2,819.0)	229.7
Derivatives (1)				
Swaps	$904.5	$(32.7)	$(54.2)	$(21.5)
Embedded Derivative in Modified Coinsurance Arrangement		(15.9)	(21.0)	(5.1)

(1) These financial instruments are carried at fair value in our consolidated balance sheets. Changes in fair value resulting from changes in interest rates may affect the fair value at which the item is reported in our consolidated balance sheets. The corresponding offsetting change is reported in other comprehensive income or loss, net of deferred taxes, except for changes in the fair value of derivatives accounted for as fair value hedges or derivatives not designated as hedging instruments, the offset of which is reported as a component of net realized investment gain or loss.

(2) The adjustment to reserves and deferred acquisition costs for unrealized investment gains and losses reflects the adjustments to policyholder liabilities and deferred acquisition costs that would be necessary if the unrealized investment gains and losses related to the fixed maturity securities had been realized. Changes in this adjustment are also reported as a component of other comprehensive income or loss, net of deferred taxes.

The effect of a change in interest rates on asset prices was determined using a duration implied methodology for corporate bonds and government and government agency securities whereby the duration of each security was used to estimate the change in price for the security assuming an increase of 100 basis points in interest rates. The effect of a change in interest rates on the mortgage-backed securities was estimated using a mortgage analytic system which takes into account the impact of changing prepayment speeds resulting from a 100 basis point increase in interest rates on the change in price of the mortgage-backed securities. These hypothetical prices were compared to the actual prices for the period to compute the overall change in market value. The changes in the fair values shown in the chart above for all other items were determined using discounted cash flow analyses. Because we actively manage our investments and liabilities, actual changes could be less than those estimated above.

We remain in an environment of low interest rates, which continues to place pressure on our profit margins as we invest cash flows to support our businesses. We estimate that we will have approximately $2.9 billion of investable cash flows in 2019. Assuming interest rates and credit spreads remain constant throughout 2020 at the January 2019 market levels, our net investment income would decrease by approximately $0.1 million in 2019 and $1.2 million in 2020 as a result of the investment of cash flows at levels below our current expectations. This interest rate scenario does not give consideration to the effect of other factors which could impact these results, such as changes in the bond market and changes in hedging strategies and positions, nor does it consider the potential change to our discount rate reserve assumptions and any mitigating factors such as pricing adjustments. In addition, a continued low or declining interest rate environment may also result in an increase in the net periodic benefit costs for our pension plans, but we do not believe it would materially affect net income in 2019 or 2020.

Foreign Currency Risk

The functional currency of our U.K. operations is the British pound sterling. The functional currency of our operations in Poland is the Polish zloty. We are exposed to foreign currency risk arising from fluctuations in the British pound sterling and Polish zloty to U.S. dollar exchange rates primarily as they relate to the translation of the financial results of our U.K. and Polish operations. Fluctuations in exchange rates have an effect on our reported financial results. We do not hedge against the possible impact of this risk. Because we do not actually convert our functional currency into dollars except for a limited number of transactions, we view foreign currency translation as a financial reporting issue and not a reflection of operations or profitability in our U.K. or Polish operations.

Assuming the pound to dollar exchange rate decreased 10 percent from the December 31, 2018 and 2017 levels, stockholders' equity as reported in U.S. dollars would have been lower by approximately $62 million and $71 million, respectively. Assuming the pound to dollar average exchange rate decreased 10 percent from the actual average exchange rates for 2018 and 2017, adjusted operating income, as reported in U.S. dollars, would have decreased approximately $11 million in each year. Our Polish operations are currently not a significant portion of our overall operations, any changes in the dollar exchange rate would not represent a material impact to our reported financial results in U.S. dollars.

Dividends paid by Unum Limited are generally held at our U.K. finance subsidiary or our U.K. holding company. If these funds are repatriated to our U.S. holding company, we would at that time be subject to foreign currency risk as the value of the dividend, when converted into U.S. dollars, would be dependent upon the foreign exchange rate at the time of conversion.

We are also exposed to foreign currency risk related to certain foreign investment securities denominated in local currencies. We use foreign currency interest rate swaps to hedge or minimize the foreign exchange risk associated with these instruments.

See "Risk Factors" contained herein in Item 1A and "Consolidated Operating Results" and "Unum International Segment" contained herein in Item 7 for further information concerning foreign currency translation.

Risk Management

Effectively taking and managing risks is essential to the success of our Company. To facilitate this effort, we have a formal Enterprise Risk Management (ERM) program, with a framework comprising the following key components:

- Risk-aware culture and governance
- Risk appetite policy
- Risk identification and prioritization
- Risk and capital modeling
- Risk management activities
- Risk reporting

Our ERM framework is the ongoing system of people, processes, and tools across our Company under which we intend to function consistently and collectively to identify and assess risks and opportunities, to manage all material risks within our risk appetite, and to contribute to strategic decision making. With the goal of maximizing shareholder value, the primary objectives of our ERM framework are to support Unum Group in meeting its operational and financial objectives, maintaining liquidity, optimizing capital, and protecting franchise value.

Risk-Aware Culture and Governance

We employ a risk management model under which risk-based decisions are made daily on a local level. To achieve long-term success, we believe risk management must be the responsibility of all employees. The individual and collective decisions of our employees play a key role in successfully managing our overall risk profile. We strive for a culture of integrity, commitment, and accountability and we believe these values allow our employees to feel comfortable identifying issues as well as taking ownership for addressing potential problems.

Our employees have an obligation to report issues that they believe will have a material financial, reputational, or regulatory impact to the Company. We offer several channels for employees to report their issues or concerns and encourage employees to use the channel that is most appropriate for their situation. We recommend that an employee initially discuss their concerns with their manager; however, if that channel is not appropriate an employee may use any of the other reporting channels available.

By employing various approaches, we have established a culture that supports candid discussion and reporting of risks while empowering our employees to take ownership for risk management.

Our culture is reinforced by our system of risk governance. We employ a multi-layered risk control system. Our three lines of defense model is depicted below.

1st Line: Own and Manage	2nd Line: Oversee	3rd Line: Independent Assurance
Business processes and procedures employed throughout the Company through which management assumes and monitors significant risks	Management committees chartered with oversight of activities within the 1st and 2nd lines of defense, mitigation of substantial exposures, and management of emerging risks	Independent assurance on the effectiveness of governance, risk management, and internal control performed by internal audit and the board of directors

Business units are primarily responsible for managing their principal risks. Our risk committees and other management committees serve risk and control functions responsible for providing risk oversight, or the second line of risk control. Our internal audit team provides periodic independent reviews and assurance activities serving as our third line of risk control.

In addition, our board has an active role, as a whole and through its committees, in overseeing management of our risks. The board is responsible for the oversight of strategic risk and regularly reviews information regarding our capital, liquidity, and operations, as well as the risks associated with each. The risk and finance committee of the board is responsible for oversight of our risk management process, including financial risk, operational risk, and any other risk not specifically assigned to another board committee. It also is responsible for oversight of risks associated with investments, capital and financing plans and activities, and related financial matters, including matters pertaining to our Closed Block segment. The audit committee of the board is responsible for oversight of risks relating to financial reporting risk and certain operational risks. Cyber-related operational risk is the joint responsibility of the risk and finance committee and the audit committee. The human capital committee of the board is responsible for oversight of risks relating to our compensation plans and programs. The regulatory compliance committee of the board is responsible for oversight of risks related to regulatory, compliance, policy, and legal matters, both current and emerging, and whether of a local, state, federal, or international nature. While each committee is responsible for evaluating certain risks and overseeing the management of such risks, the entire board is regularly informed through committee reports about such risks in addition to the risk information it receives directly.

Our executive risk management committee is responsible for overseeing our enterprise-wide risk management program. The chief risk officer, who is a member of the executive risk management committee, has primary responsibility for our ERM program and is supported by corporate risk committees and by the risk committees of our operating segments.

Operating segment risk committees for Unum US, Unum International, Colonial Life, and Closed Block are responsible for oversight of risks specific to their businesses. These committees are responsible for identifying, measuring, reporting, and managing strategic insurance and operational risks within their respective areas, consistent with enterprise risk management guidance. Corporate risk committees and other management committees oversee the operational, global technology services, investment, and capital management risks on a corporate level.

Risk Appetite Policy

Our risk appetite policy describes the types of risks we are willing to take, as well as the amount of enterprise risk exposure we deem acceptable in pursuit of our goals, with an objective of clearly defining boundaries for our risk-taking activities.

The starting point of our philosophy and approach to our ERM strategy is our corporate strategy. In contrast to many multi-line peer companies, we do not offer retirement savings, traditional medical benefits, or property and casualty insurance. Our corporate strategy is focused on providing group, individual, and voluntary benefits, either as stand-alone products or combined with other coverages, that create comprehensive benefits solutions for employers. We have market leadership positions in the product lines we offer and believe this combination of focused expertise and experience is a competitive advantage and forms the foundation of our approach to risk management.

We believe our sound and consistent business practices, strong internal compliance program, and comprehensive risk management strategy enable us to operate efficiently and to identify and address potential areas of risk in our business. We take and manage risks to achieve our business and strategic objectives, and our risk appetite statement sets boundaries for risk-taking activities that link earnings, capital, and operational processes, as well as summarizes our most material risk limits and controls.

We monitor our risk profile against our established risk tolerance and limits. Risks falling outside our risk tolerance and limits are reported to the applicable governance group, where decisions are made pertaining to acceptance of the risk or implementation of remediation plans or corrective actions as deemed appropriate by that governance group.

Risk Identification and Prioritization

Risk identification and prioritization is an ongoing process, whereby we identify and assess our risk positions and exposures, including notable risk events. Additionally, we identify emerging risks and analyze how material future risks might affect us. Knowing the potential risks we face, allows us to monitor and manage their potential effects including adjusting our strategies as appropriate and holding capital levels which provide financial flexibility. Risk and other management committees have primary responsibility for identifying and prioritizing risks within their respective areas.

We face a wide range of risks, and our continued success depends on our ability to identify and appropriately manage our risk exposures. For additional information on certain risks that may adversely affect our business, operating results, or financial condition see "Cautionary Statement Regarding Forward-Looking Statements" contained herein on page 1 and "Risk Factors" contained herein in Item 1A.

Risk Modeling and Controls

We assess material risks, including how they affect us and how individual risks interrelate, to provide valuable information to management in order that they may effectively manage our risks. We use qualitative and quantitative approaches to assess existing and emerging risks and to develop mitigating strategies to limit our exposure to both.

We utilize stress testing and scenario analysis for risk management and to shape our business, financial, and strategic planning activities. Both are key components of our risk appetite policy and play an important role in monitoring, assessing, managing, and mitigating our primary risk exposures.
In particular, stress testing of our capital and liquidity management strategies enables us to identify areas of high exposure, assess mitigating actions, develop contingency plans, and guide decisions around our target capital and liquidity levels. For example, we periodically perform stress tests on certain categories of assets or liabilities to support development of capital and liquidity risk contingency plans. These tests help ensure that we have a buffer to support our operations in uncertain times and financial flexibility to respond to market opportunities. Stress testing is also central to reserve adequacy testing, cash flow testing, and asset and liability management.
In addition, we aim to constantly improve our capital modeling techniques and methodologies that are used to determine a level of capital that is commensurate with our risk profile and to ensure compliance with evolving regulatory and rating agency requirements. Our capital modeling reflects appropriate aggregation of risks and diversification benefits resulting from our mix of products and business units.

Our internal capital modeling and allocation aids us in making significant business decisions including strategic planning, capital management, risk limit determination, reinsurance purchases, hedging activities, asset allocation, pricing, and corporate development.

Risk Management Activities

We accept and manage strategic, credit, and insurance risks in accordance with our corporate strategy, investment policy, and annual business plans. The following fundamental principles are embedded in our risk management efforts across our Company.

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We believe in the benefits of specialization and a focused business strategy. We seek profitable risk-taking in areas where we have established risk management skills and capabilities.

- We seek to manage our exposure to insurance risk through a combination of prudent underwriting with effective risk selection, maintaining pricing discipline, sound reserving practices, claims operational effectiveness, and selective use of reinsurance. Detailed underwriting guidelines and claim policies are tools used to manage our insurance risk exposure. We also monitor exposures against internally prescribed limits, and we diversify to reduce potential concentration risk and volatility.
- We maintain a detailed set of investment policies and guidelines, including fundamental credit analysis, that are used to manage our credit risk exposure and diversify our risks across asset classes and issuers.

- We value the importance of managing cyber-related risks, and have policies and procedures in place to help protect against insider trading and allow for timely disclosure of material cybersecurity events.
- Finally, we foster a risk-aware culture that embeds our corporate values and our code of conduct in our daily operations and preserves our reputation with customers and other key stakeholders. We monitor a composite set of operational risk metrics that measure operating effectiveness from the customer perspective.

Risk Reporting

Regular internal and external risk reporting is an integral part of our ERM framework. Internally, ERM reports are a standard part of our quarterly senior management and board meetings. The reports summarize our existing and emerging risk exposures, as well as report against the tolerances and limits defined by our risk appetite policy.

Externally, we are subject to a number of regulatory and rating agency risk examinations, and risk reports are often included. Annually, we file our Own Risk and Solvency Assessment (ORSA) summary report with the applicable insurance regulators for our U.S. insurance subsidiaries. This report provides strong evidence of the strengths of our ERM framework, measurement approaches, key assumptions utilized in assessing our risks, and prospective solvency assessments under both normal and stressed conditions. See "Regulation" contained herein in Item 1 for additional information regarding the ORSA.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Unum Group

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Unum Group and subsidiaries (the Company) as of December 31, 2018 and 2017, and the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes and financial statement schedules listed in the Index at Item 15(a)(2) (collectively referred to as the "financial statements"). In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Company at December 31, 2018 and 2017, and the consolidated results of operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control -Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 19, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company’s auditor since 1999.

Chattanooga, Tennessee
February 19, 2019

CONSOLIDATED BALANCE SHEETS

Unum Group and Subsidiaries

	December 31	
	2018	2017
	(in millions of dollars)	
Assets		
Investments		
Fixed Maturity Securities - at fair value (amortized cost: $40,275.2; $39,780.5)	$43,011.7	$45,457.8
Mortgage Loans	2,295.0	2,213.2
Policy Loans	3,729.9	3,571.1
Other Long-term Investments	702.9	646.8
Short-term Investments	968.1	1,155.1
Total Investments	50,707.6	53,044.0
Other Assets		
Cash and Bank Deposits	94.0	77.4
Accounts and Premiums Receivable	1,615.5	1,665.7
Reinsurance Recoverable	4,662.4	4,879.2
Accrued Investment Income	690.6	690.1
Deferred Acquisition Costs	2,309.4	2,184.6
Goodwill	350.3	338.6
Property and Equipment	546.9	504.8
Deferred Income Tax	109.9	—
Other Assets	789.0	628.7
Total Assets	$61,875.6	$64,013.1

See notes to consolidated financial statements.

CONSOLIDATED BALANCE SHEETS - Continued

Unum Group and Subsidiaries

	December 31	
	2018	2017
	(in millions of dollars)	
Liabilities and Stockholders' Equity		
Liabilities		
Policy and Contract Benefits	$1,695.7	$1,605.2
Reserves for Future Policy and Contract Benefits	44,841.9	45,601.6
Unearned Premiums	363.3	373.1
Other Policyholders’ Funds	1,594.8	1,595.0
Income Tax Payable	24.0	2.9
Deferred Income Tax	—	199.0
Short-term Debt	—	199.9
Long-term Debt	2,971.3	2,738.4
Payables for Collateral on Investments	128.1	396.2
Other Liabilities	1,634.7	1,726.9
Total Liabilities	53,253.8	54,438.2
Commitments and Contingent Liabilities - Note 14		
Stockholders' Equity		
Common Stock, $0.10 par		
Authorized: 725,000,000 shares		
Issued: 305,104,548 and 304,448,032 shares	30.5	30.5
Additional Paid-in Capital	2,321.7	2,303.3
Accumulated Other Comprehensive Income (Loss)	(814.2)	127.5
Retained Earnings	9,863.1	9,542.2
Treasury Stock - at cost: 90,551,513 and 81,900,950 shares	(2,779.3)	(2,428.6)
Total Stockholders' Equity	8,621.8	9,574.9
Total Liabilities and Stockholders' Equity	$61,875.6	$64,013.1

See notes to consolidated financial statements.

99

CONSOLIDATED STATEMENTS OF INCOME

Unum Group and Subsidiaries

	Year Ended December 31		
	2018	2017	2016
	(in millions of dollars, except share data)		
		As Adjusted	
Revenue			
Premium Income	$8,986.1	$8,597.1	$8,357.7
Net Investment Income	2,453.7	2,451.7	2,459.0
Realized Investment Gain (Loss)			
Other-Than-Temporary Impairment Loss on Fixed Maturity Securities	(17.5)	(8.1)	(30.5)
Net Realized Investment Gain (Loss), Excluding Other-Than-Temporary Impairment Loss on Fixed Maturity Securities	(22.0)	48.4	54.7
Net Realized Investment Gain (Loss)	(39.5)	40.3	24.2
Other Income	198.2	197.7	205.6
Total Revenue	11,598.5	11,286.8	11,046.5
Benefits and Expenses			
Benefits and Change in Reserves for Future Benefits	8,020.4	7,055.7	6,941.8
Commissions	1,108.4	1,060.8	1,026.7
Interest and Debt Expense	167.3	159.9	166.0
Deferral of Acquisition Costs	(668.0)	(628.0)	(592.4)
Amortization of Deferred Acquisition Costs	565.5	527.1	493.0
Compensation Expense	885.9	852.3	839.1
Other Expenses	891.2	855.0	824.6
Total Benefits and Expenses	10,970.7	9,882.8	9,698.8
Income Before Income Tax	627.8	1,404.0	1,347.7
Income Tax Expense (Benefit)			
Current	227.4	401.3	385.7
Deferred	(123.0)	8.5	30.6
Total Income Tax Expense	104.4	409.8	416.3
Net Income	$523.4	$994.2	$931.4
Net Income Per Common Share			
Basic	$2.38	$4.39	$3.96
Assuming Dilution	$2.38	$4.37	$3.95

See notes to consolidated financial statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Unum Group and Subsidiaries

	Year Ended December 31		
	2018	2017	2016
	(in millions of dollars)		
Net Income	$523.4	$994.2	$931.4
Other Comprehensive Income (Loss)			
Change in Net Unrealized Gain on Securities Before Adjustment (net of tax expense (benefit) of $(614.2); $328.1; $318.0	(2,314.5)	721.7	661.9
Change in Adjustment to Deferred Acquisition Costs and Reserves for Future Policy and Contract Benefits, Net of Reinsurance (net of tax expense (benefit) of $371.7; $(245.0); $(200.6)	1,411.8	(554.5)	(425.6)
Change in Net Gain on Hedges (net of tax benefit of $8.2; $24.4; $25.4)	(31.7)	(45.2)	(50.5)
Change in Foreign Currency Translation Adjustment (net of tax benefit of $0.6; $-; $-)	(50.7)	99.5	(180.4)
Change in Unrecognized Pension and Postretirement Benefit Costs (net of tax expense (benefit) of $17.0; $(8.3); $(34.2))	60.9	(43.0)	(72.5)
Total Other Comprehensive Income (Loss)	(924.2)	178.5	(67.1)
Comprehensive Income (Loss)	$(400.8)	$1,172.7	$864.3

See notes to consolidated financial statements.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

Unum Group and Subsidiaries

	Year Ended December 31		
	2018	2017	2016
	(in millions of dollars)		
Common Stock			
Balance at Beginning of Year	$30.5	$30.4	$30.3
Common Stock Activity	—	0.1	0.1
Balance at End of Year	30.5	30.5	30.4
Additional Paid-in Capital			
Balance at Beginning of Year	2,303.3	2,272.8	2,247.2
Common Stock Activity	18.4	30.5	25.6
Balance at End of Year	2,321.7	2,303.3	2,272.8
Accumulated Other Comprehensive Income (Loss)			
Balance at Beginning of Year	127.5	(51.0)	16.1
Adjustment to Adopt Accounting Standard Update - Note 1	(17.5)	—	—
Other Comprehensive Income (Loss)	(924.2)	178.5	(67.1)
Balance at End of Year	(814.2)	127.5	(51.0)
Retained Earnings			
Balance at Beginning of Year	9,542.2	8,744.0	7,995.2
Adjustment to Adopt Accounting Standard Update - Note 1	14.5	—	—
Net Income	523.4	994.2	931.4
Dividends to Stockholders (per common share: $0.98; $0.86; $0.77)	(217.0)	(196.0)	(182.6)
Balance at End of Year	9,863.1	9,542.2	8,744.0
Treasury Stock			
Balance at Beginning of Year	(2,428.6)	(2,028.2)	(1,624.9)
Purchases of Treasury Stock	(350.7)	(400.4)	(403.3)
Balance at End of Year	(2,779.3)	(2,428.6)	(2,028.2)
Total Stockholders' Equity at End of Year	$8,621.8	$9,574.9	$8,968.0

See notes to consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

Unum Group and Subsidiaries

	Year Ended December 31		
	2018	2017	2016
	(in millions of dollars)		
		As Adjusted	
Cash Flows from Operating Activities			
Net Income	$523.4	$994.2	$931.4
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities			
Change in Receivables	(4.7)	(101.8)	(167.3)
Change in Deferred Acquisition Costs	(102.5)	(100.9)	(99.4)
Change in Insurance Reserves and Liabilities	1,193.1	441.9	368.2
Change in Income Taxes	(39.1)	25.6	34.7
Change in Other Accrued Liabilities	(10.1)	14.6	125.8
Non-cash Components of Net Investment Income	(211.1)	(200.1)	(187.7)
Net Realized Investment (Gain) Loss	39.5	(40.3)	(24.2)
Depreciation	101.4	103.4	101.7
Other, Net	46.6	27.5	38.4
Net Cash Provided by Operating Activities	1,536.5	1,164.1	1,121.6
Cash Flows from Investing Activities			
Proceeds from Sales of Fixed Maturity Securities	642.5	436.3	911.5
Proceeds from Maturities of Fixed Maturity Securities	2,815.4	2,560.8	2,197.8
Proceeds from Sales and Maturities of Other Investments	454.0	257.9	331.3
Purchase of Fixed Maturity Securities	(3,861.7)	(2,808.5)	(3,362.8)
Purchase of Other Investments	(623.2)	(474.3)	(576.0)
Net Sales (Purchases) of Short-term Investments	200.5	(356.4)	6.3
Net Decrease in Payables for Collateral on Investments	(268.1)	(9.8)	(9.4)
Acquisition of Business (Net of Cash Acquired)	(145.4)	—	(129.2)
Net Purchases of Property and Equipment	(144.1)	(105.3)	(85.0)
Net Cash Used by Investing Activities	(930.1)	(499.3)	(715.5)
Cash Flows from Financing Activities			
Short-term Debt Repayment	(200.0)	—	—
Issuance of Long-term Debt	290.7	—	609.1
Long-term Debt Repayment	(60.0)	(63.5)	(414.0)
Issuance of Common Stock	4.6	10.8	8.5
Repurchase of Common Stock	(356.2)	(401.8)	(405.2)
Dividends Paid to Stockholders	(215.6)	(196.0)	(182.6)
Other, Net	(53.3)	(37.3)	(34.4)
Net Cash Used by Financing Activities	(589.8)	(687.8)	(418.6)
Net Increase (Decrease) in Cash and Bank Deposits	16.6	(23.0)	(12.5)
Cash and Bank Deposits at Beginning of Year	77.4	100.4	112.9
Cash and Bank Deposits at End of Year	$94.0	$77.4	$100.4

See notes to consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Unum Group and Subsidiaries

Note 1 - Significant Accounting Policies

Basis of Presentation: The accompanying consolidated financial statements of Unum Group and its subsidiaries (the Company) have been prepared in accordance with U.S. generally accepted accounting principles (GAAP). Such accounting principles differ from statutory accounting principles (see Note 15). Intercompany transactions have been eliminated.

