UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2017

or

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

For the transition period from ____________to ____________

Commission file number 001-32293

HARTFORD LIFE INSURANCE COMPANY

(Exact name of registrant as specified in its charter)

Connecticut	**06-0974148**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

One Hartford Plaza, Hartford, Connecticut 06155
(Address of principal executive offices) (Zip Code)

(860) 547-5000
(Registrant's telephone number, including area code)

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

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

Indicate by check mark:	**Yes**	**No**
• if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.	☒	☐
• if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act.	☐	☒
• 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.	☒	☐
• whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).	☒	☐
• if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K 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.	☒	☐

• whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐ Accelerated filer ☐ Non Accelerated filer ☒ Smaller reporting company ☐

Emerging growth company ☐

	Yes	**No**
• whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act.)	☐	☒

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. ☐

The aggregate market value of the shares of Common Stock held by non-affiliates of the registrant as of June 30, 2017 was $0 , because all of the outstanding shares of Common Stock were owned by Hartford Life Inc., a direct wholly owned subsidiary of Hartford Holdings, Inc.

As of March 1, 2018 , there were outstanding 1,000 shares of Common Stock, $5,690 par value per share, of the registrant.

T he registrant meets the conditions set forth in General Instruction (I) (1) (a) and (b) of Form 10-K and is therefore filing this Form with the reduced disclosure format.

HARTFORD LIFE INSURANCE COMPANY
ANNUAL REPORT ON FORM 10-K
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2017

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[a] Omitted pursuant to General Instruction I(2)(c) of Form 10-K.
[b] The information required by this item is set forth in the Enterprise Risk Management section of Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations and is incorporated herein by reference.
[c] See Index to Consolidated Financial Statements and Schedules elsewhere herein.

* Item prepared in accordance with General Instruction I (2) of Form 10-K.

Forward-Looking Statements

Certain of the statements contained herein are forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements can be identified by words such as “anticipates,” “intends,” “plans,” “seeks,” “believes,” “estimates,” “expects,” “projects,” and similar references to future periods.

Forward-looking statements are based on management's current expectations and assumptions regarding future economic, competitive, legislative and other developments and their potential effect upon Hartford Life Insurance Company and its subsidiaries (collectively, the “Company”). Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Actual results could differ materially from expectations, depending on the evolution of various factors, including the risks and uncertainties identified below, as well as factors described in such forward-looking statements or in Part I, Item 1A. Risk Factors, in Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, and those identified from time to time in our other filings with the Securities and Exchange Commission ("SEC").

- Risks Relating to Economic, Political and Global Market Conditions:
    - challenges related to the Company's current operating environment, including global, political, economic and market conditions, and the effect of financial market disruptions, economic downturns or other potentially adverse macroeconomic developments on our products, the returns in our investment portfolios and the hedging costs associated with our run-off annuity block;
    - financial risk related to the continued reinvestment of our investment portfolios and performance of our hedge program for our run-off annuity block;
    - market risks associated with our business, including changes in credit spreads, equity prices, interest rates, market volatility and foreign exchange rates;
    - the impact on our investment portfolio if our investment portfolio is concentrated in any particular segment of the economy;
- Insurance Industry and Product-Related Risks:
    - volatility in our statutory earnings and earnings calculated in conformity with accounting principles generally accepted in the United States of America (“U.S. GAAP”) and potential material changes to our results resulting from our adjustment of our risk management program to emphasize protection of economic value;
    - the the possibility of a terrorist attack, a pandemic, or other natural or man-made disaster that may increase the Company’s mortality exposure and adversely affect its businesses;
- Financial Strength, Credit and Counterparty Risks:
    - risks to our business, financial position, prospects and results associated with negative rating actions or downgrades in the Company's financial strength and credit ratings or negative rating actions or downgrades relating to our investments;
    - the impact on our statutory capital of various factors, including many that are outside the Company’s control, which can in turn affect our credit and financial strength ratings, cost of capital, regulatory compliance and other aspects of our business and results;
    - losses due to nonperformance or defaults by others, including sourcing partners, derivative counterparties and other third parties;
    - the potential for losses due to our reinsurers' unwillingness or inability to meet their obligations under reinsurance contracts and the availability, pricing and adequacy of reinsurance to protect the Company against losses;
    - regulatory limitations on the ability of the Company and certain of its subsidiaries to declare and pay dividends;
- Risks Relating to Estimates, Assumptions and Valuations:
    - risk associated with the use of analytical models in making decisions in key areas such as capital management, hedging, and reserving;
    - the potential for differing interpretations of the methodologies, estimations and assumptions that underlie the Company’s fair value estimates for its investments and the evaluation of other-than-temporary impairments on available-for-sale securities;
    - the potential for further acceleration of deferred policy acquisition cost amortization and an increase in reserve for certain guaranteed benefits in our variable annuities;

    - the potential for valuation allowances against deferred tax assets;
- Strategic and Operational Risks:
    - risks associated with the run-off of our annuity book of business;
    - the Company’s ability to maintain the availability of its systems and safeguard the security of its data in the event of a disaster, cyber or other information security incident or other unanticipated event;
    - the potential for difficulties arising from outsourcing and similar third-party relationships; and
    - the risks, challenges and uncertainties associated with The Hartford's expense reduction initiatives and other actions, which may include acquisitions, divestitures or restructurings;
    - the Company’s ability to protect its intellectual property and defend against claims of infringement;
- Regulatory and Legal Risks:
    - the cost and other potential effects of increased regulatory and legislative developments, including those that could adversely impact the Company’s operating costs and required capital levels;
    - unfavorable judicial or legislative developments;
    - the impact of changes in federal or state tax laws that could impact the tax-favored status of life and annuity contracts; and
    - the impact of potential changes in accounting and financial reporting of the liability for future policy benefits, including how we account for our long-duration insurance contracts, including the discounting of life contingent fixed annuities.