Description of Business: We are a leading provider of financial protection benefits in the United States and the United Kingdom. Our products include disability, life, accident, critical illness, dental and vision, and other related services. We market our products primarily through the workplace.

We have three principal operating business segments: Unum US, Unum International, and Colonial Life. Our other reporting segments are Closed Block and Corporate. See Note 13 for further discussion of our operating segments.

Use of Estimates: The preparation of financial statements in conformity with GAAP requires us to make estimates and assumptions that affect amounts reported in the financial statements and accompanying notes. Such estimates and assumptions could change in the future as more information becomes known, which could impact the amounts reported and disclosed herein.

Fixed Maturity Securities: Fixed maturity securities include long-term bonds and redeemable preferred stocks. Our fixed maturity securities are classified as available-for-sale and reported at fair value. Changes in the fair value of available-for-sale fixed maturity securities, except for amounts related to other-than-temporary impairment losses recognized in earnings, are reported as a component of other comprehensive income. These amounts are net of income tax and valuation adjustments to deferred acquisition costs and reserves for future policy and contract benefits which would have been recorded had the related unrealized gain or loss on these securities been realized.

Interest income is recorded as part of net investment income when earned, using an effective yield method giving effect to amortization of premium and accretion of discount. Included within fixed maturity securities are mortgage-backed and asset-backed securities. We recognize investment income on these securities using a constant effective yield based on projected prepayments of the underlying loans and the estimated economic life of the securities. Actual prepayment experience is reviewed periodically, and effective yields are recalculated when differences arise between prepayments originally projected and the actual prepayments received and currently projected. The effective yield is recalculated on a retrospective basis, and the adjustment is reflected in net investment income. For fixed maturity securities on which collection of investment income is uncertain, we discontinue the accrual of investment income and recognize investment income when interest and dividends are received. Payment terms specified for fixed maturity securities may include a prepayment penalty for unscheduled payoff of the investment. Prepayment penalties are recognized as investment income when received.

In determining when a decline in fair value below amortized cost of a fixed maturity security is other than temporary, we evaluate available information, both positive and negative, in reaching our conclusions. In particular, we consider the strength of the issuer's balance sheet, its debt obligations and near-term funding requirements, cash flow and liquidity, the profitability of its core businesses, the availability of marketable assets which could be sold to increase liquidity, its industry fundamentals and regulatory environment, and its access to capital markets. Although all available and applicable factors are considered in our analysis, our expectation of recovering the entire amortized cost basis of the security, whether we intend to sell the security, whether it is more likely than not that we will be required to sell the security before recovery of its amortized cost, and whether the security is current on principal and interest payments are the most critical factors in determining whether impairments are other than temporary. The significance of the decline in value and the length of time during which there has been a significant decline are also important factors, but we generally do not record an impairment loss based solely on these two factors, since often other more relevant factors will impact our evaluation of a security.

If we determine that the decline in value of an investment is other than temporary, the investment is written down to fair value, and an impairment loss is recognized in the current period, either in earnings or in both earnings and other comprehensive income, as applicable. Other-than-temporary impairment losses on fixed maturity securities which we intend to sell or more likely than not will be required to sell before recovery in value are recognized in earnings and equal the entire difference between the security's amortized cost basis and its fair value. For securities which we do not intend to sell and it is not more likely than not that we will be required to sell before recovery in value, other-than-temporary impairment losses recognized in earnings generally represent the difference between the amortized cost of the security and the present value of our best estimate of cash flows expected to be collected, discounted using the effective interest rate implicit in the security at the date of acquisition. For fixed maturity securities for which we have recognized an other-than-temporary impairment loss through earnings, if through subsequent evaluation there is a significant increase in expected cash flows, the difference between the new amortized cost basis and the cash flows expected to be collected is accreted as net investment income over the remaining life of the investment. See Notes 2 and 3.

Mortgage Loans: Mortgage loans are generally held for investment and are carried at amortized cost less an allowance for probable losses. Interest income is accrued on the principal amount of the loan based on the loan's contractual interest rate. Prepayment penalties are recognized as investment income when received. For mortgage loans on which collection of interest income is uncertain, we discontinue the accrual of interest and recognize it in the period when an interest payment is received. We typically do not resume the accrual of interest on mortgage loans on nonaccrual status until there are significant improvements in the underlying financial condition of the borrower. We consider a loan to be delinquent if full payment is not received in accordance with the contractual terms of the loan.

We evaluate each of our mortgage loans individually for impairment and assign an internal credit quality rating based on a comprehensive rating system used to evaluate the credit risk of the loan. Although all available and applicable factors are considered in our analysis, loan-to-value and debt service coverage ratios are the most critical factors in determining impairment. If we determine that it is probable we will be unable to collect all amounts due under the contractual terms of a mortgage loan, we establish an allowance for credit loss. If we expect to foreclose on the property, the amount of the allowance typically equals the excess carrying value of the mortgage loan over the fair value of the underlying collateral. If we expect to retain the mortgage loan until payoff, the allowance equals the excess carrying value of the mortgage loan over the expected future cash flows of the loan. Additions and reductions to our allowance for credit losses on mortgage loans are reported as a component of net realized investment gains and losses. We do not purchase mortgage loans with existing credit impairments. See Note 3.

Policy Loans: Policy loans are presented at unpaid balances directly related to policyholders. Interest income is accrued on the principal amount of the loan based on the loan's contractual interest rate. Included in policy loans are $3,449.3 million and $3,307.5 million of policy loans ceded to reinsurers at December 31, 2018 and 2017, respectively.

Other Long-term Investments: Other long-term investments are comprised primarily of tax credit partnerships and private equity partnerships.

Tax credit partnerships in which we have invested were formed for the purpose of investing in the construction and rehabilitation of low-income housing. Because the partnerships are structured such that there is no return of principal, the primary sources of investment return from our tax credit partnerships are tax credits and tax benefits derived from passive losses on the investments, both of which may exhibit variability over the life of the investment. These partnerships are accounted for using either the proportional or the effective yield method, depending primarily on whether the tax credits are guaranteed through a letter of credit, a tax indemnity agreement, or another similar arrangement. Tax credits received from these partnerships are reported in our consolidated statements of income as either a reduction of premium tax or a reduction of income tax. The amortization of the principal amount invested in these partnerships is reported as a component of either premium tax or income tax.

Our investments in private equity partnerships are passive in nature and represent funds that are primarily invested in private credit, private equity, and real assets. We account for our investments in these partnerships using either the equity method or at fair value through net income depending on the level of ownership and the degree of our influence over partnership operating and financial policies. For investments in partnerships accounted for under the equity method, we report our investments at our share of the partnership's net asset value (NAV) and record our portion of partnership earnings is recorded as a component of net investment income. For investments in partnerships accounted for at fair value through net income, we also report our investments at our share of the partnership's NAV as a practical expedient for fair value with increases or decreases recorded as a component of net investment income. Distributions received from the funds arise from income generated by the underlying investments as well as the liquidation of the underlying investments and there is generally not a public market for these investments.

See notes 2 and 3 for further discussion of our other long-term investments.

Short-term Investments: Short-term investments are carried at cost. Short-term investments include investments maturing within one year of purchase, such as corporate commercial paper and U.S. Treasury bills, bank term deposits, and other cash accounts and cash equivalents earning interest.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 1 - Significant Accounting Policies - Continued

Cash and Bank Deposits: Cash and bank deposits include cash on hand and non-interest bearing cash and deposit accounts.

Derivative Financial Instruments: Derivative financial instruments (including certain derivative instruments embedded in other contracts) are recognized as either other long-term investments or other liabilities in our consolidated balance sheets and are reported at fair value. The accounting for a derivative depends on whether it has been designated and qualifies as part of a hedging relationship, and further, on the type of hedging relationship. To qualify for hedge accounting, at the inception of the hedging transaction, we formally document the risk management objective and strategy for undertaking the hedging transaction, as well as the designation of the hedge as either a fair value hedge or a cash flow hedge. Included in this documentation is how the hedging instrument is expected to hedge the designated risk(s) related to specific assets or liabilities on the balance sheet or to specific forecasted transactions as well as a description of the method that will be used to retrospectively and prospectively assess the hedging instrument's effectiveness.

A derivative designated as a hedging instrument must be assessed as being highly effective in offsetting the designated risk(s) of the hedged item. Hedge effectiveness is formally assessed at inception and periodically throughout the life of the designated hedging relationship, using qualitative and quantitative methods. Qualitative methods include comparison of critical terms of the derivative to the hedged item. Quantitative methods include regression or other statistical analysis of changes in fair value or cash flows associated with the hedge relationship.

Changes in the fair value of a derivative designated as a fair value hedge and changes in the fair value of the hedged item attributable to the risk being hedged are recognized in earnings as a component of net realized investment gain or loss during the period of change in fair value. For gains or losses on the derivative instrument that are excluded from the assessment of hedge effectiveness, those gains and losses are recognized in other comprehensive income or loss and amortized into earnings in the same income statement line as the related hedged item. The gain or loss on the termination of a fair value hedge is recognized in earnings as a component of net realized investment gain or loss during the period in which the termination occurs. When interest rate swaps are used in hedge accounting relationships, periodic settlements are recorded in the same income statement line as the related settlements of the hedged items.

Changes in the fair value of a derivative designated as a cash flow hedge are reported in other comprehensive income and reclassified into earnings and reported on the same income statement line item as the hedged item and in the same period or periods during which the hedged item affects earnings. The gain or loss on the termination of an effective cash flow hedge is reported in other comprehensive income and reclassified into earnings and reported on the same income statement line item as the hedged item and in the same period or periods during which the hedged item affects earnings.

Gains or losses on the termination of ineffective fair value or cash flow hedges are reported in earnings as a component of net realized investment gain or loss. In the event a hedged item is disposed of or the anticipated transaction being hedged is no longer likely to occur, we will terminate the related derivative and recognize the gain or loss on termination in current earnings as a component of net realized investment gain or loss. In the event a hedged item is disposed of subsequent to the termination of the hedging transaction, we reclassify any remaining gain or loss on the hedge out of accumulated other comprehensive income into earnings as a component of the same income statement line item wherein we report the gain or loss on disposition of the hedged item.

For a derivative not designated as a hedging instrument, changes in the fair value of the derivative, together with the payment of periodic fees, if applicable, are recognized in earnings as a component of net realized investment gain or loss during the period of change in fair value.

Cash flow activity from the settlement of derivative contracts is reported in the consolidated statements of cash flows as a component of proceeds from sales and maturities of other investments.

In our consolidated balance sheets, we do not offset fair value amounts recognized for derivatives executed with the same counterparty under a master netting agreement and fair value amounts recognized for the right to reclaim cash collateral or the obligation to return cash collateral arising from those master netting agreements. See Notes 2, 3 and 4.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 1 - Significant Accounting Policies - Continued

Fair Value Measurement: Certain assets and liabilities are reported at fair value in our consolidated balance sheets and in our notes to our consolidated financial statements. We define fair value 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. Therefore, fair value represents an exit price, not an entry price. The exit price objective applies regardless of our intent and/or ability to sell the asset or transfer the liability at the measurement date. Assets or liabilities with readily available actively quoted prices or for which fair value can be measured from actively quoted prices in active markets generally have more pricing observability and less judgment utilized in measuring fair value. When actively quoted prices are not available, fair values are based on quoted prices in markets that are not active, quoted prices for similar but not identical assets or liabilities, or other observable inputs. If observable inputs are not available, unobservable inputs and/or adjustments to observable inputs requiring management judgment are used to determine fair value. We categorize our assets and liabilities measured at estimated fair value into a three-level hierarchy, based on the significance of the inputs. The fair value hierarchy gives the highest priority to inputs which are unadjusted and represent quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). See Note 2.

Realized Investment Gains and Losses: Realized investment gains and losses are reported as a component of revenue in the consolidated statements of income and are based upon specific identification of the investments sold. See Note 3.

Deferred Acquisition Costs: Incremental direct costs associated with the successful acquisition of new or renewal insurance contracts have been deferred. Such costs include commissions, other agency compensation, certain selection and policy issue expenses, and certain field expenses. Acquisition costs that do not vary with the production of new business, such as commissions on group products which are generally level throughout the life of the policy, are excluded from deferral. Deferred acquisition costs are subject to recoverability testing at the time of policy issue and loss recognition testing in subsequent years.

Deferred acquisition costs related to non-interest sensitive policies are amortized in proportion to the premium income we expect to receive over the lives of the policies. Deferred acquisition costs related to interest sensitive policies are amortized over the lives of the policies in relation to the present value of estimated gross profits from surrender charges, mortality margins, investment returns, and expense margins. Deviations from projections result in a change to the rate of amortization in the period during which such events occur. Generally, the amortization periods for these policies approximate the estimated lives of the policies.

For certain products, policyholders can elect to modify product benefits, features, rights, or coverages by exchanging a contract for a new contract or by amendment, endorsement, or rider to a contract, or by the election of a feature or coverage within a contract. These transactions are known as internal replacement transactions. Internal replacement transactions wherein the modification does not substantially change the policy are accounted for as continuations of the replaced contracts. Unamortized deferred acquisition costs from the original policy continue to be amortized over the expected life of the new policy, and the costs of replacing the policy are accounted for as policy maintenance costs and expensed as incurred. Internal replacement transactions, principally on group contracts, that result in a policy that is substantially changed are accounted for as an extinguishment of the original policy and the issuance of a new policy. Unamortized deferred acquisition costs on the original policy that was replaced are immediately expensed, and the costs of acquiring the new policy are capitalized and amortized in accordance with our accounting policies for deferred acquisition costs.

Loss recognition is performed on an annual basis, or more frequently if appropriate, using best estimate assumptions as to future experience as of the date of the test. Insurance contracts are grouped for each major product line within a segment when we perform the loss recognition tests. If loss recognition testing indicates that deferred acquisition costs are not recoverable, the deficiency is charged to expense.

Goodwill: Goodwill is the excess of the amount paid to acquire a business over the fair value of the net assets acquired. We review the carrying amount of goodwill for impairment on an annual basis, or more frequently if events or changes in circumstances indicate that the carrying amount might not be recoverable. Goodwill impairment testing compares the fair value of a reporting unit with its carrying amount, including goodwill. The fair values of the reporting units are determined using discounted cash flow models. The critical estimates necessary in determining fair value are projected earnings and the discount rate. We set our discount rate assumption based on an expected risk adjusted cost of capital. If the fair value of the reporting unit to which the goodwill relates is less than the carrying amount of the unamortized goodwill, the impairment charge is determined by calculating the implied fair value of goodwill by assigning the fair value of a reporting unit to all of its assets and liabilities. The carrying amount of goodwill is then reduced with a corresponding charge to expense.

Property and Equipment: Property and equipment is reported at cost less accumulated depreciation, which is calculated on the straight-line method over the estimated useful life. The accumulated depreciation for property and equipment was $1,151.8 million and $1,067.7 million as of December 31, 2018 and 2017, respectively.

Value of Business Acquired: Value of business acquired represents the present value of future profits recorded in connection with the acquisition of a block of insurance policies. The asset is amortized based upon expected future premium income for non-interest sensitive insurance policies and estimated future gross profits from surrender charges, mortality margins, investment returns, and expense margins for interest sensitive insurance policies. The value of business acquired, which is included in other assets in our consolidated balance sheets, was $96.7 million and $27.9 million at December 31, 2018 and 2017, respectively. The accumulated amortization for value of business acquired was $133.0 million and $130.4 million as of December 31, 2018 and 2017, respectively.

The amortization of value of business acquired, which is included in other expenses in the consolidated statements of income, was $6.4 million, $4.8 million, and $5.1 million for the years ended December 31, 2018, 2017, and 2016, respectively. We periodically review the carrying amount of value of business acquired using the same methods used to evaluate deferred acquisition costs.

Policy and Contract Benefits: Policy and contract benefits represent amounts paid and expected to be paid based on reported losses and estimates of incurred but not reported losses for non-interest sensitive life and accident and health products. For interest sensitive products, benefits are the amounts paid and expected to be paid on insured claims in excess of the policyholders' policy fund balances.

Reserves for Policy and Contract Benefits: Policy reserves represent future policy and contract benefits for claims not yet incurred. Policy reserves for non-interest sensitive life and accident and health products are determined using the net level premium method. The reserves are calculated based upon assumptions as to interest, persistency, morbidity, and mortality that were appropriate at the date of issue. Discount rate assumptions are based on actual and expected net investment returns. Persistency assumptions are based on our actual historical experience adjusted for future expectations. Claim incidence and claim resolution rate assumptions related to morbidity and mortality are based on actual experience or industry standards adjusted as appropriate to reflect our actual experience and future expectations. The assumptions vary by plan, year of issue, and policy duration and include a provision for adverse deviation.

Policy reserves for group single premium annuities are developed on a net single premium method. The reserves are calculated based on assumptions as to interest, mortality, and retirement that were appropriate at the date of issue. Mortality assumptions are based upon industry standards adjusted as appropriate to reflect our actual experience and future expectations. The assumptions vary by year of issue.

Policy reserves for interest sensitive products are principally policyholder account values.

Policy reserves require ongoing loss recognition testing. We perform loss recognition tests on our policy reserves annually, or more frequently if appropriate, using best estimate assumptions as of the date of the test, without a provision for adverse deviation. We group the policy reserves for each major product line within a segment when we perform the loss recognition tests. If the policy reserves determined using these best estimate assumptions are higher than our existing policy reserves net of any deferred acquisition cost balance, the existing policy reserves are increased or deferred acquisition costs are reduced to immediately recognize the deficiency. This becomes the new basis for policy reserves going forward, subject to future loss recognition testing.

Claim reserves represent future policy and contract benefits for claims that have been incurred or are estimated to have been incurred but not yet reported to us. Our claim reserves relate primarily to disability and long-term care policies and are calculated based on assumptions as to interest and claim resolution rates that are currently appropriate. Claim resolution rate assumptions are based on our actual experience. The interest rate assumptions used for discounting claim reserves are based on projected portfolio yield rates, after consideration for defaults and investment expenses, for the assets supporting the liabilities for the various product lines. Unlike policy reserves for which assumptions are generally established and locked in at the time of policy issuance, claim reserves are subject to revision as current claim experience and projections of future factors affecting claim experience change. Claim reserves do not include a provision for adverse deviation. See Note 6.

Policyholders' Funds: Policyholders' funds represent customer deposits plus interest credited at contract rates. We control interest rate risk by investing in quality assets which have an aggregate duration that closely matches the expected duration of the liabilities.

Income Tax: Deferred taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial statement purposes and the amounts used for income tax purposes. Deferred taxes have been measured using enacted statutory income tax rates and laws that are currently in effect. We record adjustments to our deferred taxes resulting from tax rate changes through income as of the date of enactment. We record deferred tax assets for tax positions taken in the U.S. and other tax jurisdictions based on our assessment of whether a position is more likely than not to be sustained upon examination based solely on its technical merits. A valuation allowance is established for deferred tax assets when it is more likely than not that an amount will not be realized. See Note 7.

Short-term and Long-term Debt: Debt is generally carried at the unpaid principal balance, net of unamortized discount or premium and deferred debt issuance costs. Short-term debt consists of debt due within the next twelve months, including that portion of debt otherwise classified as long-term. Original issue discount or premium as well as debt issuance costs are recognized as a component of interest expense over the period the debt is expected to be outstanding. The carrying amount of long-term debt that is part of a fair value hedge program includes an adjustment to reflect the effect of the change in fair value attributable to the risk being hedged. Net interest settlements for fair value hedges on our long-term debt are recognized as a component of interest expense. See Note 8.

Treasury Stock and Retirement of Common Stock: Treasury stock is reflected as a reduction of stockholders' equity at cost. When shares are retired, the par value is removed from common stock, and the excess of the repurchase price over par is allocated between additional paid-in capital and retained earnings. See Note 10.

Revenue Recognition: Our non-interest sensitive life and accident and health products are long-duration contracts, and premium income is recognized as revenue when due from policyholders. If the contracts are experience rated, the estimated ultimate premium is recognized as revenue over the period of the contract. The estimated ultimate premium, which is revised to reflect current experience, is based on estimated claim costs, expenses, and profit margins.

For interest sensitive products, the amounts collected from policyholders are considered deposits, and only the deductions during the period for cost of insurance, policy administration, and surrenders are included in revenue. Policyholders' funds represent funds deposited by contract holders and are not included in revenue.

Fees from our administrative-services only and family medical leave products are reported as other income when services are rendered.

Reinsurance: We routinely enter into reinsurance agreements with other insurance companies to spread risk and thereby limit losses from large exposures. For each of our reinsurance agreements, we determine if the agreement provides indemnification against loss or liability relating to insurance risk in accordance with applicable accounting standards. If we determine that a reinsurance agreement does not expose the reinsurer to a reasonable possibility of a significant loss from insurance risk, we record the agreement using the deposit method of accounting.

Reinsurance activity is accounted for on a basis consistent with the terms of the reinsurance contracts and the accounting used for the original policies issued. Premium income and benefits and change in reserves for future benefits are presented in our consolidated statements of income net of reinsurance ceded. Ceded liabilities for policy and contract benefits, future policy and contract benefits, and unearned premiums are reported on a gross basis in our consolidated balance sheets, as are ceded policy loans. Our reinsurance recoverable includes the balances due from reinsurers under the terms of the reinsurance agreements for these ceded balances as well as settlement amounts currently due.

Where applicable, gains or losses on reinsurance transactions are deferred and amortized into earnings based upon expected future premium income for non-interest sensitive insurance policies and estimated future gross profits for interest sensitive insurance policies. The deferred gain on reinsurance included in other liabilities in our consolidated balance sheets at December 31, 2018 and 2017 was $12.5 million and $17.7 million, respectively.

Under ceded reinsurance agreements wherein we are not relieved of our legal liability to our policyholders, if the assuming reinsurer is unable to meet its obligations, we remain contingently liable. We evaluate the financial condition of reinsurers and monitor concentration of credit risk to minimize this exposure. We may also require assets in trust, letters of credit, or other acceptable collateral to support our reinsurance recoverable balances. In the event that reinsurers do not meet their obligations to us under the terms of the reinsurance agreements, certain amounts reported in our reinsurance recoverable could become uncollectible, in which case the reinsurance recoverable balances are stated net of allowances for uncollectible reinsurance. See Note 12.

Premium Tax Expense: Premium tax expense is included in other expenses in the consolidated statements of income. For the years ended December 31, 2018, 2017, and 2016, premium tax expense was $155.8 million, $158.0 million, and $152.5 million, respectively.

Stock-Based Compensation: The cost of stock-based compensation is generally measured based on the grant-date fair value of the award. The Black-Scholes options valuation model is used for estimating the fair value of stock options, and the Monte-Carlo valuation model is used for estimating the fair value of performance share units. Restricted stock units are valued based on the fair value of common stock at the grant date. Stock-based awards are expensed over the requisite service period, or for performance share units over the requisite service period, or remaining service period, if and when it becomes probable that the performance conditions will be satisfied, with an offsetting increase to additional paid-in capital in stockholders' equity. Forfeitures of stock-based awards are recognized as they occur. See Note 11.

Earnings Per Share: We compute basic earnings per share by dividing net income by the weighted average number of common shares outstanding for the period. Earnings per share assuming dilution is computed by dividing net income by the weighted average number of shares outstanding for the period plus the shares representing the dilutive effect of stock-based awards. In computing earnings per share assuming dilution, only potential common shares resulting from stock-based awards that are dilutive (those that reduce earnings per share) are included. We use the treasury stock method to account for the effect of outstanding stock options and nonvested stock awards on the computation of earnings per share assuming dilution. See Note 10.

Translation of Foreign Currency: Revenues and expenses of our foreign operations are translated at average exchange rates. Assets and liabilities are translated at the rate of exchange on the balance sheet dates. The translation gain or loss is generally reported in accumulated other comprehensive income, net of deferred tax. We do not provide for deferred taxes to the extent unremitted foreign earnings are deemed permanently invested.

Accounting for Participating Individual Life Insurance: Participating policies issued by one of our subsidiaries prior to its 1986 conversion from a mutual to a stock life insurance company will remain participating as long as the policies remain in-force. A Participation Fund Account (PFA) was established for the benefit of all such individual participating life and annuity policies and contracts. The assets of the PFA provide for the benefit, dividend, and certain expense obligations of the participating individual life insurance policies and annuity contracts. The assets of the PFA were $301.2 million and $328.3 million at December 31, 2018 and 2017, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 1 - Significant Accounting Policies - Continued

Accounting Updates Adopted in 2018:

Accounting Standards Codification (ASC)	Description	Date of Adoption	Effect on Financial Statements
ASC 230 "Statement of Cash Flows"	This update provided clarifying guidance intended to reduce the diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. The update addressed eight specific cash flow issues that relate to various types of transactions. The guidance was applied retrospectively.	January 1, 2018	The adoption of this update resulted in the reclassification of certain cash inflows between investing activities and operating activities within our consolidated statements of cash flows. The reclassification primarily related to cash distributions from equity method investees and the bifurcation of those distributions as either returns on investment or returns of investment which resulted in a reclassification of cash inflows from investing activities to operating activities. The remaining portion of the reclassification related to the receipt of proceeds from corporate-owned life insurance benefits which resulted in a reclassification of cash inflows from operating activities to investing activities. The adoption of this update had no effect on our financial position or results of operations. See the summary tables contained herein for the financial statement impacts of this retrospective adoption.
ASC 606 "Revenue from Contracts with Customers"	These updates superseded virtually all existing guidance regarding the recognition of revenue from customers. Specifically excluded from the scope of these updates are insurance contracts, although our fee-based service products are included within the scope. Our fee-based service products, which are primarily sold in our Unum US segment, are reported in other income within our consolidated statements of income and represent less than one percent of our total revenue. The core principle of this guidance is that revenue recognition should depict the transfer of goods or services to customers in an amount that reflects the consideration to which	January 1, 2018	The adoption of these updates did not have an impact on our financial position or results of operations and did not result in expanded disclosures due to the immaterial nature of our fee-based service products relative to our overall business.

an entity expects to be entitled in exchange for those goods or services. Accordingly, we continue to recognize revenue for these fee-based service products as services are rendered. The guidance was applied retrospectively for all periods presented or retrospectively with a cumulative-effect adjustment at the date of adoption.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 1 - Significant Accounting Policies - Continued

ASC	Description	Date of Adoption	Effect on Financial Statements
ASC 715 "Compensation - Retirement Benefits"	This update required the service cost component of net periodic pension and postretirement benefit costs to be included as a component of compensation costs in an entity's statement of income. Other components of net periodic pension and postretirement benefit costs are required to be presented separately from the service cost along with a disclosure identifying the line items in which these costs are presented in the statement of income. The amendments in this update were applied retrospectively or prospectively depending on the specific requirement of the update.	January 1, 2018	The adoption of this update resulted in the reclassification of service cost from the other expenses line item to the compensation expense line item on our consolidated statements of income but had no effect on our financial position or results of operations. We elected to use the practical expedient for the retrospective application of this update. See the summary tables contained herein for the financial statement impacts of this retrospective adoption.
ASC 740 "Income Taxes"	This update eliminated the exception that required the tax effect of intra-entity asset transfers other than inventory to be deferred until the transferred asset is sold to a third party or otherwise recovered through use. It required recognition of tax expense from the sale of the asset in the seller’s tax jurisdiction when the transfer occurs, even though the pre-tax effects of that transaction are eliminated in consolidation. The guidance was applied retrospectively.	January 1, 2018	The adoption of this update did not have an impact on our financial position or results of operations.
ASC 815 "Derivatives and Hedge Accounting"	This update provided targeted improvements to accounting for hedging activities for both nonfinancial and financial risk components, aligns the recognition and presentation of the effects of the hedging instrument and the hedged item in the financial statements, eases certain documentation and effectiveness assessment requirements, and enhances transparency through expanded disclosures. For cash flow and net investment hedges existing at the date of adoption, the guidance was applied using a modified retrospective approach through a cumulative-effect adjustment to accumulated other comprehensive income with a corresponding adjustment to retained earnings as	January 1, 2018	We elected to early adopt this update. The adoption of this update did not have an impact on our financial position or results of operations; however, it expanded our disclosures. This update also simplified hedge documentation requirements and expanded available hedging strategies.

of the beginning of the fiscal year the guidance is adopted. The amended presentation and disclosure guidance were required prospectively. Early adoption was permitted.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 1 - Significant Accounting Policies - Continued

ASC	Description	Date of Adoption	Effect on Financial Statements
ASC 820 "Fair Value Measurement"	This update amended the fair value measurement guidance by removing or clarifying certain existing disclosure requirements, while also adding new disclosure requirements. Specifically, this update removed certain disclosures related to Level 1 and Level 2 transfers and also removed the discussion regarding valuation processes of Level 3 fair value measurements. The update modifies guidance related to investments in certain entities that calculate net asset value to explicitly require disclosure regarding timing of liquidation of the investee's assets and timing of redemption restrictions. The update adds disclosures around the changes in unrealized gains and losses in other comprehensive income for recurring Level 3 investments held at the end of the reporting period and adds disclosures regarding certain unobservable inputs on Level 3 fair value measurements. The guidance was applied retrospectively or prospectively depending on the specific requirement of the update. Entities are permitted to early adopt any removed or modified disclosures and may delay adoption of the additional disclosures until their effective date.	December 31, 2018 for the removal and modification of certain disclosures and January 1, 2020 for the addition of certain disclosures.	We elected to early adopt the removal and modification of disclosures, as permitted by the update. We have elected to delay the adoption of the additional disclosures until the effective date. The adoption of this update will modify our disclosures but will not have an impact on our financial position or results of operations.
ASC 825 "Financial Instruments - Overall"	This update changed the accounting and disclosure requirements for certain financial instruments. These changes include a requirement to measure equity investments, other than those that result in consolidation or are accounted for under the equity method, at fair value through net income unless the investment qualifies for certain practicability exceptions. In addition, the update clarified guidance related to the valuation allowance assessment when recognizing deferred tax assets resulting from unrealized losses on available-for-sale fixed maturity securities. Changes also included the modification of certain disclosures around the fair value of financial instruments, including the requirement for separate presentation of financial assets and liabilities by measurement category, as well as the elimination of certain disclosures around methods and significant assumptions used to estimate fair value. The guidance was applied using a modified retrospective approach through a cumulative-effect adjustment to accumulated other comprehensive income with a	January 1, 2018	See the summary tables contained herein for the financial statement impacts of this modified retrospective adoption on our financial statement line items at January 1, 2018.

corresponding adjustment to retained earnings as of the beginning of the fiscal year of adoption.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 1 - Significant Accounting Policies - Continued

Summary of Financial Statement Impacts of Accounting Updates Adopted in 2018:

	For the Year Ended December 31					
	2017			2016		
	Historical Accounting Method	As Adjusted	Effect of Change	Historical Accounting Method	As Adjusted	Effect of Change
	(in millions of dollars)					
Adjustments due to ASC 230						
Consolidated Statements of Cash Flow						
Cash Flows from Operating Activities						
Other, Net	$12.8	$ 27.5	$ 14.7	$32.9	$ 38.4	$ 5.5
Cash Flows from Investing Activities						
Proceeds from Sales and Maturities of Other Investments	272.6	257.9	(14.7)	336.8	331.3	(5.5)

	For the Year Ended December 31					
	2017			2016		
	Historical Accounting Method	As Adjusted	Effect of Change	Historical Accounting Method	As Adjusted	Effect of Change
	(in millions of dollars)					
Adjustments due to ASC 715						
Consolidated Statements of Income						
Compensation Expense	$844.4	$ 852.3	$ 7.9	$832.1	$ 839.1	$ 7.0
Other Expenses	862.9	855.0	(7.9)	831.6	824.6	(7.0)

	Balance at December 31, 2017	Balance at January 1, 2018	Effect of Change
	(in millions of dollars)		
Adjustments due to ASC 825			
Consolidated Balance Sheets			
Assets			
Investments			
Other Long-term Investments	$646.8	$ 643.0	$ (3.8)
Liabilities			
Deferred Income Tax	199.0	198.2	(0.8)
Stockholders' Equity			
Accumulated Other Comprehensive Income (Loss)	127.5	110.0	(17.5)
Retained Earnings	9,542.2	9,556.7	14.5

For the adoption of these updates, certain reclassifications have been made to prior year amounts in order to conform to current year presentation.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 1 - Significant Accounting Policies - Continued

Accounting Updates Adopted in 2017:

ASC	Description	Date of Adoption	Effect on Financial Statements
ASC 944 "Financial Services - Insurance"	This update changed the disclosure requirements for certain insurance contracts. These changes included a requirement to disclose the rollforward of the liability for unpaid claims and claim adjustment expenses in both interim and annual reporting periods for long-duration and short-duration insurance contracts. Additional claims disclosures were also required for short-duration contracts. The guidance was applied retrospectively.	January 1, 2016 for annual reporting period disclosures and January 1, 2017 for interim reporting period disclosures.	The adoption of this update expanded our interim reporting period disclosures but had no effect on our financial position or results of operations. The annual reporting period disclosure requirements were only applicable to our individual dental products, which we deem immaterial, and therefore did not alter our annual disclosures.
ASC 718 "Compensation - Stock Compensation"	This update changed the accounting and disclosure requirements for certain aspects of share-based payments to employees. The update required all income tax effects of stock-based compensation awards to be recognized in the income statement when the awards vest or are settled. The update also allows an employer to repurchase more of an employee's shares than it can today for tax withholding purposes without triggering liability accounting and to make a policy election to account for forfeitures as they occur. Additionally, the update required reclassification of tax-related cash flows resulting from share-based payments to be classified as operating activities instead of financing activities on the statement of cash flows. Transition guidance for the amendments varied between the retrospective, modified retrospective, and prospective methods depending on the specific requirement of the update.	January 1, 2017	The adoption of this update did not have a material effect on our financial position or results of operations. The impact of the update reduced our effective income tax rate by a de minimis amount for the year ended December 31, 2017. During periods in which the vesting date fair value differs from the grant date fair value of certain stock-based compensation awards, we may experience volatility in the income tax recognized in our results of operations. The amendment related to the reclassification of tax-related cash flows in our consolidated statements of cash flows has been applied prospectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 1 - Significant Accounting Policies - Continued

Accounting Updates Adopted in 2016:

ASC	Description	Date of Adoption	Effect on Financial Statements
ASC 820 "Fair Value Measurement"	This update eliminated the requirement to categorize within the fair value hierarchy table investments whose fair value is measured at net asset value using the practical expedient. Instead, entities are required to disclose the fair value of these investments so that financial statement users can reconcile amounts reported in the fair value hierarchy table to the amounts reported on the consolidated balance sheets. The guidance was applied retrospectively.	January 1, 2016	The adoption of this update modified certain of our annual reporting period disclosures for invested assets held in our employee benefit plans but had no effect on our financial position or results of operations.
ASC 835 "Interest - Imputation of Interest"	This update simplified the presentation of deferred debt issuance costs by requiring these costs to be presented in the balance sheet as a reduction of the carrying amount of the debt liability to which the deferred costs relate, rather than classifying the deferred costs as an asset. This classification is consistent with the treatment of debt discounts. We applied the amendments in the update retrospectively, adjusting all prior periods in our consolidated financial statements and accompanying notes.	January 1, 2016	The adoption of this update resulted in reclassification adjustments to our consolidated balance sheets but had no effect on our financial position or results of operations.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 1 - Significant Accounting Policies - Continued

Accounting Updates Outstanding:

ASC	Description	Date of Adoption	Effect on Financial Statements
ASC 220 "Income Statement - Reporting Comprehensive Income"	This update allows entities to make an optional accounting policy election to reclassify the stranded tax effects arising as a result of the recognition of the enactment of the tax bill, H.R.1, An Act to Provide Reconciliation Pursuant to Titles II and V of the Concurrent Resolution on the Budget for Fiscal Year 2018, more commonly known as the Tax Cuts and Jobs Act (TCJA) from accumulated other comprehensive income to retained earnings. Tax effects that are stranded in accumulated other comprehensive income for reasons other than the TCJA may not be reclassified. This update requires additional disclosures on whether an entity elects to reclassify the stranded tax effects and its policy for releasing tax effects from accumulated other comprehensive income. This guidance may be applied in the period of adoption or retrospectively to each period in which the effect of the change in federal income tax rate in the TCJA is recognized, with early adoption permitted.	January 1, 2019	The adoption of this update will expand certain of our disclosures but will have no impact on our financial position or results of operations because we do not intend to make the optional accounting policy election to reclassify the stranded tax effects resulting from the TCJA from accumulated other comprehensive income to retained earnings.
ASC 310 "Receivables - Nonrefundable Fees and Other Costs"	This update shortens the amortization period to the earliest call date for certain callable debt securities held at a premium. This update does not impact securities held at a discount. The guidance is to be applied using a modified retrospective approach through a cumulative-effect adjustment to retained earnings as of the beginning of the period of adoption, with early adoption permitted.	January 1, 2019	We have determined that certain of our callable debt securities are within the scope of this update. The adoption of this update will not have a material impact on our financial position or results of operations.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 1 - Significant Accounting Policies - Continued

ASC	Description	Date of Adoption	Effect on Financial Statements
ASC 718 "Compensation - Stock Compensation"	This update generally aligns the accounting guidance for share-based payments issued to non-employees with guidance for share-based payments issued to employees. Specifically, the update requires non-employee share-based payments to be measured using the grant date fair value of the equity instruments that an entity is obligated to issue when the good has been delivered or the service has been rendered rather than being remeasured through the performance completion date. Additionally, for non-employee share-based payments that contain performance conditions, the update will change the criteria regarding the recognition of compensation cost to when achievement of a performance condition is probable rather than upon actual achievement of the performance condition. The guidance is to be applied using a modified retrospective approach through a cumulative-effect adjustment to retained earnings as of the beginning of the period of adoption, with early adoption permitted. For purposes of determining the cumulative effect adjustment, the guidance shall be applied only to equity-classified non-employee share-based payments for which a measurement date has not been established and liability-classified non-employee share-based payments that have not been settled as of the date of adoption.	January 1, 2019	The adoption of this update will not have an impact on our financial position or results of operations.
ASC 842 "Leases"	This update changes the accounting for leases, requiring lessees to report most leases on their balance sheets, regardless of whether the lease is classified as a finance lease or an operating lease. For lessees, the initial lease liability is equal to the present value of lease payments, and a corresponding right-of-use asset, adjusted for certain items, is also recorded. Expense recognition for lessees will remain similar to current accounting requirements for capital and operating leases. For lessors, the guidance modifies the classification criteria and the accounting for sales-type and direct financing leases. The guidance may be applied using a modified retrospective approach at either the	January 1, 2019	We will adopt this update using the modified retrospective transition option that allows for application of the guidance at the beginning of the period of adoption. The adoption of this update on January 1, 2019 will result in the recognition of a lease liability of approximately $125 million with a corresponding right-of-use asset, less an immaterial cumulative-effect decrease to retained earnings related to our operating leases. We will elect to

beginning of the earliest comparative period presented or as of the beginning of the period of adoption. The guidance also allows practical expedients related to adoption considerations for leases that commenced before the date of adoption. Early adoption is permitted.	apply the package of practical expedients available to leases that commenced prior to the date of adoption. We do not expect this update to have an impact to our results of operations but it will expand our disclosures.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 1 - Significant Accounting Policies - Continued

ASC	Description	Date of Adoption	Effect on Financial Statements
ASC 326 "Financial Instruments - Credit Losses"	This update amends the guidance on the impairment of financial instruments. The update adds an impairment model known as the current expected credit loss model that is based on expected losses rather than incurred losses and will generally result in earlier recognition of allowances for losses. The current expected credit loss model applies to financial instruments such as mortgage loans, fixed maturity securities classified as held-to-maturity, and certain receivables. The update also modifies the other-than-temporary impairment model used for available-for-sale fixed maturity securities such that credit losses are recognized as an allowance rather than as a reduction in the amortized cost of the security. The reversal of previously recognized credit losses on available-for-sale fixed maturity securities is allowed under specified circumstances. Additional disclosures will also be required, including information used to develop the allowance for losses. The guidance is to be applied to most instruments in scope using a modified retrospective approach through a cumulative-effect adjustment to retained earnings as of the beginning of the period of adoption. For available-for-sale fixed maturity securities, the update is applied prospectively. Other-than-temporary impairment losses recognized on available-for-sale fixed maturity securities prior to adoption of the update cannot be reversed. Early adoption is permitted.	January 1, 2020	We have not yet determined the expected impact on our financial position or results of operations.
ASC 350 "Intangibles - Goodwill and Other"	This update eliminates the requirement to calculate the implied fair value of goodwill (the second step in the current two-step test) to measure a goodwill impairment charge. Instead, entities should perform the goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount and recognize an impairment charge for the excess of the carrying amount over the fair value, with the loss not to exceed the total amount of goodwill allocated to that reporting unit. The guidance is to be applied prospectively, with early adoption permitted for goodwill impairment tests performed on testing dates after January 1, 2017.	January 1, 2020	The adoption of this update will not have a material effect on our financial position or results of operations.
ASC 715 "Compensation - Retirement Benefits"	This update amends the defined benefit pension and other postretirement benefit guidance by removing or clarifying certain existing disclosures requirements, while also adding new disclosure requirements. Specifically, this update removes the requirement to disclose the effects of a one-percentage point change in the assumed healthcare cost trend and the requirement to disclose amounts in accumulated other comprehensive income expected to be recognized as part of net periodic benefit cost of the next year. This update adds a	December 31, 2020	We have not yet determined the expected impact on our disclosures.

requirement to describe the reasons for significant gains and losses related to changes in the benefit obligation for the period. The update also clarifies that the projected benefit obligation (PBO) and accumulated benefit obligation (ABO) and fair value of plan assets are to be disclosed for plans with PBOs or ABOs in excess of plan assets. The guidance is to be applied retrospectively and early adoption is permitted.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 1 - Significant Accounting Policies - Continued

ASC	Description	Date of Adoption	Effect on Financial Statements
ASC 944 "Financial Services - Insurance"	This update significantly amends the accounting and disclosure requirements for long-duration insurance contracts. These changes include a requirement to review, and if necessary, update cash flow assumptions used to measure the liability for future policy benefits for traditional and limited-payment contracts at least annually, with changes recognized in earnings. In addition, an entity will be required to update the discount rate assumption at each reporting date using a yield that is reflective of an upper-medium grade fixed-income instrument, with changes recognized in other comprehensive income. These changes result in the elimination of the provision for risk of adverse deviation and premium deficiency (or loss recognition) testing. The update also requires that an entity measure all market risk benefits associated with deposit contracts at fair value, with changes recognized in earnings except for the portion attributable to a change in the instrument-specific credit risk, which is to be recognized in other comprehensive income. This update also simplifies the amortization of deferred acquisition costs by requiring amortization on a constant level basis over the expected term of the related contracts. Deferred acquisition costs are required to be written off for unexpected contract terminations but are no longer subject to an impairment test. Significant additional disclosures will also be required, which include disaggregated rollforwards of certain liability balances and the disclosure of qualitative and quantitative information about expected cash flows, estimates, and assumptions. The application of this guidance will vary based upon the specific requirements of the update but will generally result in either a modified retrospective or full retrospective approach with changes applied as of the beginning of the earliest period presented. Early adoption is permitted.	January 1, 2021	We have not yet determined the expected impact on our financial position or results of operations.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 2 - Fair Values of Financial Instruments

Fair Value Measurements for Financial Instruments Carried at Fair Value

We report fixed maturity securities, which are classified as available-for-sale securities, derivative financial instruments, and unrestricted equity securities at fair value in our consolidated balance sheets. We report our investments in private equity partnerships at our share of the partnerships' net asset value per share or its equivalent (NAV) as a practical expedient for fair value. See Note 1.

The degree of judgment utilized in measuring the fair value of financial instruments generally correlates to the level of pricing observability. Financial instruments with readily available active quoted prices or for which fair value can be measured from actively quoted prices in active markets generally have more pricing observability and less judgment utilized in measuring fair value. An active market for a financial instrument is a market in which transactions for an asset or a similar asset occur with sufficient frequency and volume to provide pricing information on an ongoing basis. A quoted price in an active market provides the most reliable evidence of fair value and should be used to measure fair value whenever available. Conversely, financial instruments rarely traded or not quoted have less observability and are measured at fair value using valuation techniques that require more judgment. Pricing observability is generally impacted by a number of factors, including the type of financial instrument, whether the financial instrument is new to the market and not yet established, the characteristics specific to the transaction, and overall market conditions.

We classify financial instruments in accordance with a fair value hierarchy consisting of three levels based on the observability of valuation inputs:

- Level 1 - the highest category of the fair value hierarchy classification wherein inputs are unadjusted and represent quoted prices in active markets for identical assets or liabilities at the measurement date.

- Level 2 - valued using inputs (other than prices included in Level 1) that are either directly or indirectly observable for the asset or liability through correlation with market data at the measurement date and for the duration of the instrument's anticipated life.

- Level 3 - the lowest category of the fair value hierarchy and reflects the judgment of management regarding what market participants would use in pricing assets or liabilities at the measurement date. Financial assets and liabilities categorized as Level 3 are generally those that are valued using unobservable inputs to extrapolate an estimated fair value.

Valuation Methodologies of Financial Instruments Measured at Fair Value

Valuation techniques used for assets and liabilities accounted for at fair value are generally categorized into three types. The market approach uses prices and other relevant information from market transactions involving identical or comparable assets or liabilities. The income approach converts future amounts, such as cash flows or earnings, to a single present amount, or a discounted amount. The cost approach is based upon the amount that currently would be required to replace the service capacity of an asset, or the current replacement cost.

We use valuation techniques that are appropriate in the circumstances and for which sufficient data are available that can be obtained without undue cost and effort. In some cases, a single valuation technique will be appropriate (for example, when valuing an asset or liability using quoted prices in an active market for identical assets or liabilities). In other cases, multiple valuation techniques will be appropriate. If we use multiple valuation techniques to measure fair value, we evaluate and weigh the results, as appropriate, considering the reasonableness of the range indicated by those results. A fair value measurement is the point within that range that is most representative of fair value in the circumstances.

The selection of the valuation method(s) to apply considers the definition of an exit price and depends on the nature of the asset or liability being valued. For assets and liabilities accounted for at fair value, we generally use valuation techniques consistent with the market approach, and to a lesser extent, the income approach. We believe the market approach provides more observable data than the income approach, considering the type of investments we hold. Our fair value measurements could differ significantly based on the valuation technique and available inputs. When using a pricing service, we obtain the vendor's pricing documentation to ensure we understand their methodologies. We periodically review and approve the selection of our

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 2 - Fair Values of Financial Instruments - Continued

pricing vendors to ensure we are in agreement with their current methodologies. When markets are less active, brokers may rely more on models with inputs based on the information available only to the broker. Our internal investment management professionals, which include portfolio managers and analysts, monitor securities priced by brokers and evaluate their prices for reasonableness based on benchmarking to available primary and secondary market information. In weighing a broker quote as an input to fair value, we place less reliance on quotes that do not reflect the result of market transactions. We also consider the nature of the quote, particularly whether the quote is a binding offer. If prices in an inactive market do not reflect current prices for the same or similar assets, adjustments may be necessary to arrive at fair value. When relevant market data is unavailable, which may be the case during periods of market uncertainty, the income approach can, in suitable circumstances, provide a more appropriate fair value. During 2018, we have applied valuation approaches and techniques on a consistent basis to similar assets and liabilities and consistent with those approaches and techniques used at year end 2017.

Fixed Maturity and Equity Securities

We use observable and unobservable inputs in measuring the fair value of our fixed maturity and equity securities. For securities categorized as Level 1, fair values equal active Trade Reporting and Compliance Engine (TRACE) pricing or unadjusted broker market maker prices. For securities categorized as Level 2 or Level 3, inputs that may be used in valuing each class of securities at any given time period are disclosed below. Actual inputs used to determine fair values will vary for each reporting period depending on the availability of inputs which may, at times, be affected by the lack of market liquidity.

Instrument	Level 2 Observable Inputs	Level 3 Unobservable Inputs
United States Government and Government Agencies and Authorities		
Valuation Method	Principally the market approach	Not applicable
Valuation Techniques / Inputs	Prices obtained from external pricing services	
States, Municipalities, and Political Subdivisions		
Valuation Method	Principally the market approach	Principally the market approach
Valuation Techniques / Inputs	Prices obtained from external pricing services Relevant reports issued by analysts and rating agencies Audited financial statements	Analysis of similar bonds, adjusted for comparability Non-binding broker quotes Security and issuer level spreads
Foreign Governments		
Valuation Method	Principally the market approach	Principally the market approach
Valuation Techniques / Inputs	Prices obtained from external pricing services Non-binding broker quotes	Analysis of similar bonds, adjusted for comparability Non-binding broker quotes

	Call provisions	Security and issuer level spreads
Public Utilities		
Valuation Method	Principally the market and income approaches	Principally the market and income approaches
Valuation Techniques / Inputs	TRACE pricing	Change in benchmark reference

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 2 - Fair Values of Financial Instruments - Continued

Instrument	Level 2 Observable Inputs	Level 3 Unobservable Inputs
Public Utilities - Continued		
	Prices obtained from external pricing services	Analysis of similar bonds, adjusted for comparability
	Non-binding broker quotes	Discount for size - illiquidity
	Benchmark yields	Non-binding broker quotes
	Transactional data for new issuances and secondary trades	Lack of marketability
	Security cash flows and structures	Security and issuer level spreads
	Recent issuance / supply	Volatility of credit
	Matrix pricing	Matrix pricing
	Security and issuer level spreads	
	Security creditor ratings/maturity/capital structure/optionality	
	Public covenants	
	Comparative bond analysis	
	Relevant reports issued by analysts and rating agencies	
	Audited financial statements	
Mortgage/Asset-Backed Securities		
Valuation Method	Principally the market and income approaches	Principally the market approach
Valuation Techniques / Inputs	Prices obtained from external pricing services	Analysis of similar bonds, adjusted for comparability
	Non-binding broker quotes	Non-binding broker quotes
	Security cash flows and structures	Security and issuer level spreads
	Underlying collateral	
	Prepayment speeds/loan performance/delinquencies	
	Relevant reports issued by analysts and rating agencies	
	Audited financial statements	
All Other Corporate Bonds		
Valuation Method	Principally the market and income approaches	Principally the market and income approaches
Valuation Techniques / Inputs	TRACE pricing	Change in benchmark reference
	Prices obtained from external pricing services	Analysis of similar bonds, adjusted for comparability
	Non-binding broker quotes	Discount for size - illiquidity

Benchmark yields	Non-binding broker quotes
Transactional data for new issuances and secondary trades	Lack of marketability
Security cash flows and structures	Security and issuer level spreads
Recent issuance / supply	Volatility of credit
Matrix pricing	Matrix pricing

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 2 - Fair Values of Financial Instruments - Continued

Instrument	Level 2 Observable Inputs	Level 3 Unobservable Inputs
All Other Corporate Bonds - Continued		
	Security and issuer level spreads Security creditor ratings/maturity/capital structure/optionality Public covenants	
	Comparative bond analysis Relevant reports issued by analysts and rating agencies Audited financial statements	
Redeemable Preferred Stocks		
Valuation Method	Principally the market approach	Principally the market approach
Valuation Techniques / Inputs	Non-binding broker quotes	Non-binding broker quotes
	Benchmark yields Comparative bond analysis Call provisions Relevant reports issued by analysts and rating agencies Audited financial statements	
Equity Securities		
Valuation Method	Principally the market approach	Principally the market and income approaches
Valuation Techniques / Inputs	Prices obtained from external pricing services	Financial statement analysis
	Non-binding broker quotes	Non-binding broker quotes

The management of our investment portfolio includes establishing pricing policy and reviewing the reasonableness of sources and inputs used in developing pricing. We review all prices obtained to ensure they are consistent with a variety of observable market inputs and to verify the validity of a security's price. In the event we receive a vendor's market price that does not appear reasonable based on our market analysis, we may challenge the price and request further information about the assumptions and methodologies used by the vendor to price the security. We may change the vendor price based on a better data source such as an actual trade. We also review all price changes from the prior month which fall outside a predetermined corridor. The overall valuation process for determining fair values may include adjustments to valuations obtained from our pricing sources when they do not represent a valid exit price. These adjustments may be made when, in our judgment and considering our knowledge of the financial conditions and industry in which the issuer operates, certain features of the financial instrument require that an adjustment be made to the value originally obtained from our pricing sources. These features may include the complexity of the financial instrument, the market in which the financial instrument is traded, counterparty credit risk, credit structure, concentration, or liquidity. Additionally, an adjustment to the price derived from a model typically reflects our judgment of the inputs that other participants in the market for the financial instrument being measured at fair value would consider in pricing that same financial instrument. In the event an asset is sold, we test the validity of the fair value determined by our valuation techniques by comparing the selling price to the fair value determined for the asset in the immediately preceding month end reporting period.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 2 - Fair Values of Financial Instruments - Continued

Certain of our investments do not have readily determinable market prices and/or observable inputs or may at times be affected by the lack of market liquidity. For these securities, we use internally prepared valuations combining matrix pricing with vendor purchased software programs, including valuations based on estimates of future profitability, to estimate the fair value. Additionally, we may obtain prices from independent third-party brokers to aid in establishing valuations for certain of these securities. Key assumptions used by us to determine fair value for these securities include risk free interest rates, risk premiums, performance of underlying collateral (if any), and other factors involving significant assumptions which may or may not reflect those of an active market.

The parameters and inputs used to validate a price on a security may be adjusted for assumptions about risk and current market conditions on a quarter to quarter basis, as certain features may be more significant drivers of valuation at the time of pricing. Changes to inputs in valuations are not changes to valuation methodologies; rather, the inputs are modified to reflect direct or indirect impacts on asset classes from changes in market conditions.

At December 31, 2018, approximately 11.7 percent of our fixed maturity securities were valued using active trades from TRACE pricing or broker market maker prices for which there was current market activity in that specific security (comparable to receiving one binding quote). The prices obtained were not adjusted, and the assets were classified as Level 1.

The remaining 88.3 percent of our fixed maturity securities were valued based on non-binding quotes or other observable and unobservable inputs, as discussed below:

- 75.0 percent of our fixed maturity securities were valued based on prices from pricing services that generally use observable inputs such as prices for securities or comparable securities in active markets in their valuation techniques. These assets were classified as Level 2.

- 3.6 percent of our fixed maturity securities were valued based on one or more non-binding broker quotes, if validated by observable market data, or on TRACE prices for identical or similar assets absent current market activity. When only one price is available, it is used if observable inputs and analysis confirms that it is appropriate. These assets, for which we were able to validate the price using other observable market data, were classified as Level 2.

- 9.7 percent of our fixed maturity securities were valued based on prices of comparable securities, matrix pricing, market models, and/or internal models or were valued based on non-binding quotes with no other observable market data. These assets were classified as either Level 2 or Level 3, with the categorization dependent on whether there was other observable market data.

Derivatives

Fair values for derivatives other than embedded derivatives in modified coinsurance arrangements are based on market quotes or pricing models and represent the net amount of cash we would have paid or received if the contracts had been settled or closed as of the last day of the period. We analyze credit default swap spreads relative to the average credit spread embedded within the LIBOR-setting syndicate in determining the effect of credit risk on our derivatives' fair values. If net counterparty credit risk for a derivative asset is determined to be material and is not adequately reflected in the LIBOR-based fair value obtained from our pricing sources, we adjust the valuations obtained from our pricing sources. For purposes of valuing net counterparty risk, we measure the fair value of a group of financial assets and financial liabilities on the basis of the price that would be received to sell a net long position or transfer a net short position for a particular risk exposure in an orderly transaction between market participants at the measurement date under current market conditions. In regard to our own credit risk component, we adjust the valuation of derivative liabilities wherein the counterparty is exposed to our credit risk when the LIBOR-based valuation of our derivatives obtained from pricing sources does not effectively include an adequate credit component for our own credit risk.

Fair values for our embedded derivative in a modified coinsurance arrangement are estimated using internal pricing models and represent the hypothetical value of the duration mismatch of assets and liabilities, interest rate risk, and third party credit risk embedded in the modified coinsurance arrangement.

We consider transactions in inactive markets to be less representative of fair value. We use all available observable inputs when measuring fair value, but when significant unobservable inputs are used, we classify these assets or liabilities as Level 3.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 2 - Fair Values of Financial Instruments - Continued

Private Equity Partnerships

Our private equity partnerships represent funds that are primarily invested in private credit, private equity, and real assets, as described below. Distributions received from the funds arise from income generated by the underlying investments as well as the liquidation of the underlying investments. There is generally not a public market for these investments.

The following table presents additional information about our private equity partnerships as of December 31, 2018, including commitments for additional investments which may or may not be funded:

Investment Category		Fair Value (in millions of dollars)	Redemption Term / Redemption Notice	Unfunded Commitments (in millions of dollars)
Private Credit	(a)	$ 168.6	Not redeemable	$ 99.5
		25.7	Initial 2 year lock on each new investment / Quarterly after 2 year lock with 90 days notice	10.3
Total Private Credit		194.3		109.8
Private Equity	(b)	128.3	Not redeemable	169.5
Real Assets	(c)	131.0	Not redeemable	106.0
		30.2	Quarterly / 90 days notice	—
Total Real Assets		161.2		106.0
Total Partnerships		$ 483.8		$ 385.3

(a) Private Credit - The limited partnerships described in this category employ various investment strategies, generally providing direct lending or other forms of debt financing including first-lien, second-lien, mezzanine, and subordinated loans. The limited partnerships have credit exposure to corporates, physical assets, and/or financial assets within a variety of industries (including manufacturing, healthcare, energy, business services, technology, materials, and retail) in North America and, to a lesser extent, outside of North America. As of December 31, 2018, the estimated remaining life of the investments that do not allow for redemptions is approximately 20 percent in the next 3 years, 46 percent during the period from 3 to 5 years, 30 percent during the period from 5 to 10 years, and 4 percent after the period of 15 years.

(b) Private Equity - The limited partnerships described in this category employ various strategies generally investing in controlling or minority control equity positions directly in companies and/or assets across various industries (including manufacturing, healthcare, energy, business services, technology, materials, and retail), primarily in private markets within North America and, to a lesser extent, outside of North America. As of December 31, 2018, the estimated remaining life of the investments that do not allow for redemptions is approximately 40 percent in the next 3 years, 9 percent during the period from 3 to 5 years, 49 percent during the period from 5 to 10 years, 1 percent during the period from 10 to 15 years, and 1 percent after the period of 15 years.

(c) Real Assets - The limited partnerships described in this category employ various strategies, which include investing in the equity and/or debt financing of physical assets, including infrastructure (energy, power, water/wastewater, communications), transportation (including airports, ports, toll roads, aircraft, railcars) and real estate in North America, Europe, South America, and Asia. As of December 31, 2018, the estimated remaining life of the investments that do not allow for redemptions is approximately 2 percent in the next 3 years, 19 percent during period from 3 to 5 years, 75 percent during the period from 5 to 10 years, and 4 percent during the period from 10 to 15 years.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 2 - Fair Values of Financial Instruments - Continued

The following tables present information about financial instruments measured at fair value on a recurring basis by fair value level, based on the observability of the inputs used:

	December 31, 2018				
	Level 1	Level 2	Level 3	NAV	Total
	(in millions of dollars)				
Assets					
Fixed Maturity Securities					
United States Government and Government Agencies and Authorities	$513.4	$1,301.0	$—	$—	$1,814.4
States, Municipalities, and Political Subdivisions	—	2,424.2	—	—	2,424.2
Foreign Governments	—	952.3	31.4	—	983.7
Public Utilities	286.4	7,041.7	84.7	—	7,412.8
Mortgage/Asset-Backed Securities	—	1,582.7	—	—	1,582.7
All Other Corporate Bonds	4,232.1	23,026.1	1,495.8	—	28,754.0
Redeemable Preferred Stocks	—	18.8	21.1	—	39.9
Total Fixed Maturity Securities	5,031.9	36,346.8	1,633.0	—	43,011.7
Other Long-term Investments					
Derivatives					
Foreign Exchange Contracts	—	30.4	—	—	30.4
Credit Default Swaps	—	0.5	—	—	0.5
Equity Securities	—	24.6	4.6	—	29.2
Private Equity Partnerships	—	—	—	483.8	483.8
Total Other Long-term Investments	—	55.5	4.6	483.8	543.9
Total Financial Instrument Assets Carried at Fair Value	$5,031.9	$36,402.3	$1,637.6	$483.8	$43,555.6
Liabilities					
Other Liabilities					
Derivatives					
Interest Rate Swaps	$—	$5.2	$—	$—	$5.2
Foreign Exchange Contracts	—	32.8	—	—	32.8
Embedded Derivative in Modified Coinsurance Arrangement	—	—	31.1	—	31.1
Total Derivatives	—	38.0	31.1	—	69.1
Total Financial Instrument Liabilities Carried at Fair Value	$—	$38.0	$31.1	$—	$69.1

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 2 - Fair Values of Financial Instruments - Continued

	December 31, 2017				
	Level 1	Level 2	Level 3	NAV	Total
	(in millions of dollars)				
Assets					
Fixed Maturity Securities					
United States Government and Government Agencies and Authorities	$460.1	$1,022.4	$—	$—	$1,482.5
States, Municipalities, and Political Subdivisions	—	2,336.9	—	—	2,336.9
Foreign Governments	—	863.9	—	—	863.9
Public Utilities	154.2	7,874.6	207.7	—	8,236.5
Mortgage/Asset-Backed Securities	—	1,973.6	—	—	1,973.6
All Other Corporate Bonds	3,556.1	25,816.2	1,150.1	—	30,522.4
Redeemable Preferred Stocks	—	19.2	22.8	—	42.0
Total Fixed Maturity Securities	4,170.4	39,906.8	1,380.6	—	45,457.8
Other Long-term Investments					
Derivatives					
Foreign Exchange Contracts	—	19.5	—	—	19.5
Equity Securities	0.2	10.4	1.1	—	11.7
Private Equity Partnerships	—	—	—	407.2	407.2
Total Other Long-term Investments	0.2	29.9	1.1	407.2	438.4
Total Financial Instrument Assets Carried at Fair Value	$4,170.6	$39,936.7	$1,381.7	$407.2	$45,896.2
Liabilities					
Other Liabilities					
Derivatives					
Interest Rate Swaps	$—	$5.1	$—	$—	$5.1
Foreign Exchange Contracts	—	46.9	—	—	46.9
Credit Default Swaps	—	0.2	—	—	0.2
Embedded Derivative in Modified Coinsurance Arrangement	—	—	15.9	—	15.9
Total Derivatives	—	52.2	15.9	—	68.1
Total Financial Instrument Liabilities Carried at Fair Value	$—	$52.2	$15.9	$—	$68.1

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 2 - Fair Values of Financial Instruments - Continued

Changes in assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) are as follows:

	Year Ended December 31, 2018							
		Total Realized and Unrealized Investment Gains (Losses) Included in				Level 3 Transfers		
	Fair Value Beginning of Year	Earnings	Other Comprehensive Income or Loss	Purchases	Sales	Into	Out of	Fair Value End of Year
	(in millions of dollars)							
Fixed Maturity Securities								
Foreign Governments	$ —	$ —	$ (1.4)	$ —	$ —	$ 32.8	$ —	$ 31.4
Public Utilities	207.7	—	(2.3)	—	—	39.0	(159.7)	84.7
All Other Corporate Bonds	1,150.1	5.8	(118.1)	95.1	(148.7)	968.6	(457.0)	1,495.8
Redeemable Preferred Stocks	22.8	—	(1.7)	—	—	—	—	21.1
Total Fixed Maturity Securities	1,380.6	5.8	(123.5)	95.1	(148.7)	1,040.4	(616.7)	1,633.0
Equity Securities	1.1	—	—	3.5	—	—	—	4.6
Embedded Derivative in Modified Coinsurance Arrangement	(15.9)	(15.2)	—	—	—	—	—	(31.1)

	Year Ended December 31, 2017							
		Total Realized and Unrealized Investment Gains (Losses) Included in				Level 3 Transfers		
	Fair Value Beginning of Year	Earnings	Other Comprehensive Income or Loss	Purchases	Sales	Into	Out of	Fair Value End of Year
	(in millions of dollars)							
Fixed Maturity Securities								
States, Municipalities, and Political Subdivisions	$ 89.5	$ —	$ —	$ —	$ —	$ —	$ (89.5)	$ —
Public Utilities	265.3	—	0.3	8.0	(4.8)	125.2	(186.3)	207.7
All Other Corporate Bonds	1,459.7	(0.6)	2.8	118.9	(149.2)	524.7	(806.2)	1,150.1
Redeemable Preferred Stocks	23.2	—	(0.4)	—	—	—	—	22.8
Total Fixed Maturity Securities	1,837.7	(0.6)	2.7	126.9	(154.0)	649.9	(1,082.0)	1,380.6
Equity Securities	1.2	—	—	—	—	—	(0.1)	1.1
Embedded Derivative in Modified Coinsurance Arrangement	(46.7)	30.8	—	—	—	—	—	(15.9)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 2 - Fair Values of Financial Instruments - Continued

Realized and unrealized investment gains and losses presented in the preceding tables represent gains and losses only for the time during which the applicable financial instruments were classified as Level 3. The transfers between levels resulted primarily from a change in observability of three inputs used to determine fair values of the securities transferred: (1) transactional data for new issuance and secondary trades, (2) broker/dealer quotes and pricing, primarily related to changes in the level of activity in the market and whether the market was considered orderly, and (3) comparable bond metrics from which to perform an analysis. For fair value measurements of financial instruments that were transferred either into or out of Level 3, we reflect the transfers using the fair value at the beginning of the period. We believe this allows for greater transparency, as all changes in fair value that arise during the reporting period of the transfer are disclosed as a component of our Level 3 reconciliation. Gains (losses) which are included in earnings and are attributable to the change in fair value of assets or liabilities valued using significant unobservable inputs and still held at each year end were $(15.2) million and $30.8 million for the years ended December 31, 2018 and 2017, respectively. These amounts relate entirely to the change in fair value of an embedded derivative in a modified coinsurance arrangement and are reported as a component of realized investment gains and losses.

The table below provides quantitative information regarding the significant unobservable inputs used in Level 3 fair value measurements derived from internal models. Certain securities classified as Level 3 are excluded from the table below due to limitations in our ability to obtain the underlying inputs used by external pricing sources.

	December 31, 2018				
	Fair Value	Valuation Method	Unobservable Input		Range/Weighted Average
	(in millions of dollars)				
Fixed Maturity Securities					
All Other Corporate Bonds - Private	$148.5	Market Approach	Lack of Marketability Volatility of Credit Market Convention	(b) (c) (d)	0.25% - 0.25% / 0.25% 0.25% - 10.99% / 1.0% Priced at Par
Equity Securities - Private	4.6	Market Approach	Market Convention	(d)	Priced at Cost or Owner's Equity
Embedded Derivative in Modified Coinsurance Arrangement	(31.1)	Discounted Cash Flows	Projected Liability Cash Flows	(e)	Actuarial Assumptions

	December 31, 2017				
	Fair Value	Valuation Method	Unobservable Input		Range/Weighted Average
	(in millions of dollars)				
Fixed Maturity Securities					
All Other Corporate Bonds - Private	$244.4	Market Approach	Comparability Adjustment Lack of Marketability Volatility of Credit Market Convention	(a) (b) (c) (d)	0.20% - 0.20% / 0.20% 0.25% - 0.25% / 0.25% 0.12% - 6.25% / 0.50% Priced at Par
Equity Securities - Private	1.1	Market Approach	Market Convention	(d)	Priced at Cost or Owner's Equity
Embedded Derivative in Modified Coinsurance Arrangement	(15.9)	Discounted Cash Flows	Projected Liability Cash Flows	(e)	Actuarial Assumptions

(a) Represents basis point adjustments for changes in benchmark spreads associated with various industry sectors
(b) Represents basis point adjustments to apply a discount due to the illiquidity of an investment
(c) Represents basis point adjustments for credit-specific factors
(d) Represents a decision to price based on par value, cost, or owner's equity when limited data is available
(e) Represents various actuarial assumptions required to derive the liability cash flows including incidence, termination, and lapse rates

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 2 - Fair Values of Financial Instruments - Continued

Isolated increases in unobservable inputs other than market convention will result in a lower fair value measurement, whereas isolated decreases will result in a higher fair value measurement. The unobservable input for market convention is not sensitive to input movements. The projected liability cash flows used in the fair value measurement of our Level 3 embedded derivative are based on expected claim payments. If claim payments increase, the projected liability cash flows will increase, resulting in a decrease in the fair value of the embedded derivative. Decreases in projected liability cash flows will result in an increase in the fair value of the embedded derivative.

Fair Value Measurements for Financial Instruments Not Carried at Fair Value

The methods and assumptions used to estimate fair values of financial instruments not carried at fair value are discussed as follows:

Mortgage Loans: Fair values are estimated using discounted cash flow analyses and interest rates currently being offered for similar loans to borrowers with similar credit ratings and maturities. Loans with similar characteristics are aggregated for purposes of the calculations.

Policy Loans: Fair values for policy loans, net of reinsurance ceded, are estimated using discounted cash flow analyses and interest rates currently being offered to policyholders with similar policies. Carrying amounts for ceded policy loans, which equal $3,449.3 million and $3,307.5 million as of December 31, 2018 and 2017, respectively, approximate fair value and are reported on a gross basis in our consolidated balance sheets. A change in interest rates for ceded policy loans will not impact our financial position because the benefits and risks are fully ceded to reinsuring counterparties.

Miscellaneous Long-term Investments: Carrying amounts for tax credit partnerships equal the unamortized balance of our contractual commitments and approximate fair value. Our shares of FHLB common stock are carried at cost, which approximates fair value.

Long-term Debt: Fair values for long-term debt are obtained from independent pricing services or discounted cash flow analyses based on current incremental borrowing rates for similar types of borrowing arrangements.

FHLB Funding Agreements: Funding agreements with the FHLB represent cash advances used for the purpose of investing in fixed maturity securities. Carrying amounts approximate fair value.

Unfunded Commitments to Investment Partnerships: Unfunded equity commitments represent amounts that we have committed to fund certain investment partnerships. These commitments are legally binding, subject to the partnerships meeting specified conditions. Carrying amounts of these financial instruments approximate fair value.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 2 - Fair Values of Financial Instruments - Continued

The following table presents the carrying amounts and estimated fair values of our financial instruments not measured at fair value and indicates the level in the fair value hierarchy of the estimated fair value measurement based on the observability of the inputs used:

	December 31, 2018				
	Estimated Fair Value				
	Level 1	Level 2	Level 3	Total	Carrying Value
	(in millions of dollars)				
Assets					
Mortgage Loans	$—	$2,317.4	$—	$2,317.4	$2,295.0
Policy Loans	—	—	3,831.1	3,831.1	3,729.9
Other Long-term Investments					
Miscellaneous Long-term Investments	—	24.1	91.5	115.6	115.6
Total Financial Instrument Assets Not Carried at Fair Value	$—	$2,341.5	$3,922.6	$6,264.1	$6,140.5
Liabilities					
Long-term Debt	$1,429.8	$1,639.4	$—	$3,069.2	$2,971.3
Payables for Collateral on Investments					
Federal Home Loan Bank (FHLB) Funding Agreements	—	104.0	—	104.0	104.0
Other Liabilities					
Unfunded Commitments	—	2.3	—	2.3	2.3
Total Financial Instrument Liabilities Not Carried at Fair Value	$1,429.8	$1,745.7	$—	$3,175.5	$3,077.6

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 2 - Fair Values of Financial Instruments - Continued

	December 31, 2017 Estimated Fair Value				
	Level 1	Level 2	Level 3	Total	Carrying Value
	(in millions of dollars)				
Assets					
Mortgage Loans	$—	$2,306.2	$—	$2,306.2	$2,213.2
Policy Loans	—	—	3,677.5	3,677.5	3,571.1
Other Long-term Investments					
Miscellaneous Long-term Investments	—	34.1	128.2	162.3	162.3
Total Financial Instrument Assets Not Carried at Fair Value	$—	$2,340.3	$3,805.7	$6,146.0	$5,946.6
Liabilities					
Long-term Debt	$1,171.8	$1,876.9	$—	$3,048.7	$2,738.4
Payables for Collateral on Investments					
Federal Home Loan Bank (FHLB) Funding Agreements	—	350.0	—	350.0	350.0
Other Liabilities					
Unfunded Commitments	—	3.7	—	3.7	3.7
Total Financial Instrument Liabilities Not Carried at Fair Value	$1,171.8	$2,230.6	$—	$3,402.4	$3,092.1

The carrying values of financial instruments such as short-term investments, cash and bank deposits, accounts and premiums receivable, accrued investment income, securities lending agreements, and short-term debt approximate fair value due to the short-term nature of the instruments. As such, these financial instruments are not included in the above chart.

Fair values for insurance contracts other than investment contracts are not required to be disclosed. However, the fair values of liabilities under all insurance contracts are taken into consideration in our overall management of interest rate risk, which seeks to minimize exposure to changing interest rates through the matching of investment maturities with amounts due under insurance contracts.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 3 - Investments

Fixed Maturity Securities

At December 31, 2018 and 2017, all fixed maturity securities were classified as available-for-sale. The amortized cost and fair values of securities by security type are shown as follows:

	December 31, 2018			
	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Fair Value
	(in millions of dollars)			
United States Government and Government Agencies and Authorities	$1,702.1	$ 123.2	$ 10.9	$1,814.4
States, Municipalities, and Political Subdivisions	2,121.5	307.1	4.4	2,424.2
Foreign Governments	825.8	162.7	4.8	983.7
Public Utilities	6,626.2	850.0	63.4	7,412.8
Mortgage/Asset-Backed Securities	1,523.8	67.2	8.3	1,582.7
All Other Corporate Bonds	27,436.8	1,981.6	664.4	28,754.0
Redeemable Preferred Stocks	39.0	1.1	0.2	39.9
Total Fixed Maturity Securities	$40,275.2	$ 3,492.9	$ 756.4	$43,011.7

	December 31, 2017			
	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Fair Value
	(in millions of dollars)			
United States Government and Government Agencies and Authorities	$1,311.1	$ 176.1	$ 4.7	$1,482.5
States, Municipalities, and Political Subdivisions	1,942.8	395.4	1.3	2,336.9
Foreign Governments	673.0	191.3	0.4	863.9
Public Utilities	6,952.7	1,296.4	12.6	8,236.5
Mortgage/Asset-Backed Securities	1,873.2	105.1	4.7	1,973.6
All Other Corporate Bonds	26,988.7	3,633.5	99.8	30,522.4
Redeemable Preferred Stocks	39.0	3.0	—	42.0
Total Fixed Maturity Securities	$39,780.5	$ 5,800.8	$ 123.5	$45,457.8

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 3 - Investments - Continued

The following charts indicate the length of time our fixed maturity securities have been in a gross unrealized loss position.

	December 31, 2018			
	Less Than 12 Months		12 Months or Greater	
	Fair Value	Gross Unrealized Loss	Fair Value	Gross Unrealized Loss
	(in millions of dollars)			
United States Government and Government Agencies and Authorities	$68.8	$ 1.7	$212.5	$ 9.2
States, Municipalities, and Political Subdivisions	183.2	2.1	65.0	2.3
Foreign Governments	58.4	3.8	12.0	1.0
Public Utilities	740.1	31.3	325.7	32.1
Mortgage/Asset-Backed Securities	81.5	1.2	201.6	7.1
All Other Corporate Bonds	9,240.2	462.2	1,704.9	202.2
Redeemable Preferred Stocks	18.8	0.2	—	—
Total Fixed Maturity Securities	$10,391.0	$ 502.5	$2,521.7	$ 253.9

	December 31, 2017			
	Less Than 12 Months		12 Months or Greater	
	Fair Value	Gross Unrealized Loss	Fair Value	Gross Unrealized Loss
	(in millions of dollars)			
United States Government and Government Agencies and Authorities	$157.9	$ 3.0	$58.8	$ 1.8
States, Municipalities, and Political Subdivisions	45.7	0.5	22.3	0.7
Foreign Governments	13.2	0.4	—	—
Public Utilities	213.2	7.9	133.5	4.7
Mortgage/Asset-Backed Securities	252.5	1.4	144.7	3.3
All Other Corporate Bonds	1,355.1	26.8	785.2	73.0
Total Fixed Maturity Securities	$2,037.6	$ 40.0	$1,144.5	$ 83.5

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 3 - Investments - Continued

The following is a distribution of the maturity dates for fixed maturity securities. The maturity dates have not been adjusted for possible calls or prepayments.

	December 31, 2018				
	Total	Unrealized Gain Position		Unrealized Loss Position	
	Amortized Cost	Gross Gain	Fair Value	Gross Loss	Fair Value
	(in millions of dollars)				
1 year or less	$1,073.3	$ 14.5	$ 1,020.1	$ 8.4	$ 59.3
Over 1 year through 5 years	6,267.5	300.6	5,186.9	80.2	1,301.0
Over 5 years through 10 years	12,573.4	795.0	6,812.7	303.9	6,251.8
Over 10 years	18,837.2	2,315.6	15,779.7	355.6	5,017.5
	38,751.4	3,425.7	28,799.4	748.1	12,629.6
Mortgage/Asset-Backed Securities	1,523.8	67.2	1,299.6	8.3	283.1
Total Fixed Maturity Securities	$40,275.2	$ 3,492.9	$ 30,099.0	$ 756.4	$ 12,912.7

	December 31, 2017				
	Total	Unrealized Gain Position		Unrealized Loss Position	
	Amortized Cost	Gross Gain	Fair Value	Gross Loss	Fair Value
	(in millions of dollars)				
1 year or less	$1,625.1	$ 30.9	$ 1,638.8	$ 3.1	$ 14.1
Over 1 year through 5 years	5,579.9	453.6	5,810.9	18.5	204.1
Over 5 years through 10 years	12,091.1	1,169.8	11,916.5	53.2	1,291.2
Over 10 years	18,611.2	4,041.4	21,333.1	44.0	1,275.5
	37,907.3	5,695.7	40,699.3	118.8	2,784.9
Mortgage/Asset-Backed Securities	1,873.2	105.1	1,576.4	4.7	397.2
Total Fixed Maturity Securities	$39,780.5	$ 5,800.8	$ 42,275.7	$ 123.5	$ 3,182.1

The following chart depicts an analysis of our fixed maturity security portfolio between investment-grade and below-investment-grade categories as of December 31, 2018:

			Gross Unrealized Loss	
	Fair Value	Gross Unrealized Gain	Amount	Percent of Total Gross Unrealized Loss
	(in millions of dollars)			
Investment-Grade	$39,973.1	$ 3,464.2	$529.5	70.0 %
Below-Investment-Grade	3,038.6	28.7	226.9	30.0
Total Fixed Maturity Securities	$43,011.7	$ 3,492.9	$756.4	100.0 %

The unrealized losses on investment-grade fixed maturity securities principally relate to changes in interest rates or changes in market or sector credit spreads which occurred subsequent to the acquisition of the securities. Below-investment-grade fixed maturity securities are generally more likely to develop credit concerns than investment-grade securities. At December 31, 2018, the unrealized losses in our below-investment-grade fixed maturity securities were generally due to credit spreads in certain industries or sectors and, to a lesser extent, credit concerns related to specific securities. For each specific security in an unrealized loss position, we believe that there are positive factors which mitigate credit concerns and that the securities for which we have not recorded an other-than-temporary impairment will recover in value.

As of December 31, 2018, we held 552 individual investment-grade fixed maturity securities and 135 individual below-investment-grade fixed maturity securities that were in an unrealized loss position, of which 204 investment-grade fixed maturity

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 3 - Investments - Continued

securities and 32 below-investment-grade fixed maturity securities had been in an unrealized loss position continuously for over one year.

In determining when a decline in fair value below amortized cost of a fixed maturity security is other than temporary, we evaluate the following factors:

- Whether we expect to recover the entire amortized cost basis of the security
- Whether we intend to sell the security or will be required to sell the security before the recovery of its amortized cost basis
- Whether the security is current as to principal and interest payments
- The significance of the decline in value
- The time period during which there has been a significant decline in value
- Current and future business prospects and trends of earnings
- The valuation of the security's underlying collateral
- Relevant industry conditions and trends relative to their historical cycles
- Market conditions
- Rating agency and governmental actions
- Bid and offering prices and the level of trading activity
- Adverse changes in estimated cash flows for securitized investments
- Changes in fair value subsequent to the balance sheet date
- Any other key measures for the related security

While determining other-than-temporary impairments is a judgmental area, we utilize a formal, well-defined, and disciplined process to monitor and evaluate our fixed income investment portfolio, supported by issuer specific research and documentation as of the end of each period. The process results in a thorough evaluation of problem investments and the recording of losses on a timely basis for investments determined to have an other-than-temporary impairment.

We held no fixed maturity securities as of December 31, 2018 and 2017, for which a portion of an other-than-temporary impairment was recognized in accumulated other comprehensive income.

At December 31, 2018, we had commitments of $117.3 million to fund private placement fixed maturity securities, the amount of which may or may not be funded.

Variable Interest Entities

We invest in variable interests issued by variable interest entities. These investments include tax credit partnerships, private equity partnerships, and special purpose entities. For those variable interests that are not consolidated in our financial statements, we are not the primary beneficiary because we have neither the power to direct the activities that are most significant to economic performance nor the responsibility to absorb a majority of the expected losses. The determination of whether we are the primary beneficiary is performed at the time of our initial investment and at the date of each subsequent reporting period.

As of December 31, 2018, the carrying amount of our variable interest entity investments that are not consolidated in our financial statements was $575.3 million, comprised of $91.5 million of tax credit partnerships and $483.8 million of private equity partnerships. At December 31, 2017, the carrying amount of our variable interest entity investments that are not consolidated in our financial statements was $535.4 million, comprised of $128.2 million of tax credit partnerships and $407.2 million of private equity partnerships. These variable interest entity investments are reported as other long-term investments in our consolidated balance sheets.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 3 - Investments - Continued

The Company invests in tax credit partnerships primarily for the receipt of income tax credits and tax benefits derived from passive losses on the investments. Amounts recognized in the consolidated statements of income are as follows:

	Year Ended December 31		
	2018	2017	2016
	(in millions of dollars)		
Income Tax Credits	$41.4	$41.8	$41.8
Amortization, Net of Tax	(28.1)	(23.2)	(23.2)
Income Tax Benefit	$13.3	$18.6	$18.6

Contractually, we are a limited partner in these tax credit partnerships, and our maximum exposure to loss is limited to the carrying value of our investment, which includes $2.3 million of unfunded unconditional commitments at December 31, 2018. See Note 2 for commitments to fund private equity partnerships.

We are the sole beneficiary of a special purpose entity which is consolidated in our financial statements. This entity is a securitized asset trust containing a highly rated bond for principal protection which we contributed into the trust at the time it was established. There are no restrictions on the asset held in this trust, and the trust is free to dispose of the asset at any time. The fair values of the bond were $156.7 million and $154.1 million as of December 31, 2018 and 2017, respectively. The bond is reported as a component of fixed maturity securities in our consolidated balance sheets. At December 31, 2016, the trust also contained a private equity partnership which we contributed into the trust at the time it was established with a fair value of $1.0 million. During 2017, we received the final distribution from the private equity partnership and recorded a loss of $0.2 million on the disposal. The loss is reported as a component of net realized investments gains and losses in our consolidated statements of income.

Mortgage Loans

Our mortgage loan portfolio is well diversified by both geographic region and property type to reduce risk of concentration. All of our mortgage loans are collateralized by commercial real estate. When issuing a new loan, our general policy is not to exceed a loan-to-value ratio, or the ratio of the loan balance to the estimated fair value of the underlying collateral, of 75 percent. We update the loan-to-value ratios at least every three years for each loan, and properties undergo a general inspection at least every two years. Our general policy for newly issued loans is to have a debt service coverage ratio greater than 1.25 times on a normalized 25 year amortization period. We update our debt service coverage ratios annually.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 3 - Investments - Continued

Mortgage loans by property type and geographic region are presented below.

	December 31			
	2018		2017	
	(in millions of dollars)			
	Carrying Amount	Percent of Total	Carrying Amount	Percent of Total
Property Type				
Apartment	$491.0	21.4 %	$360.0	16.3 %
Industrial	635.6	27.7	601.2	27.2
Office	604.2	26.3	692.3	31.3
Retail	519.5	22.6	527.6	23.8
Other	44.7	2.0	32.1	1.4
Total	$2,295.0	100.0%	$2,213.2	100.0%
Region				
New England	$45.9	2.0 %	$56.1	2.5 %
Mid-Atlantic	160.6	7.0	155.5	7.0
East North Central	354.4	15.4	282.0	12.8
West North Central	190.3	8.3	210.1	9.5
South Atlantic	485.2	21.1	494.4	22.3
East South Central	105.5	4.6	88.8	4.0
West South Central	240.6	10.5	247.4	11.2
Mountain	242.7	10.6	251.2	11.4
Pacific	469.8	20.5	427.7	19.3
Total	$2,295.0	100.0%	$2,213.2	100.0%

We evaluate each of our mortgage loans individually for impairment and assign an internal credit quality rating based on a comprehensive rating system used to evaluate the credit risk of the loan. The factors we use to derive our internal credit ratings may include the following:

- Loan-to-value ratio
- Debt service coverage ratio based on current operating income
- Property location, including regional economics, trends and demographics
- Age, condition, and construction quality of property
- Current and historical occupancy of property
- Lease terms relative to market
- Tenant size and financial strength
- Borrower's financial strength
- Borrower's equity in transaction
- Additional collateral, if any

Although all available and applicable factors are considered in our analysis, loan-to-value and debt service coverage ratios are the most critical factors in determining whether we will initially issue the loan and also in assigning values and determining impairment. We assign an overall rating to each loan using an internal rating scale of Aa (highest quality) to B (lowest quality). We review and adjust, as needed, our internal credit quality ratings on an annual basis.

This review process is performed more frequently for mortgage loans deemed to have a higher risk of delinquency.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 3 - Investments - Continued

Mortgage loans, sorted by the applicable credit quality indicators, are as follows:

	December 31	
	2018	2017
	(in millions of dollars)	
Internal Rating		
Aa	$—	$0.4
A	477.5	445.7
Baa	1,814.1	1,753.0
Ba	3.4	14.1
Total	$2,295.0	$2,213.2
Loan-to-Value Ratio		
<= 65%	$1,204.8	$1,101.7
> 65% <= 75%	1,049.1	1,041.6
> 75% <= 85%	11.8	49.3
> 85%	29.3	20.6
Total	$2,295.0	$2,213.2

At December 31, 2018, we held one mortgage loan that was greater than 90 days past due regarding principal and/or interest payments which was modified in a troubled debt restructuring during the second quarter of 2018. The loan had a principal balance of $3.6 million prior to the restructuring, wherein the terms of the loan were modified to reduce monthly payments to interest-only at the current note rate and to permit a discounted payoff by September 2018. At the time of restructuring in the second quarter of 2018, we recorded an allowance for credit losses and recognized an impairment loss of $0.2 million resulting in a net realizable value for the loan of $3.4 million. The payoff of the loan did not occur in September 2018 and therefore, the loan was considered impaired as of December 31, 2018. At December 31, 2017, we held no mortgage loans that were greater than 90 days past due regarding principal and/or interest payments.

There were no troubled debt restructurings during 2017. During 2016, we foreclosed on a mortgage loan with a carrying value of $5.4 million. We did not recognize a loss at foreclosure as the value of the underlying property exceeded the carrying value of the loan. We had no realized losses on loan foreclosures for the years ended December 31, 2018, 2017, and 2016 other than any initial impairment loss recognized prior to foreclosure.

There have been no changes to our accounting policies or methodology from the prior period regarding estimating the allowance for credit losses on our mortgage loans. There was no activity in the allowance for credit losses for the years ended December 31, 2018, 2017 or 2016 other than previously mentioned impairment loss of $0.2 million.

Our average investment in impaired mortgage loans was $2.3 million and $2.2 million for the years ended December 31, 2018 and 2016, respectively. We did not hold any impaired mortgage loans for the year ended December 31, 2017. We did not recognize any interest income during 2018, 2017 or 2016 on mortgage loans subsequent to impairment.

At December 31, 2018, we had commitments of $13.0 million to fund certain commercial mortgage loans, the amount of which may or may not be funded.

Transfers of Financial Assets

To manage our cash position more efficiently, we may enter into repurchase agreements with unaffiliated financial institutions. We generally use repurchase agreements as a means to finance the purchase of invested assets or for short-term general business purposes until projected cash flows become available from our operations or existing investments. Our repurchase agreements are typically outstanding for less than 30 days. We post collateral through our repurchase agreement transactions whereby the counterparty commits to purchase securities with the agreement to resell them to us at a later, specified date. The fair value of collateral posted is generally 102 percent of the cash received.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 3 - Investments - Continued

Our investment policy also permits us to lend fixed maturity securities to unaffiliated financial institutions in short-term securities lending agreements. These agreements increase our investment income with minimal risk. Our securities lending policy requires that a minimum of 102 percent of the fair value of the securities loaned be maintained as collateral. We may receive cash and/or securities as collateral under these agreements. Cash received as collateral is typically reinvested in short-term investments. If securities are received as collateral, we are not permitted to sell or re-post them.

As of December 31, 2018, the carrying amount of fixed maturity securities loaned to third parties under our securities lending program was $164.1 million, for which we received collateral in the form of cash and securities of $0.1 million and $171.4 million, respectively. As of December 31, 2017, the carrying amount of fixed maturity securities loaned to third parties under our securities lending program was $159.2 million, for which we received collateral in the form of cash and securities of $30.5 million and $135.6 million, respectively. We had no outstanding repurchase agreements at December 31, 2018 or 2017.

The remaining contractual maturities of our securities lending agreements disaggregated by class of collateral pledged are as follows:

	December 31 2018		2017	
	Overnight and Continuous (in millions of dollars)			
United States Government and Government Agencies and Authorities	$	—	$	0.2
Public Utilities	—		0.5	
All Other Corporate Bonds	0.1		29.8	
Total Borrowings	0.1		30.5	
Gross Amount of Recognized Liability for Securities Lending Transactions	0.1		30.5	
Amounts Related to Agreements Not Included in Offsetting Disclosure Contained Herein	$	—	$	—

Certain of our U.S. insurance subsidiaries are members of regional FHLBs. Membership, which requires that we purchase a minimum amount of FHLB common stock on which we receive dividends, provides access to low-cost funding. Advances received from the FHLB are used for the purchase of fixed maturity securities. Additional common stock purchases may be required, based on the amount of funds we borrow from the FHLBs. The carrying value of common stock owned, collateral posted, and advances received are as follows:

	December 31, 2018	December 31, 2017

	(in millions of dollars)	
Carrying Value of FHLB Common Stock	$24.1	$ 34.1
Advances from FHLB	$104.0	$ 350.0
Carrying Value of Collateral Posted to FHLB		
Fixed Maturity Securities	$219.8	$ 213.3
Commercial Mortgage Loans	179.9	331.5
Total Carrying Value of Collateral Posted to FHLB	$399.7	$ 544.8

Offsetting of Financial Instruments

We enter into master netting agreements with each of our derivatives counterparties. These agreements provide for conditional rights of set-off upon the occurrence of an early termination event. An early termination event is considered a default, and it allows the non-defaulting party to offset its contracts in a loss position against any gain positions or payments due to the defaulting party. Under our agreements, default type events are defined as failure to pay or deliver as contractually agreed, misrepresentation, bankruptcy, or merger without assumption. See Note 4 for further discussion of collateral related to our derivative contracts.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 3 - Investments - Continued

We have securities lending agreements with unaffiliated financial institutions that post collateral to us in return for the use of our fixed maturity securities. A right of set-off exists that allows us to keep and apply collateral received in the event of default by the counterparty. Default within a securities lending agreement would typically occur if the counterparty failed to return the securities borrowed from us as contractually agreed. In addition, if we default by not returning collateral received, the counterparty has a right of set-off against our securities or any other amounts due to us.

Shown below are our financial instruments that either meet the accounting requirements that allow them to be offset in our balance sheets or that are subject to an enforceable master netting arrangement or similar agreement. Our accounting policy is to not offset these financial instruments in our balance sheets. Net amounts disclosed below have been reduced by the amount of collateral pledged to or received from our counterparties.

	December 31, 2018					
	Gross Amount of Recognized Financial Instruments	Gross Amount Offset in Balance Sheet	Net Amount Presented in Balance Sheet	Gross Amount Not Offset in Balance Sheet		Net Amount
				Financial Instruments	Cash Collateral	
	(in millions of dollars)					
Financial Assets:						
Derivatives	$30.9	$ —	$ 30.9	$(6.9)	$ (24.0)	$ —
Securities Lending	164.1	—	164.1	(164.0)	(0.1)	—
Total	$195.0	$ —	$ 195.0	$(170.9)	$ (24.1)	$ —
Financial Liabilities:						
Derivatives	$38.0	$ —	$ 38.0	$(33.2)	$ —	$ 4.8
Securities Lending	0.1	—	0.1	(0.1)	—	—
Total	$38.1	$ —	$ 38.1	$(33.3)	$ —	$ 4.8

	December 31, 2017					
	Gross Amount of Recognized Financial Instruments	Gross Amount Offset in Balance Sheet	Net Amount Presented in Balance Sheet	Gross Amount Not Offset in Balance Sheet		Net Amount
				Financial Instruments	Cash Collateral	
	(in millions of dollars)					
Financial Assets:						
Derivatives	$19.5	$ —	$ 19.5	$(4.2)	$ (15.3)	$ —
Securities Lending	159.2	—	159.2	(128.7)	(30.5)	—
Total	$178.7	$ —	$ 178.7	$(132.9)	$ (45.8)	$ —

Financial Liabilities:						
Derivatives	$52.2	$ —	$ 52.2	$(42.9)	$ —	$ 9.3
Securities Lending	30.5	—	30.5	(30.5)	—	—
Total	$82.7	$ —	$ 82.7	$(73.4)	$ —	$ 9.3

142

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 3 - Investments - Continued

Net Investment Income

Net investment income reported in our consolidated statements of income is as follows:

	Year Ended December 31		
	2018	2017	2016
	(in millions of dollars)		
Fixed Maturity Securities	$2,239.7	$2,271.8	$2,293.9
Derivatives	66.1	56.4	49.8
Mortgage Loans	110.1	104.2	114.0
Policy Loans	18.6	17.9	17.3
Other Long-term Investments			
Equity Securities[1]	(0.2)	1.5	1.2
Private Equity Partnerships[2]	36.0	25.5	11.4
Other	8.4	10.0	10.0
Short-term Investments	23.7	11.3	7.5
Gross Investment Income	2,502.4	2,498.6	2,505.1
Less Investment Expenses	35.2	32.8	31.9
Less Investment Income on Participation Fund Account Assets	13.5	14.1	14.2
Net Investment Income	$2,453.7	$2,451.7	$2,459.0

[1] The net unrealized loss recognized in net investment income for the year ended December 31, 2018 related to equity securities still held at December 31, 2018 was $3.9 million.
[2] The net unrealized gain recognized in net investment income for the year ended December 31, 2018 related to private equity partnerships still held at December 31, 2018 was $7.1 million.

Realized Investment Gain and Loss

Realized investment gains and losses are as follows:

	Year Ended December 31		
	2018	2017	2016
	(in millions of dollars)		
Fixed Maturity Securities			
Gross Gains on Sales	$9.7	$13.8	$34.3
Gross Losses on Sales	(15.2)	(4.4)	(17.2)
Other-Than-Temporary Impairment Loss	(17.5)	(8.1)	(30.5)
Mortgage Loans and Other Invested Assets			
Gross Gains on Sales	0.5	9.4	5.5
Gross Losses on Sales	—	(0.2)	(0.7)
Impairment Loss	(1.4)	(0.9)	(5.7)
Embedded Derivative in Modified Coinsurance Arrangement	(15.2)	30.8	40.9
All Other Derivatives	0.3	(0.1)	(1.5)
Foreign Currency Transactions	(0.7)	—	(0.9)
Net Realized Investment Gain (Loss)	$(39.5)	$40.3	$24.2

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 4 - Derivative Financial Instruments

Purpose of Derivatives

We are exposed to certain risks relating to our ongoing business operations. The primary risks managed by using derivative instruments are interest rate risk, risk related to matching duration for our assets and liabilities, foreign currency risk, and credit risk. Historically, we have utilized current and forward interest rate swaps, current and forward currency swaps, forward treasury locks, currency forward contracts, forward contracts on specific fixed income securities, and credit default swaps. Transactions hedging interest rate risk are primarily associated with our individual and group long-term care and individual and group disability products. All other product portfolios are periodically reviewed to determine if hedging strategies would be appropriate for risk management purposes. We do not use derivative financial instruments for speculative purposes.

Derivatives designated as cash flow hedges and used to reduce our exposure to interest rate and duration risk are as follows:

- Interest rate swaps are used to hedge interest rate risks and to improve the matching of assets and liabilities. An interest rate swap is an agreement in which we agree with other parties to exchange, at specified intervals, the difference between fixed rate and variable rate interest amounts. We use interest rate swaps to hedge the anticipated purchase of fixed maturity securities thereby protecting us from the potential adverse impact of declining interest rates on the associated policy reserves. We also use interest rate swaps to hedge the potential adverse impact of rising interest rates in anticipation of issuing fixed rate long-term debt.

- Forward treasury locks are used to minimize interest rate risk associated with the anticipated purchase or disposal of fixed maturity securities. A forward treasury lock is a derivative contract without an initial investment where we and the counterparty agree to purchase or sell a specific U.S. Treasury bond at a future date at a pre-determined price.

Derivatives designated as fair value hedges and used to reduce our exposure to interest rate and duration risk are as follows:

- Interest rate swaps are used to effectively convert certain of our fixed rate securities into floating rate securities which are used to fund our floating rate long-term debt. Under these swap agreements, we receive a variable rate of interest and pay a fixed rate of interest. Additionally, we use interest rate swaps to effectively convert certain fixed rate, long-term debt into floating rate long-term debt. Under these swap agreements, we receive a fixed rate of interest and pay a variable rate of interest.

Derivatives designated as either cash flow or fair value hedges and used to reduce our exposure to foreign currency risk are as follows:

- Foreign currency interest rate swaps are used to hedge the currency risk of certain foreign currency-denominated fixed maturity securities owned for portfolio diversification. Under these swap agreements, we agree to pay, at specified intervals, fixed rate foreign currency-denominated principal and interest payments in exchange for fixed rate payments in the functional currency of the operating segment.

Derivatives not designated as hedging instruments and used to reduce our exposure to foreign currency risk, credit losses on securities owned, and interest rate risk are as follows:

Foreign currency interest rate swaps previously designated as hedges were used to hedge the currency risk of certain foreign currency-denominated fixed maturity securities owned for portfolio diversification. These derivatives were effective hedges prior to novation to a new counterparty. In conjunction with the novation, these derivatives were de-designated as hedges. We agree to pay, at specified intervals, fixed rate foreign currency-denominated principal and interest payments in exchange for fixed rate payments in the functional currency of the operating segment. We hold offsetting swaps wherein we agree to pay fixed rate principal and interest payments in the functional currency of the operating segment in exchange for fixed rate foreign currency-denominated payments.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 4 - Derivative Financial Instruments - Continued

- Credit default swaps are used as economic hedges against credit risk but do not qualify for hedge accounting. A credit default swap is an agreement in which we agree with another party to pay, at specified intervals, a fixed-rate fee in exchange for insurance against a credit event on a specific investment. If a defined credit event occurs, our counterparty may either pay us a net cash settlement, or we may surrender the specific investment to them in exchange for cash equal to the full notional amount of the swap. Credit events typically include events such as bankruptcy, failure to pay, or certain types of debt restructuring.

- Interest rate swap was used to effectively convert certain of our floating rate, long-term debt into fixed rate long-term debt. Under this swap agreement, we received a variable rate of interest and paid a fixed rate of interest.

Derivative Risks

The basic types of risks associated with derivatives are market risk (that the value of the derivative will be adversely impacted by changes in the market, primarily the change in interest and exchange rates) and credit risk (that the counterparty will not perform according to the terms of the contract). The market risk of the derivatives should generally offset the market risk associated with the hedged financial instrument or liability. To help limit the credit exposure of the derivatives, we enter into master netting agreements with our counterparties whereby contracts in a gain position can be offset against contracts in a loss position. We also typically enter into bilateral, cross-collateralization agreements with our counterparties to help limit the credit exposure of the derivatives. These agreements require the counterparty in a loss position to submit acceptable collateral with the other counterparty in the event the net loss position meets or exceeds an agreed upon amount. Our credit exposure on derivatives, which is limited to the value of those contracts in a net gain position, including accrued interest receivable less collateral held, was $0.9 million at December 31, 2018. As of December 31, 2017 we did not have any credit exposure on derivatives. The table below summarizes the nature and amount of collateral received from and posted to our derivative counterparties.

	December 31, 2018	December 31, 2017
	(in millions of dollars)	
Carrying Value of Collateral Received from Counterparties		
Cash	$ 24.0	$ 15.7
Carrying Value of Collateral Posted to Counterparties		
Fixed Maturity Securities	$ 33.4	$ 46.4

See Note 3 for further discussion of our master netting agreements.

The majority of our derivative instruments contain provisions that require us to maintain specified issuer credit ratings and financial strength ratings. Should our ratings fall below these specified levels, we would be in violation of the provisions, and our derivatives counterparties could terminate our contracts and request immediate payment. The aggregate fair value of all derivative instruments with credit risk-related contingent features that were in a liability position was $38.0 million and $52.2 million at December 31, 2018 and 2017, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 4 - Derivative Financial Instruments - Continued

Derivative Transactions

The table below summarizes, by notional amounts, the activity for each category of derivatives. The notional amounts represent the basis upon which our counterparty pay and receive amounts are calculated.

	Swaps Receive Variable/Pay Fixed	Receive Fixed/Pay Fixed	Receive Fixed/Pay Variable	Credit Default	Forwards	Total
	(in millions of dollars)					
Balance at December 31, 2015	$150.0	$ 650.3	$ 600.0	$ 70.0	$ —	$1,470.3
Additions	3.5	—	—	—	30.0	33.5
Terminations	48.0	33.8	350.0	—	20.0	451.8
Balance at December 31, 2016	105.5	616.5	250.0	70.0	10.0	1,052.0
Additions	—	26.4	—	—	65.7	92.1
Terminations	57.5	106.4	—	—	75.7	239.6
Balance at December 31, 2017	48.0	536.5	250.0	70.0	—	904.5
Additions	—	78.1	—	11.0	47.4	136.5
Terminations	48.0	76.4	—	70.0	47.4	241.8
Balance at December 31, 2018	$—	$ 538.2	$ 250.0	$ 11.0	$ —	$799.2

Cash Flow Hedges

As of December 31, 2018 and 2017, we had $286.4 million and $343.9 million, respectively, notional amount of receive fixed, pay fixed, open current and forward foreign currency interest rate swaps to hedge fixed income foreign currency-denominated securities.

As of December 31, 2018, we expect to amortize approximately $70.0 million of net deferred gains on derivative instruments during the next twelve months. This amount will be reclassified from accumulated other comprehensive income into earnings and reported on the same income statement line item as the hedged item. The income statement line items that will be affected by this amortization are net investment income and interest and debt expense. Additional amounts that may be reclassified from accumulated other comprehensive income into earnings to offset the earnings impact of foreign currency translation of hedged items are not estimable.

As of December 31, 2018, we are hedging the variability of future cash flows associated with forecasted transactions through the year 2038.

Fair Value Hedges

As of December 31, 2017, we had $48.0 million of notional amount of receive variable, pay fixed interest rate swaps to hedge the changes in fair value of certain fixed rate securities held which matured in 2018 along with the hedged securities. These swaps effectively converted the associated fixed rate securities into floating rate securities, which were used to fund our floating rate long-term debt. During 2016, we terminated $24.0 million notional amount of receive variable, pay fixed interest rate swaps in connection with the sale of the hedged securities and recorded a loss on the swap terminations of $1.2 million in our consolidated statements of income as a component of net realized investment gains and losses.

As of December 31, 2018, we had $78.1 million notional amount of receive fixed, pay fixed, open current and forward foreign currency interest rate swaps to hedge fixed income foreign currency-denominated securities.

As of December 31, 2018 and 2017, we had 250.0 million notional amount of receive fixed, pay variable interest rate swaps to hedge the changes in the fair value of certain fixed rate long-term debt. These swaps effectively convert the associated fixed rate long-term debt into floating rate debt and provide for a better matching of interest rates with our short-term investments, which have frequent interest rate resets similar to a floating rate security. During 2016, $350.0 million notional amount of receive

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 4 - Derivative Financial Instruments - Continued

fixed, pay variable interest rate swaps matured in conjunction with the maturity of the $350.0 million hedged fixed rate debt. See Note 8.

The following table summarizes the carrying amount of hedged assets and liabilities and the related cumulative basis adjustments related to our fair value hedges:

	Carrying Amount of Hedged Assets (Liabilities)		Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Amount of the Hedged Assets (Liabilities)	
	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
	(in millions of dollars)			
Fixed maturity securities:				
Receive variable interest rate, pay fixed interest rate	$—	$ 48.5	$—	$ 0.6
Receive fixed functional currency interest, pay fixed foreign currency interest	$ 56.2	$ —	$ (2.7)	$ —
Long-term Debt	$ (244.4)	$ (244.8)	$ 5.1	$ 4.5

For the year ended December 31, 2018, $2.5 million of the derivative instruments' gain was excluded from the assessment of hedge effectiveness. For the year ended December 31, 2017, no component of the derivative instruments' gain or loss was excluded from the assessment of hedge effectiveness. There were no instances wherein we discontinued fair value hedge accounting due to a hedged firm commitment no longer qualifying as a fair value hedge.

Derivatives not Designated as Hedging Instruments

As of December 31, 2018 and 2017, we held $173.7 million and $192.6 million, respectively, notional amount of receive fixed, pay fixed, foreign currency interest rate swaps. These derivatives are not designated as hedges, and as such, changes in fair value related to these derivatives are reported in earnings as a component of net realized investment gain or loss.

As of December 31, 2018 and 2017, we held $11.0 million and $70.0 million, respectively, notional amount of single name credit default swaps. We entered into these swaps in order to mitigate the credit risk associated with specific securities owned.

As of December 31, 2016, we held $3.5 million notional amount of a receive variable, pay fixed interest rate swap acquired through our purchase of Starmount during 2016. This swap effectively converted Starmount's floating rate long-term debt into fixed rate debt. During 2017, we purchased and retired the debt and terminated the interest rate swap. We recorded a loss of $0.1 million on the swap termination in our consolidated statements of income as a component of net realized investment gains and losses. See Note 8.

We have an embedded derivative in a modified coinsurance arrangement for which we include in our realized investment gains and losses a calculation intended to estimate the value of the option of our reinsurance counterparty to cancel the reinsurance contract with us. However, neither party can unilaterally terminate the reinsurance agreement except in extreme circumstances resulting from regulatory supervision, delinquency proceedings, or other direct regulatory action. Cash settlements or collateral related to this embedded derivative are not required at any time during the reinsurance contract or at termination of the reinsurance contract. There are no credit-related counterparty triggers, and any accumulated embedded derivative gain or loss reduces to zero over time as the reinsured business winds down.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 4 - Derivative Financial Instruments - Continued

Locations and Amounts of Derivative Financial Instruments

The following tables summarize the location and fair values of derivative financial instruments, as reported in our consolidated balance sheets.

	December 31, 2018			
	Derivative Assets		Derivative Liabilities	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
	(in millions of dollars)			
Designated as Hedging Instruments				
Cash Flow Hedges				
Foreign Exchange Contracts	Other L-T Investments	$25.0	Other Liabilities	$7.9
Fair Value Hedges				
Interest Rate Swaps	Other L-T Investments	—	Other Liabilities	5.2
Foreign Exchange Contracts	Other L-T Investments	5.4	Other Liabilities	0.4
Total Fair Value Hedges		5.4		5.6
Total Designated as Hedging Instruments		$30.4		$13.5
Not Designated as Hedging Instruments				
Credit Default Swaps	Other L-T Investments	$0.5	Other Liabilities	$—
Foreign Exchange Contracts	Other L-T Investments	—	Other Liabilities	24.5
Embedded Derivative in Modified Coinsurance Arrangement	Other L-T Investments	—	Other Liabilities	31.1
Total Not Designated as Hedging Instruments		$0.5		$55.6

	December 31, 2017			
	Derivative Assets		Derivative Liabilities	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
	(in millions of dollars)			
Designated as Hedging Instruments				
Cash Flow Hedges				
Foreign Exchange Contracts	Other L-T Investments	$19.5	Other Liabilities	$19.4
Fair Value Hedges				
Interest Rate Swaps	Other L-T Investments	—	Other Liabilities	5.1
Total Designated as Hedging Instruments		$19.5		$24.5
Not Designated as Hedging Instruments				
Credit Default Swaps			Other Liabilities	$0.2
Foreign Exchange Contracts			Other Liabilities	27.5
Embedded Derivative in Modified Coinsurance Arrangement			Other Liabilities	15.9
Total Not Designated as Hedging Instruments				$43.6

148

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 4 - Derivative Financial Instruments - Continued

The following tables summarize the location of gains and losses of derivative financial instruments designated as hedging instruments, as reported in our consolidated statements of income.

	Year Ended December 31, 2018		
	Net Investment Income	Net Realized Investment Gain (Loss)	Interest and Debt Expense
	(in millions of dollars)		
Total Income and Expense Presented in the Consolidated Statements of Income of Which Hedged Items are Recorded	$2,453.7	$ (39.5)	$ 167.3
Gain (Loss) on Cash Flow Hedging Relationships			
Interest Rate Swaps:			
Hedged items	310.3	0.1	38.4
Derivatives Designated as Hedging Instruments	67.1	(0.3)	2.3
Foreign Exchange Contracts:			
Hedged items	18.1	1.5	—
Derivatives Designated as Hedging Instruments	(0.9)	(1.5)	—
Gain (Loss) on Fair Value Hedging Relationships			
Interest Rate Swaps:			
Hedged items	1.0	0.1	14.3
Derivatives Designated as Hedging Instruments	(0.5)	(0.1)	1.8
Foreign Exchange Contracts			
Hedged items	0.6	(2.7)	—
Derivatives Designated as Hedging Instruments	0.5	2.7	—

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 4 - Derivative Financial Instruments - Continued

	Year Ended December 31, 2017		
	Net Investment Income	Net Realized Investment Gain (Loss)	Interest and Debt Expense
	(in millions of dollars)		
Total Income and Expense Presented in the Consolidated Statements of Income of Which Hedged Items are Recorded	$2,451.7	$ 40.3	$ 159.9
Gain (Loss) on Cash Flow Hedging Relationships			
Interest Rate Swaps:			
Hedged items	321.1	2.5	44.9
Derivatives Designated as Hedging Instruments	60.4	0.2	2.2
Foreign Exchange Contracts:			
Hedged items	21.7	8.9	—
Derivatives Designated as Hedging Instruments	(1.2)	(9.2)	—
Gain (Loss) on Fair Value Hedging Relationships			
Interest Rate Swaps:			
Hedged items	4.8	(1.7)	14.3
Derivatives Designated as Hedging Instruments	(3.2)	1.7	(0.6)

	Year Ended December 31, 2016		
	Net Investment Income	Net Realized Investment Gain (Loss)	Interest and Debt Expense
	(in millions of dollars)		
Total Income and Expense Presented in the Consolidated Statements of Income of Which Hedged Items are Recorded	$2,459.0	$ 24.2	$ 166.0
Gain (Loss) on Cash Flow Hedging Relationships			
Interest Rate Swaps:			
Hedged items	337.7	7.2	44.9
Derivatives Designated as Hedging Instruments	55.7	3.4	2.1
Foreign Exchange Contracts:			
Hedged items	23.1	1.5	—
Derivatives Designated as Hedging Instruments	(0.6)	(1.4)	—
Gain (Loss) on Fair Value Hedging Relationships			
Interest Rate Swaps:			
Hedged items	7.1	(3.1)	39.7
Derivatives Designated as Hedging Instruments	(5.3)	3.1	(4.7)

150

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 4 - Derivative Financial Instruments - Continued

The following table summarizes the location of gains and losses of derivative financial instruments designated as cash flow hedging instruments, as reported in our consolidated statements of comprehensive income (loss).

	Year Ended December 31		
	2018	2017	2016
	(in millions of dollars)		
Gain (Loss) Recognized in Other Comprehensive Income (Loss) on Derivatives			
Interest Rate Swaps and Forwards	$(0.1)	$(0.1)	$(0.1)
Foreign Exchange Contracts	16.9	(23.0)	(22.2)
Total	$16.8	$(23.1)	$(22.3)

The following table summarizes the location of gains and losses on our derivatives not designated as hedging instruments, as reported in our consolidated statements of income.

	Year Ended December 31		
	2018	2017	2016
	(in millions of dollars)		
Net Realized Investment Gain (Loss)			
Credit Default Swaps	$(0.3)	$(0.4)	$(0.9)
Interest Rate Swaps	(0.3)	(0.1)	0.4
Foreign Exchange Contracts	0.9	0.4	0.2
Embedded Derivative in Modified Coinsurance Arrangement	(15.2)	30.8	40.9
Total	$(14.9)	$30.7	$40.6

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 5 - Accumulated Other Comprehensive Income (Loss)

Components of our accumulated other comprehensive income (loss), after tax, and related changes are as follows:

	Net Unrealized Gain (Loss) on Securities	Net Gain on Hedges	Foreign Currency Translation Adjustment	Unrecognized Pension and Postretirement Benefit Costs	Total
	(in millions of dollars)				
Balance at December 31, 2015	$204.3	$378.0	$ (173.6)	$ (392.6)	$16.1
Other Comprehensive Income (Loss) Before Reclassifications	226.5	(15.8)	(180.4)	(82.8)	(52.5)
Amounts Reclassified from Accumulated Other Comprehensive Income or Loss	9.8	(34.7)	—	10.3	(14.6)
Net Other Comprehensive Income (Loss)	236.3	(50.5)	(180.4)	(72.5)	(67.1)
Balance at December 31, 2016	440.6	327.5	(354.0)	(465.1)	(51.0)
Other Comprehensive Income (Loss) Before Reclassifications	176.7	(14.7)	99.5	(55.9)	205.6
Amounts Reclassified from Accumulated Other Comprehensive Income or Loss	(9.5)	(30.5)	—	12.9	(27.1)
Net Other Comprehensive Income (Loss)	167.2	(45.2)	99.5	(43.0)	178.5
Balance at December 31, 2017	607.8	282.3	(254.5)	(508.1)	127.5
Adjustment to Adopt Accounting Standard Update - Note 1	(17.5)	—	—	—	(17.5)
Other Comprehensive Income (Loss) Before Reclassifications	(920.3)	16.8	(50.7)	43.6	(910.6)
Amounts Reclassified from Accumulated Other Comprehensive Income or Loss	17.6	(48.5)	—	17.3	(13.6)
Net Other Comprehensive Income (Loss)	(902.7)	(31.7)	(50.7)	60.9	(924.2)
Balance at December 31, 2018	$(312.4)	$250.6	$ (305.2)	$ (447.2)	$(814.2)

The net unrealized gain (loss) on securities consists of the following components:

	December 31	January 1	December 31			Change for the Year Ended December 31		
	2018		2017	2016	2015	2018	2017	2016
	(in millions of dollars)							
Fixed Maturity Securities	$2,736.5	$5,665.2	$5,677.3	$4,664.6	$3,695.7	$(2,928.7)	$1,012.7	$968.9
Other Investments	—	—	14.4	(22.7)	(33.7)	—	37.1	11.0
Deferred Acquisition Costs	(27.9)	(51.4)	(51.4)	(38.9)	(29.4)	23.5	(12.5)	(9.5)
Reserves for Future Policy and Contract Benefits	(3,220.3)	(5,094.7)	(5,094.7)	(4,253.2)	(3,578.4)	1,874.4	(841.5)	(674.8)
Reinsurance Recoverable	261.4	375.8	375.8	321.3	263.2	(114.4)	54.5	58.1
Income Tax	(62.1)	(304.6)	(313.6)	(230.5)	(113.1)	242.5	(83.1)	(117.4)
Total	$(312.4)	$590.3	$607.8	$440.6	$204.3	$(902.7)	$167.2	$236.3

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 5 - Accumulated Other Comprehensive Income (Loss) - Continued

Amounts reclassified from accumulated other comprehensive income (loss) were recognized in our consolidated statements of income as follows:

	Year Ended December 31		
	2018	2017	2016
	(in millions of dollars)		
Net Unrealized Gain (Loss) on Securities			
Net Realized Investment Gain (Loss)			
Gain (Loss) on Sales of Securities and Other Invested Assets	$(4.8)	$22.7	$15.3
Other-Than-Temporary Impairment Loss	(17.5)	(8.1)	(30.5)
	(22.3)	14.6	(15.2)
Income Tax Expense (Benefit)	(4.7)	5.1	(5.4)
Total	$(17.6)	$9.5	$(9.8)
Net Gain on Hedges			
Net Investment Income			
Gain on Interest Rate Swaps and Forwards	$65.9	$59.0	$54.5
Loss on Foreign Exchange Contracts	(1.1)	(1.2)	(1.1)
Net Realized Investment Gain (Loss)			
Gain on Interest Rate Swaps	0.2	0.2	3.2
Loss on Foreign Exchange Contracts	(1.5)	(9.2)	(1.4)
Interest and Debt Expense			
Loss on Interest Rate Swaps	(2.1)	(2.0)	(1.9)
	61.4	46.8	53.3
Income Tax Expense	12.9	16.3	18.6
Total	$48.5	$30.5	$34.7
Unrecognized Pension and Postretirement Benefit Costs			
Other Expenses			
Amortization of Net Actuarial Loss	$(22.3)	$(20.3)	$(16.3)
Amortization of Prior Service Credit	0.2	0.7	0.5
	(22.1)	(19.6)	(15.8)
Income Tax Benefit	(4.8)	(6.7)	(5.5)
Total	$(17.3)	$(12.9)	$(10.3)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 6 - Liability for Unpaid Claims and Claim Adjustment Expenses

Changes in the liability for unpaid claims and claim adjustment expenses are as follows:

	2018	2017	2016
	(in millions of dollars)		
Balance at January 1	$23,222.0	$23,249.5	$23,796.1
Less Reinsurance Recoverable	2,182.0	2,163.6	2,064.6
Net Balance at January 1	21,040.0	21,085.9	21,731.5
Incurred Related to			
Current Year	5,832.3	5,422.9	5,243.0
Prior Years			
Interest	1,049.8	1,089.7	1,136.7
All Other Incurred	(106.2)	(158.2)	(198.3)
Foreign Currency	(110.7)	167.5	(340.2)
Total Incurred	6,665.2	6,521.9	5,841.2
Paid Related to			
Current Year	(2,354.7)	(2,156.9)	(2,035.4)
Prior Years	(4,428.8)	(4,410.9)	(4,451.4)
Total Paid	(6,783.5)	(6,567.8)	(6,486.8)
Net Balance at December 31	20,921.7	21,040.0	21,085.9
Plus Reinsurance Recoverable	2,227.3	2,182.0	2,163.6
Balance at December 31	$23,149.0	$23,222.0	$23,249.5

The majority of the net balances are related to disability claims with long-tail payouts on which interest earned on assets backing liabilities is an integral part of pricing and reserving. Interest accrued on prior year reserves has been calculated on the opening reserve balance less one-half of the year's claim payments relative to prior years at our average reserve discount rate for the respective periods.

"Incurred Related to Prior Years - All Other Incurred" shown in the preceding chart includes the reserve adjustments as discussed in the following paragraphs, which impact the comparability between the years presented. Excluding those adjustments, the variability exhibited year over year is primarily caused by the level of claim resolutions in the period relative to the long-term expectations reflected in the reserves. Our claim resolution rate assumption used in determining reserves is our expectation of the resolution rate we will experience over the life of the block of business and will vary from actual experience in any one period, both favorably and unfavorably.

2018 Long-term Care Reserve Increase

Policy reserves for our long-term care block of business are determined using the gross premium valuation method and, prior to the third quarter of 2018, were valued based on assumptions established as of December 31, 2014, the date of our last assumption update under loss recognition. Gross premium valuation assumptions do not change after the date of loss recognition unless reserves are again determined to be deficient. We undertake a review of policy reserve adequacy annually during the fourth quarter of each year, or more frequently if appropriate, using best estimate assumptions as of the date of the review.

During the third quarter of 2018, we completed our annual review of policy reserve adequacy, which incorporated our most recent experience and included a review of all assumptions, including active policy terminations, claims incidence, claim terminations, morbidity, premium rate increases, and new money yield rates. The review utilized internal and external data and outside consulting firms for quality assurance and industry benchmarking. Based on our analysis, during the third quarter of 2018, we updated our reserve assumptions and determined that our policy and claim reserves should be increased by $750.8 million, or $593.1 million after tax, to reflect our current estimate of future benefit obligations. This increase was primarily

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 6 - Liability for Unpaid Claims and Claim Adjustment Expenses - Continued

driven by the update to our liability and interest rate assumptions, particularly claims incidence and claim termination rates, which resulted in an increase to reserves of approximately $2.2 billion. Partially offsetting the increase was the update to our assumptions for premium rate increases which decreased reserves approximately $1.4 billion, resulting in the net increase to reserves of $750.8 million. Of this amount, approximately $236.0 million was related to our liability for unpaid claims and claims adjustment expenses, which can be primarily attributed to prior year incurred claims, thereby impacting the results shown in the preceding chart.

2017 Unclaimed Death Benefits Reserve Increase

Beginning in 2011, a number of state regulators began requiring insurers to cross-check specified insurance policies with the Social Security Administration's Death Master File to identify potential matches. If a potential match was identified, insurers were requested to determine if benefits were due, locate beneficiaries, and make payments where appropriate. We initiated this process where requested, and in 2012 we began implementing this process in all states on a forward-looking basis. In addition to implementing this on a forward-looking basis, in 2013 we began an initiative to search for potential claims from previous years. During 2013, we completed our assessment of benefits which we estimated would be paid under this initiative, and as such, established additional reserves for payment of these benefits.

Similar to other insurers, we are undergoing an examination by a third party acting on behalf of a number of state treasurers concerning our compliance with the unclaimed property laws of the participating states. In the fourth quarter of 2017, we started the process to reach a Global Resolution Agreement with the third party regarding settlement of the examination, which we finalized in January of 2018. During the fourth quarter of 2017, we established reserves which reflect our estimate of the liability expected to be paid as we execute on the terms of the settlement. Claim reserves were increased $18.5 million for Unum US group life, $8.1 million for Unum US voluntary life, and $12.4 million for Colonial Life voluntary life, for a total reserve increase of $39.0 million before tax. The reserves established were attributed to prior years incurred claims, thereby impacting the results shown in the preceding chart.

Reconciliation

A reconciliation of policy and contract benefits and reserves for future policy and contract benefits as reported in our consolidated balance sheets to the liability for unpaid claims and claim adjustment expenses is as follows:

	December 31		
	2018	2017	2016
	(in millions of dollars)		
Policy and Contract Benefits	$1,695.7	$1,605.2	$1,507.9
Reserves for Future Policy and Contract Benefits	44,841.9	45,601.6	44,245.9
Total	46,537.6	47,206.8	45,753.8
Less:			
Life Reserves for Future Policy and Contract Benefits	8,330.9	8,231.3	8,078.2
Accident and Health Active Life Reserves	11,837.4	10,658.8	10,172.9
Adjustment Related to Unrealized Investment Gains and Losses	3,220.3	5,094.7	4,253.2
Liability for Unpaid Claims and Claim Adjustment Expenses	$23,149.0	$23,222.0	$23,249.5

The adjustment related to unrealized investment gains and losses reflects the changes that would be necessary to policyholder liabilities if the unrealized investment gains and losses related to the corresponding available-for-sale securities had been realized. Changes in this adjustment are reported as a component of other comprehensive income or loss.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 7 - Income Tax

Total income tax expense (benefit) is allocated as follows:

	Year Ended December 31		
	2018	2017	2016
	(in millions of dollars)		
Net Income	$104.4	$409.8	$416.3
Stockholders' Equity - Additional Paid-in Capital			
Stock-Based Compensation	—	—	(0.3)
Stockholders' Equity - Accumulated Other Comprehensive Income (Loss)			
Change in Net Unrealized Gain on Securities Before Adjustment	(614.2)	328.1	318.0
Change in Adjustment to Deferred Acquisition Costs and Reserves for Future Policy and Contract Benefits, Net of Reinsurance	371.7	(245.0)	(200.6)
Change in Net Gain on Hedges	(8.2)	(24.4)	(25.4)
Change in Foreign Currency Translation Adjustment	(0.6)	—	—
Change in Unrecognized Pension and Postretirement Benefit Costs	17.0	(8.3)	(34.2)
Total	$(129.9)	$460.2	$473.8

A reconciliation of the income tax provision at the U.S. federal statutory rate to the income tax rate as reported in our consolidated statements of income is as follows. Certain prior year amounts have been reclassified to conform to current year reporting.

	Year Ended December 31		
	2018	2017	2016
Statutory Income Tax	21.0 %	35.0 %	35.0 %
Foreign Rate Differential, Inclusive of Foreign Rate Changes	(0.3)	(1.1)	(2.2)
U.S. Deferred Tax Liability Remeasurement	—	(7.0)	—
Deemed Repatriation Tax on Foreign Earnings and Profit (E&P)	1.8	4.7	—
Tax Exempt Income	(1.3)	(0.8)	(0.8)
Tax Credits	(2.4)	(1.5)	(1.6)
Policyholder Reserves	(2.4)	—	—
Other Items, Net	0.2	(0.1)	0.5
Effective Tax	16.6 %	29.2 %	30.9 %

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 7 - Income Tax - Continued

Our net deferred tax (asset) liability consists of the following:

	December 31	
	2018	2017
	(in millions of dollars)	
Deferred Tax Liability		
Deferred Acquisition Costs	$129.7	$118.6
Fixed Assets	56.2	52.8
Invested Assets	493.4	1,074.0
Intangible Assets	24.0	6.5
Other	34.1	35.8
Gross Deferred Tax Liability	737.4	1,287.7
Deferred Tax Asset		
Reserves	668.5	908.0
Employee Benefits	179.5	188.7
Other	17.7	12.3
Gross Deferred Tax Asset	865.7	1,109.0
Less: Valuation Allowance	18.4	20.3
Net Deferred Tax Asset	847.3	1,088.7
Net Deferred Tax (Asset) Liability	$(109.9)	$199.0

Our consolidated statements of income include amounts subject to both domestic and foreign taxation. The income and related tax expense (benefit) are as follows. The federal statutory rates used were 21 percent for 2018 and 35 percent for 2017 and 2016:

	Year Ended December 31		
	2018	2017	2016
	(in millions of dollars)		
Income Before Tax			
Domestic	$492.6	$1,289.0	$1,215.8
Foreign	135.2	115.0	131.9
Total	$627.8	$1,404.0	$1,347.7
Current Tax Expense (Benefit)			
Federal	$194.6	$374.9	$414.8
State and Local	(0.6)	0.4	0.3
Foreign	33.4	26.0	(29.4)
Total	227.4	401.3	385.7
Deferred Tax Expense (Benefit)			
Federal	(114.6)	14.2	(14.6)
State and Local	(0.2)	(0.3)	(2.1)
Foreign	(8.2)	(5.4)	47.3
Total	(123.0)	8.5	30.6

Total Tax Expense	$104.4	$409.8	$416.3

157

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 7 - Income Tax - Continued

On December 22, 2017, the U.S. Federal government enacted the TCJA, which reduced the federal corporate tax rate from 35 percent to 21 percent effective January 1, 2018. Although the TCJA's 21 percent corporate tax rate became effective on January 1, 2018, we are required to adjust deferred tax assets and liabilities through continuing operations on the date of enactment. As a result, in 2017 we recorded an income tax benefit of $97.9 million for the TCJA's corporate tax rate reduction and an income tax expense of $66.4 million for the deemed repatriation transition tax on accumulated foreign E&P.

TCJA brought a large number of complex changes to many areas of the tax code. The Securities and Exchange Commission issued Staff Accounting Bulletin No. 118 (SAB 118) allowing a one-year measurement period after the enactment date of TCJA to finalize the calculation and record the related tax impacts. We finalized and recorded adjustments to our initial estimates during 2018. As a result of guidance from the IRS, we recorded additional deemed repatriation transition tax on accumulated foreign E&P of $11.5 million, for a total of $77.9 million. We recorded no other material changes to our calculations of the impact of the TCJA during the one-year measurement period after the enactment period as allowed by SAB 118.

Effective January 1, 2018, the TCJA created a U.S. shareholder tax on certain foreign subsidiary income above a routine equity return on tangible depreciable business assets, or a tax on Global Intangible Low-taxed Income (GILTI). The FASB has provided additional guidance to address the accounting effects of GILTI, requiring companies to elect to either recognize deferred taxes related to GILTI or include in tax expense in the period incurred. We have elected to treat GILTI as a period cost.

Under the TCJA, a modified territorial tax system was adopted that required a one-time deemed repatriation tax on accumulated foreign E&P. Future repatriation of foreign E&P subject to the one-time deemed repatriation tax will not be subject to further U.S. taxation other than tax on foreign currency translation gain or loss. As of December 31, 2018, our plans for the future repatriations of cash from our foreign subsidiaries include only the amount of capital above that which is required by Solvency II. The remainder of our investment in our foreign subsidiaries is indefinitely reinvested and we have not recorded any deferred taxes on the approximately $0.7 billion of the excess of the U.S. GAAP carrying values over the tax basis of investments in our foreign subsidiaries.

Our consolidated statements of income include the following changes in unrecognized tax benefits. Certain prior year amounts have been reclassified to conform to current year reporting.

	December 31		
	2018	2017	2016
	(in millions of dollars)		
Balance at Beginning of Year	$1.4	$1.5	$0.8
Additions for Tax Positions Related to Prior Years	261.5	0.3	0.7
Additions for Tax Positions Related to Current Year	—	—	—
Settlements with Tax Authorities	—	—	—
Lapse of the Applicable Statute of Limitations	(0.7)	(0.4)	—
Balance at End of Year	262.2	1.4	1.5
Less Tax Attributable to Temporary Items Included Above	(148.2)	—	—
Total Unrecognized Tax Benefits That if Recognized Would Affect the Effective Tax Rate	$114.0	$1.4	$1.5

During 2018 we recorded $261.1 million gross unrecognized tax benefits for a policyholder reserves position taken on our 2017 federal tax return, which if recognized, would decrease our tax expense by $112.9 million. Included in the balance at December 31, 2018, is $148.2 million of unrecognized tax benefits for which the ultimate deductibility is highly certain but for which there is uncertainty about the timing of such deductibility. It is reasonably possible that this item could reverse in the next 12 months following review by the Internal Revenue Service (IRS).

We recognize interest expense and penalties, if applicable, related to unrecognized tax benefits in tax expense. We recognized a de minimis amount of interest expense related to unrecognized tax benefits during 2018, 2017 and 2016. We held a de minimis liability in our consolidated balance sheets for accrued interest related to unrecognized tax benefits at December 31, 2018, 2017 and 2016.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 7 - Income Tax - Continued

We file federal and state income tax returns in the United States and in foreign jurisdictions. Tax years subsequent to 2014 remain subject to examination by the IRS. All other major foreign jurisdictions remain subject to examination for tax years subsequent to 2016 with the exception of Poland for which tax years subsequent to 2013 remain subject to examination. We believe sufficient provision has been made for all potential adjustments for years that are not closed by the statute of limitations in all major tax jurisdictions and that any such adjustments would not have a material adverse effect on our financial position, liquidity, or results of operations.

We file state income tax returns in nearly every state in the United States. Tax years subsequent to 2013 remain subject to examination depending on the statute of limitation established by the various states, which is generally three to four years. Tax years subsequent to 2010 remain subject to examination in California.

We have an accumulated federal net operating loss carryforward of $6.5 million as of December 31, 2018 and had none as of December 31, 2017. Current year net operating losses relate to subsidiaries not yet included in the consolidated U.S. federal tax return and are not expected to expire unused. Our federal capital loss carryforward, also related to subsidiaries not included in the consolidated U.S. federal return, was $0.7 million at both December 31, 2018 and 2017 and is expected to be utilized by the time it expires in 2022. We have net operating loss carryforwards for state and local income tax of approximately $195 million most of which is expected to expire unused between 2019 and 2038.

We record valuation allowances to reduce deferred tax assets to the amount that is more likely than not to be realized. Our valuation allowance was $18.4 million and $20.3 million at December 31, 2018 and 2017, the majority of which related to our cumulative deferred state income tax benefits. The de minimis remaining amount of our valuation allowance relates to unrealized tax losses on buildings which we own and occupy in the U.K.

Total income taxes paid net of refunds during 2018, 2017, and 2016 were $139.7 million, $377.0 million, and $384.3 million, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 8 - Debt

Debt consists of the following:

	Interest Rates	Maturities	December 31 2018	2017
			(in millions of dollars)	
Long-term Debt				
Outstanding Principal				
Senior Secured Notes issued 2007	Variable	2037	$140.0	$200.0
Senior Notes issued 1998	6.750 - 7.250%	2028	365.8	365.8
Senior Notes issued 2002	7.375%	2032	39.5	39.5
Senior Notes issued 2010	5.625%	2020	400.0	400.0
Senior Notes issued 2012 and 2016	5.750%	2042	500.0	500.0
Senior Notes issued 2014	4.000%	2024	350.0	350.0
Senior Notes issued 2015	3.875%	2025	275.0	275.0
Senior Notes issued 2016	3.000%	2021	350.0	350.0
Medium-term Notes issued 1990 - 1996	7.000 - 7.190%	2023 - 2028	50.8	50.8
Junior Subordinated Debt Securities issued 1998	7.405%	2038	226.5	226.5
Junior Subordinated Debt Securities issued 2018	6.250%	2058	300.0	—
Fair Value Hedge Adjustment			(5.1)	(4.5)
Less:				
Unamortized Net Premium			9.6	9.7
Unamortized Debt Issuance Costs			(30.8)	(24.4)
Total Long-term Debt			2,971.3	2,738.4
Short-term Debt				
Outstanding Principal				
Senior Notes issued 1998	7.000%	2018	—	200.0
Less Unamortized Debt Issuance Costs			—	(0.1)
Total Short-term Debt			—	199.9
Total Debt			$2,971.3	$2,938.3

Collateralized debt is comprised of our senior secured notes and ranks highest in priority, followed by unsecured notes, which consist of senior notes and medium-term notes, followed by junior subordinated debt securities. The medium-term notes are non-callable and the junior subordinated debt securities are callable under limited, specified circumstances. The remaining debt is callable and may be redeemed, in whole or in part, at any time.

The aggregate contractual principal maturities are $400.0 million in 2020, $350.0 million in 2021, $2.0 million in 2023, and $2,245.6 million thereafter.

Senior Secured Notes

In 2007, Northwind Holdings, LLC (Northwind Holdings), a wholly-owned subsidiary of Unum Group, issued $800.0 million of insured, senior secured notes (the Northwind notes) in a private offering. The Northwind notes bear interest at a floating rate equal to the three-month LIBOR plus 0.78%.

Northwind Holdings' ability to meet its obligations to pay principal, interest, and other amounts due on the Northwind notes will be dependent principally on its receipt of dividends from Northwind Reinsurance Company (Northwind Re), the sole subsidiary of Northwind Holdings. Northwind Re reinsured the risks attributable to specified individual disability insurance policies issued

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 8 - Debt - Continued

by or reinsured by Provident Life and Accident Insurance Company, Unum Life Insurance Company of America, and The Paul Revere Life Insurance Company (collectively, the ceding insurers) pursuant to separate reinsurance agreements between Northwind Re and each of the ceding insurers. The ability of Northwind Re to pay dividends to Northwind Holdings will depend on its satisfaction of applicable regulatory requirements and the performance of the reinsured policies.

Recourse for the payment of principal, interest and other amounts due on the Northwind notes is limited to the collateral for the Northwind notes and the other assets, if any, of Northwind Holdings. The collateral consists of a first priority, perfected security interest in (a) the debt service coverage account (DSCA) that Northwind Holdings is required to maintain in accordance with the indenture pursuant to which the Northwind notes were issued (the Northwind indenture), (b) the capital stock of Northwind Re and the dividends and distributions on such capital stock, and (c) Northwind Holdings' rights under the transaction documents related to the Northwind notes to which Northwind Holdings is a party. At December 31, 2018, the amount in the DSCA was $73.8 million. None of Unum Group, the ceding insurers, Northwind Re, or any other affiliate of Northwind Holdings is an obligor or guarantor with respect to the Northwind notes.

Northwind Holdings is required to repay a portion of the outstanding principal under the Northwind notes at par on the quarterly scheduled payment dates under the Northwind notes in an amount equal to the lesser of (i) a targeted amortization amount as defined in the Northwind indenture and (ii) the amount of the remaining available funds in the DSCA minus an amount equal to the minimum balance that is required to be maintained in the DSCA under the Northwind indenture, provided that Northwind Holdings has sufficient funds available to pay its other expenses, including interest payments on the Northwind notes, and to maintain the minimum balance in the DSCA as required under the Northwind indenture. Northwind Holdings made principal payments on the Northwind notes of $60.0 million in both 2018 and 2017, and $64.0 million in 2016.

In 2017, we purchased and retired the remaining $3.4 million of principal on our senior secured floating rate notes acquired through our purchase of Starmount Life Insurance Company. In conjunction with this retirement, we also terminated the interest rate swap associated with the hedge of these notes and recorded a $0.1 million loss in our consolidated statements of income as a component of net realized investment gains and losses. See Note 4 for further discussion on the interest rate swap.

Unsecured Notes

In July 2018, our $200.0 million 7.00% senior unsecured notes matured.

In September 2016, our $350.0 million 7.125% senior unsecured notes matured.

In May 2016, we issued a total of $600.0 million aggregate principal amount of senior notes: (i) $350.0 million aggregate principal amount of senior notes due in 2021 with an annual coupon rate of 3.00%, and (ii) $250.0 million aggregate principal amount of senior notes due in 2042 with an annual coupon rate of 5.75%, pursuant to a reopening of the $250.0 million aggregate principal amount outstanding of our 5.75% senior notes due 2042 issued in 2012. Both issuances are callable at or above par and rank equally in the right of payment with all of our other unsecured and unsubordinated debt.

Fair Value Hedges

As of December 31, 2018 and 2017, we had $250.0 million notional amount of an interest rate swap which effectively converts certain of our unsecured senior notes into floating rate debt. Under this agreement, we receive a fixed rate of interest and pay a variable rate of interest, based off of three-month LIBOR. See Note 4 for further information on the interest rate swap.

Junior Subordinated Debt Securities

In May 2018, we issued $300.0 million of 6.25% junior subordinated notes due 2058. The notes are redeemable at or above par on or after June 15, 2023 and rank equally in the right of payment with our other junior subordinated debt securities.

In 1998, Provident Financing Trust I (the trust), a 100 percent-owned finance subsidiary of Unum Group, issued $300.0 million of 7.405% capital securities in a public offering. These capital securities are fully and unconditionally guaranteed by Unum Group, have a liquidation value of $1,000 per capital security, and have a mandatory redemption feature under certain circumstances. Unum Group issued 7.405% junior subordinated deferrable interest debentures to the trust in connection with the

Note 8 - Debt - Continued

capital securities offering. The debentures mature in 2038. The sole assets of the trust are the junior subordinated debt securities.

Interest Paid

Interest paid on long-term and short-term debt and related securities during 2018, 2017, and 2016 was $167.3 million, $154.4 million, and $153.6 million, respectively.

Credit Facility

In March 2016, we amended the terms of our five-year, $400.0 million unsecured revolving credit facility, which was previously set to expire in 2018, to extend through March 2021. Under the terms of the agreement, we may request that the credit facility be increased up to $600.0 million. Borrowings under the credit facility are for general corporate uses and are subject to financial covenants, negative covenants, and events of default that are customary. The credit facility provides for borrowing at an interest rate based either on the prime rate or LIBOR. In addition, the credit facility provides for the issuance of letters of credit subject to certain terms and limitations. At December 31, 2018 and 2017, letters of credit totaling $2.1 million had been issued from the credit facility, but there were no borrowed amounts outstanding.

Note 9 - Employee Benefit Plans

Defined Benefit Pension and Other Postretirement Benefit (OPEB) Plans

We sponsor several defined benefit pension and OPEB plans for our employees, including non-qualified pension plans. The U.S. qualified and non-qualified defined benefit pension plans comprise the majority of our total benefit obligation and benefit cost. We maintain a separate defined benefit plan for eligible employees in our U.K. operation. The U.S. defined benefit pension plans were closed to new entrants on December 31, 2013, the OPEB plan was closed to new entrants on December 31, 2012, and the U.K. plan was closed to new entrants on December 31, 2002.

Amendments to Pension Plan

In 2017, we amended our U.S. qualified defined benefit pension plan by modifying the qualified pre-retirement survivor annuity form of payment for married participants from a 67 percent joint and survivor annuity to a 100 percent joint and survivor benefit to the participant's spousal beneficiary in the event a participant pre-deceased prior to reaching pension eligibility and affirmatively electing a form of benefit. This amendment became effective January 1, 2018. As a result of this amendment, we recognized an increase in the net pension liability of $7.6 million, with a corresponding prior service cost included in accumulated other comprehensive income.

Amendment to OPEB Plan

Effective August 1, 2016, we amended the retiree medical benefits portion of our OPEB plan to transition a majority of participants to a private exchange for their health insurance coverage. Prior to the plan amendment, participants paid a subsidized premium for their health insurance coverage, but if they elect to continue participation in the plan they will now purchase coverage on a private exchange and will subsequently be reimbursed through a Health Reimbursement Account (HRA) for an amount equivalent to the subsidy that was previously provided. Participants who continued in the plan received a one-time subsidy to minimize the initial out-of-pocket cost of purchasing health insurance. The amendment did not materially change the benefit obligation of the plan.

Amortization Period of Actuarial Gain or Loss and Prior Service Cost or Credit

Because all participants in the U.S. and U.K. pension plans are considered inactive, we amortize the net actuarial loss and prior service credit for these plans over the average remaining life expectancy of the plans. As of December 31, 2018, the estimate of the average remaining life expectancy of the plans was approximately 24 years for the U.S. plan and 31 years for U.K. plan.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 9 - Employee Benefit Plans - Continued

The following table provides the changes in the benefit obligation and fair value of plan assets and the funded status of the plans.

	Pension Benefits					
	U.S. Plans		U.K. Plan		OPEB	
	2018	2017	2018	2017	2018	2017
	(in millions of dollars)					
Change in Benefit Obligation						
Benefit Obligation at Beginning of Year	$2,136.9	$1,955.3	$243.8	$223.0	$139.5	$147.9
Service Cost	9.1	7.9	—	—	—	—
Interest Cost	79.8	84.5	5.9	6.2	4.9	5.9
Plan Participant Contributions	—	—	—	—	0.2	0.2
Actuarial (Gain) Loss	(210.3)	159.3	(18.9)	1.7	(7.6)	(4.2)
Benefits and Expenses Paid	(82.2)	(77.7)	(7.3)	(8.3)	(11.1)	(10.3)
Plan Amendment	—	7.6	0.3	—	—	—
Change in Foreign Exchange Rates	—	—	(12.8)	21.2	—	—
Benefit Obligation at End of Year	$1,933.3	$2,136.9	$211.0	$243.8	$125.9	$139.5
Accumulated Benefit Obligation at December 31	$1,933.3	$2,136.9	$205.0	$234.3	N/A	N/A
Change in Fair Value of Plan Assets						
Fair Value of Plan Assets at Beginning of Year	$1,582.6	$1,454.1	$253.5	$228.4	$10.5	$10.8
Actual Return on Plan Assets	(53.6)	198.5	(16.0)	11.6	0.1	0.1
Employer Contributions	8.1	7.7	—	—	10.4	9.7
Plan Participant Contributions	—	—	—	—	0.2	0.2
Benefits and Expenses Paid	(82.2)	(77.7)	(7.3)	(8.3)	(11.1)	(10.3)
Change in Foreign Exchange Rates	—	—	(13.2)	21.8	—	—
Fair Value of Plan Assets at End of Year	$1,454.9	$1,582.6	$217.0	$253.5	$10.1	$10.5
Underfunded (Overfunded) Status	$478.4	$554.3	$(6.0)	$(9.7)	$115.8	$129.0

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 9 - Employee Benefit Plans - Continued

The amounts recognized in our consolidated balance sheets for our pension and OPEB plans at December 31, 2018 and 2017 are as follows.

	Pension Benefits					
	U.S. Plans		U.K. Plan		OPEB	
	2018	2017	2018	2017	2018	2017
	(in millions of dollars)					
Current Liability	$7.3	$7.2	$—	$—	$1.6	$1.2
Noncurrent Liability	471.1	547.1	—	—	114.2	127.8
Noncurrent Asset	—	—	(6.0)	(9.7)	—	—
Underfunded (Overfunded) Status	$478.4	$554.3	$(6.0)	$(9.7)	$115.8	$129.0
Unrecognized Pension and Postretirement Benefit Costs						
Net Actuarial Gain (Loss)	$(672.6)	$(746.4)	$(48.9)	$(46.3)	$20.9	$13.7
Prior Service Credit (Cost)	(0.7)	(0.7)	(0.3)	—	3.3	3.5
	(673.3)	(747.1)	(49.2)	(46.3)	24.2	17.2
Income Tax	236.0	251.8	11.9	11.6	3.2	4.7
Total Included in Accumulated Other Comprehensive Income (Loss)	$(437.3)	$(495.3)	$(37.3)	$(34.7)	$27.4	$21.9

The following table provides the changes recognized in other comprehensive income for the years ended December 31, 2018 and 2017.

	Pension Benefits					
	U.S. Plans		U.K. Plan		OPEB	
	2018	2017	2018	2017	2018	2017
	(in millions of dollars)					
Accumulated Other Comprehensive Income (Loss) at Beginning of Year	$(495.3)	$(451.3)	$(34.7)	$(33.1)	$21.9	$19.3
Net Actuarial Gain (Loss)						
Amortization	21.7	19.6	0.6	0.7	—	—
All Other Changes	52.1	(63.9)	(3.2)	(3.0)	7.2	3.6
Prior Service Credit (Cost)						
Amortization	—	(0.3)	—	—	(0.2)	(0.4)
Plan Amendment	—	(7.6)	(0.3)	—	—	—
Change in Income Tax	(15.8)	8.2	0.3	0.7	(1.5)	(0.6)
Accumulated Other Comprehensive Income (Loss) at End of Year	$(437.3)	$(495.3)	$(37.3)	$(34.7)	$27.4	$21.9

Plan Assets

The objective of our U.S. pension and OPEB plans is to maximize long-term return, within acceptable risk levels, in a manner that is consistent with the fiduciary standards of the Employee Retirement Income Security Act (ERISA), while maintaining sufficient liquidity to pay current benefits and expenses.

Our U.S. qualified defined benefit pension plan assets include a diversified blend of domestic, international, global, and emerging market equity securities, fixed income securities, opportunistic credit securities, real estate investments, alternative investments, and cash equivalents. Equity securities are comprised of funds and individual securities that are benchmarked against the respective indices specified below. International and global equity funds may allocate a certain percentage of assets to forward currency contracts. Fixed income securities include U.S. government and agency asset-backed securities, corporate investment-grade bonds, private placement securities, and bonds issued by states or other municipalities. Opportunistic credits consist of investments in funds that hold varied fixed income investments purchased at depressed values with the intention to

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 9 - Employee Benefit Plans - Continued

later sell those investments for a gain. Real estate investments consist primarily of funds that hold commercial real estate investments. Alternative investments, which include private equity direct investments, private equity funds of funds, and hedge funds of funds, utilize proprietary strategies that are intended to have a low correlation to the U.S. stock market. Prohibited investments include, but are not limited to, unlisted securities, futures contracts, options, short sales, and investments in securities issued by Unum Group or its affiliates. The invested asset classes, asset types, and benchmark indices for our U.S. qualified defined benefit pension plan is as follows. We target approximately 36 percent to equity securities, 40 percent to fixed income securities, and 24 percent to opportunistic credits, alternative, and real estate investments.

Asset Class	Asset Type	Benchmark Indices
Equity Securities	Collective funds; Individual holdings	Standard & Poor's 500; Russell 2000 Value and Growth; MSCI Europe Australasia Far East Small Cap; MSCI Emerging Markets; MSCI World and World Minimum Volatility; FTSE RAFI All-World Low Volatility
Fixed Income	Individual holdings	Bloomberg Barclays Long Government/Corporate Index
Opportunistic Credits	Collective fund	Custom Index
Real Estate	Collective fund	National Council of Real Estate Investment Fund Open-end Diversified Core Equity Index
Alternative Investments (Hedge and Private Equity)	Fund of funds; Direct investments	Hedge Fund Research Institute Fund of Funds; Russell 2000

Assets for our U.K. pension plan are primarily invested in a pooled diversified growth fund. This fund invests in assets such as global equities, hedge funds, commodities, below-investment-grade fixed income securities, and currencies. The objectives of the fund are to generate capital appreciation over the course of a complete economic and market cycle and to deliver equity-like returns in the medium-to-long term while maintaining approximately two thirds of the volatility of equity markets. Performance of this fund is measured against the U.K. inflation rate plus four percent. The remaining assets in the U.K. plan are invested in leveraged interest rate and inflation swap and gilt funds of varying durations designed to broadly match the interest rate and inflation sensitivities of the plan's liabilities. The current target allocation for the assets is 65 percent diversified growth assets and 35 percent interest rate and inflation swap funds. There are no categories of investments that are specifically prohibited by the U.K. plan, but there are general guidelines that ensure prudent investment action is taken. Such guidelines include the prevention of the plan from using derivatives for speculative purposes and limiting the concentration of risk in any one type of investment.

Assets for the OPEB plan are invested in life insurance contracts issued by one of our insurance subsidiaries. The assets support life insurance benefits payable to certain former retirees covered under the OPEB plan. The terms of these contracts are consistent in all material respects with those the subsidiary offers to unaffiliated parties that are similarly situated. There are no categories of investments specifically prohibited by the OPEB plan.

We believe our investment portfolios are well diversified by asset class and sector, with no undue risk concentrations in any one category.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 9 - Employee Benefit Plans - Continued

The categorization of fair value measurements by input level for the invested assets in our U.S. pension plans is shown below. The carrying values of investment-related receivables and payables approximate fair value due to the short-term nature of the securities and are not included in the following chart. Investments valued using net asset value (NAV) as a practical expedient are not required to be categorized by input level, but these investments are included as follows to reconcile to total invested assets.

	December 31, 2018				
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	NAV as a Practical Expedient	Total
	(in millions of dollars)				
Invested Assets					
Equity Securities:					
U.S. Large Cap	$—	$ —	$ —	$ 83.0	$83.0
U.S. Small Cap	18.9	—	—	—	18.9
Global	—	—	—	290.3	290.3
International	—	—	—	24.6	24.6
Emerging Markets	—	—	—	44.1	44.1
Fixed Income Securities:					
U.S. Government and Agencies	257.4	—	—	—	257.4
Corporate	—	311.2	—	—	311.2
State and Municipal Securities	—	5.7	—	—	5.7
Opportunistic Credits	—	—	—	192.0	192.0
Real Estate	—	—	—	102.8	102.8
Alternative Investments:					
Private Equity Direct Investments	—	—	—	53.5	53.5
Private Equity Funds of Funds	—	—	—	34.0	34.0
Hedge Funds of Funds	—	—	—	0.1	0.1
Cash Equivalents	39.2	—	—	—	39.2
Total Invested Assets	$315.5	$ 316.9	$ —	$ 824.4	$1,456.8

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 9 - Employee Benefit Plans - Continued

	December 31, 2017 Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	NAV as a Practical Expedient	Total
	(in millions of dollars)				
Invested Assets					
Equity Securities:					
U.S. Large Cap	$—	$ —	$ —	$ 103.3	$103.3
U.S. Small Cap	45.2	—	—	—	45.2
Global	—	—	—	325.9	325.9
International	—	—	—	35.7	35.7
Emerging Markets	—	—	—	61.5	61.5
Fixed Income Securities:					
U.S. Government and Agencies	248.5	11.9	—	—	260.4
Corporate	—	335.5	—	—	335.5
State and Municipal Securities	—	6.3	—	—	6.3
Opportunistic Credits	—	—	—	193.3	193.3
Real Estate	—	—	—	96.1	96.1
Alternative Investments:					
Private Equity Direct Investments	—	—	—	45.1	45.1
Private Equity Funds of Funds	—	—	—	34.5	34.5
Hedge Funds of Funds	—	—	—	0.2	0.2
Cash Equivalents	32.0	—	—	—	32.0
Total Invested Assets	$325.7	$ 353.7	$ —	$ 895.6	$1,575.0

Level 1 investments consist of individual holdings that are valued based on unadjusted quoted prices from active markets for identical securities. Level 2 investments consist of individual holdings that are valued using observable inputs through market corroborated pricing.

Certain equity, opportunistic credit, and real estate investments are valued based on the NAV of the underlying holdings. We made no adjustments to the NAV for 2018 or 2017. These investments have no unfunded commitments and no specific redemption restrictions.

Alternative investments are valued based on NAV in a period ranging from one month to one quarter in arrears. We evaluate the need for adjustments to the NAV based on market conditions and discussions with fund managers in the period subsequent to the valuation date and prior to issuance of the financial statements. We made no adjustments to the NAV for 2018 or 2017. The private equity direct investments and private equity funds of funds generally cannot be redeemed by investors. Distributions of capital from the sale of underlying fund assets may occur at any time, but are generally concentrated between five and eight years from the formation of the fund.

167

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 9 - Employee Benefit Plans - Continued

The categorization of fair value measurements by input level for the invested assets in our U.K. pension plan is shown below. Investments valued using NAV as a practical expedient are not required to be categorized by input level, but these investments are included as follows to reconcile to total invested assets.

	December 31, 2018				
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	NAV as a Practical Expedient	Total
	(in millions of dollars)				
Plan Assets					
Diversified Growth Assets	$—	$ —	$ —	$ 133.0	$133.0
Fixed Interest and Index-linked Securities	81.3	—	—	—	81.3
Cash Equivalents	2.7	—	—	—	2.7
Total Plan Assets	$84.0	$ —	$ —	$ 133.0	$217.0

	December 31, 2017				
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	NAV as a Practical Expedient	Total
	(in millions of dollars)				
Plan Assets					
Diversified Growth Assets	$—	$ —	$ —	$ 154.7	$154.7
Fixed Interest and Index-linked Securities	98.4	—	—	—	98.4
Cash Equivalents	0.4	—	—	—	0.4
Total Plan Assets	$98.8	$ —	$ —	$ 154.7	$253.5

Level 1 fixed interest and index-linked securities consist of individual funds that are valued based on unadjusted quoted prices from active markets for identical securities. Diversified growth assets are valued based on the NAV of the underlying holdings. We made no adjustments to the NAV for 2018 or 2017. These investments have no unfunded commitments and no specific redemption restrictions.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 9 - Employee Benefit Plans - Continued

The categorization of fair value measurements by input level for the assets in our OPEB plan is as follows:

	December 31, 2018			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
	(in millions of dollars)			
Assets				
Life Insurance Contracts	$ —	$ —	$ 10.1	$ 10.1

	December 31, 2017			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
	(in millions of dollars)			
Assets				
Life Insurance Contracts	$ —	$ —	$ 10.5	$ 10.5

The fair value is represented by the actuarial present value of future cash flows of the contracts.

Changes in our OPEB plan assets measured at fair value on a recurring basis using significant unobservable inputs (Level 3) during the years ended December 31, 2018 and 2017 are as follows:

	Year Ended December 31, 2018				
	Beginning of Year	Actual Return on Plan Assets	Contributions	Net Benefits and Expenses Paid	End of Year
	(in millions of dollars)				
Life Insurance Contracts	$ 10.5	$ 0.1	$ 10.6	$ (11.1)	$ 10.1

	Year Ended December 31, 2017				
	Beginning of Year	Actual Return on Plan Assets	Contributions	Net Benefits and Expenses Paid	End of Year
	(in millions of dollars)				
Life Insurance Contracts	$ 10.8	$ 0.1	$ 9.9	$ (10.3)	$ 10.5

For the years ended December 31, 2018 and 2017, the actual return on plan assets relates solely to investments still held at the reporting date. There were no transfers into or out of Level 3 during 2018 or 2017.

169

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 9 - Employee Benefit Plans - Continued

Measurement Assumptions

We use a December 31 measurement date for each of our plans. The weighted average assumptions used in the measurement of our benefit obligations as of December 31 and our net periodic benefit costs for the years ended December 31 are as follows:

	Pension Benefits					
	U.S. Plans		U.K. Plan		OPEB	
	2018	2017	2018	2017	2018	2017
Benefit Obligations						
Discount Rate	4.40%	3.80%	2.90%	2.50%	4.40%	3.70%
Rate of Compensation Increase	N/A	N/A	3.70%	3.70%	N/A	N/A
Net Periodic Benefit Cost						
Discount Rate	3.80%	4.40%	2.50%	2.70%	3.70%	4.20%
Expected Return on Plan Assets	6.75%	7.25%	3.90%	3.90%	5.75%	5.75%
Rate of Compensation Increase	N/A	N/A	3.70%	3.80%	N/A	N/A

We set the discount rate assumption annually for each of our retirement-related benefit plans at the measurement date to reflect the yield on a portfolio of high quality fixed income corporate debt instruments matched against the projected cash flows for future benefits.

Our long-term rate of return on plan assets assumption is selected from a range of probable return outcomes from an analysis of the asset portfolio. Our expectations for the future investment returns of the asset categories are based on a combination of historical market performance, evaluations of investment forecasts obtained from external consultants and economists, and current market yields. The methodology underlying the return assumption includes the various elements of the expected return for each asset class such as long-term rates of return, volatility of returns, and the correlation of returns between various asset classes. The expected return for the total portfolio is calculated based on the plan's strategic asset allocation. Investment risk is measured and monitored on an ongoing basis through annual liability measurements, periodic asset/liability studies, and quarterly investment portfolio reviews. Risk tolerance is established through consideration of plan liabilities, plan funded status, and corporate financial condition.

Our mortality rate assumption reflects our best estimate, as of the measurement date, of the life expectancies of plan participants in order to determine the expected length of time for benefit payments. We derive our assumptions from industry mortality tables.

The expected return assumption for the life insurance reserve for our OPEB plan is based on full investment in fixed income securities with an average book yield of 4.73 percent and 4.76 percent in 2018 and 2017, respectively.

The rate of compensation increase assumption for our U.K. pension plan is generally based on periodic studies of compensation trends.

At December 31, 2018 and 2017, the annual rates of increase in the per capita cost of covered postretirement health care benefits assumed for the next calendar year are 7.00 percent for benefits payable to both retirees prior to Medicare eligibility as well as Medicare eligible retirees. The rates are assumed to change gradually to 5.00 percent by 2024 for measurement at December 31, 2018 and remain at that level thereafter. The annual rates of increase in the per capita cost of covered postretirement health benefits do not apply to retirees whose postretirement health care benefits are provided through an exchange.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
Unum Group and Subsidiaries

Note 9 - Employee Benefit Plans - Continued

Net Periodic Benefit Cost

The following table provides the components of the net periodic benefit cost (credit) for the years ended December 31.

	Pension Benefits								
	U.S. Plans			U.K. Plan			OPEB		
	2018	2017	2016	2018	2017	2016	2018	2017	2016
	(in millions of dollars)								
Service Cost	$9.1	$7.9	$7.0	$—	$—	$—	$—	$—	$—
Interest Cost	79.8	84.5	85.2	5.9	6.2				