Any forward-looking statement made by the Company in this document speaks only as of the date of the filing of this Form 10-K. Factors or events that could cause the Company’s actual results to differ may emerge from time to time, and it is not possible for the Company to predict all of them. The Company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise.

PART I

Item 1. BUSINESS

(Dollar amounts in millions unless otherwise stated)

General

Hartford Life Insurance Company (together with its subsidiaries, “HLIC”, “the Company”, “we” or “our”), is an indirect wholly-owned subsidiary of The Hartford Financial Services Group, Inc. (“The Hartford”), a holding company for a group of subsidiaries that provide property and casualty insurance, group benefits and mutual funds to individual and business customers in the United States and continues to administer life insurance and annuity products previously sold by the Company and its subsidiaries.

The Company's mission is to efficiently manage the runoff of the business while honoring the Company's obligations to its contractholders. The Company manages approximately 711 thousand annuity contracts with account value of approximately $62 billion and private placement life insurance with account value of approximately $41 billion as of December 31, 2017 .

The Company’s results of operations are primarily influenced by the financial results of the variable and fixed annuity, institutional investment and private placement products as well as the capital gain and loss activity associated with the Company’s variable annuity hedging program. Total assets and total stockholder’s equity were $168.7 billion and $6.7 billion , respectively, at December 31, 2017 .

On December 3, 2017, The Hartford entered into a definitive agreement for its subsidiary, Hartford Holdings, Inc. ("HHI") to sell the Company's parent, Hartford Life, Inc ("HLI") to a group of investors led by Cornell Capital LLC, Atlas Merchant Capital LLC, TRB Advisors LP, Global Atlantic Financial Group, Pine Brook and J. Safra Group. The Hartford will receive a 9.7% ownership interest in the acquiring entity. The transaction is subject to the satisfaction or waiver of customary closing conditions, including regulatory approvals, and certain other conditions, including an expected $300 pre-closing dividend to HHI as well as the settlement of intercompany transactions with HHI discussed below. The Company previously sold fixed and variable annuities, individual life insurance, retirement plans, institutional investment products, private placement life insurance and group life and disability products. In 2013, the Company sold its retirement plans business and substantially all of its individual life business via reinsurance transactions. The Hartford no longer sells any of the products previously underwritten by the Company.

As a condition of the close of the sale of HLI to the investor group, the Company will forego approximately $460 of deferred tax assets associated with net operating loss carryovers and foreign tax credits that will be retained by The Hartford. These deferred tax assets continue to be reflected as an asset in the accompanying financial statements as non-recoverability is contingent on the closing of the sale of the business.

At close, HHI will pay the Company for certain assets that will be transferred to HHI. Other intercompany transactions between HHI and the Company will be net settled prior to closing resulting in a dividend from the Company of approximately $319. Additionally, at the close of the transaction, the Company will have no continuing involvement in the pension and other post-employment benefits plans (OPEB) of The Hartford. As of December 31, 2017, the Company had an intercompany receivable balance of $251 due from its parent related to previous contributions made to The Hartford’s pension and OPEB plans and a corresponding deferred tax liability of $53. When the Company’s participation in The Hartford’s pension and OPEB plans terminates at the closing date, this receivable will become unrecoverable and will be expensed net of the corresponding deferred tax amount. Also, as part of the agreement, HHI will reimburse the Company for leakage as defined in the agreement, including making HLIC whole for certain decreases in statutory surplus before closing, and other items. The reimbursement amount is currently estimated to be approximately $59 .

The Company currently owns an office building located in Windsor, Connecticut, which will be sold to The Hartford Financial Services Group, Inc. just prior to close for its estimated fair market value of $32 . This will result in the Company recognizing a loss on the sale of the building. The Hartford will compensate the Company for this loss by making a capital contribution of $38 to the Company before closing.

Immediately following the close of the transaction, the Company intends to enter into a reinsurance agreement with Commonwealth Annuity and Life Insurance Company, a subsidiary of Global Atlantic Financial Group, to reinsure the majority of the Company’s fixed deferred annuity contracts, payout annuity contracts, period certain structured settlement contracts, standard lives structured settlements policies and variable payout separate account contracts in-force as of December 31, 2016, annuitizations of fixed deferred annuity contracts and variable separate account deferred annuity contracts that occur between December 31, 2016 and closing and annuitizations of fixed deferred annuity contracts after closing. Under the terms of the reinsurance agreement, the Company would transfer cash and invested assets of approximately $ 9.4 billion to cede approximately $ 8.3 billion of future policy benefit reserves and other policyholder funds on a coinsurance basis and approximately $ 500 of separate account assets and liabilities on a modified coinsurance basis in exchange for a ceding commission of $ 357 . Based on current financial information the Company expects the transaction would result in an immaterial gain or loss. The ultimate gain or loss will be affected by business operations and other changes affecting recorded balances until closing.

Subsequent to the closing, the Company will continue to write direct and cede to HLA ("Hartford Life and Accident Insurance Company") certain group benefits business. Additionally, the Company will provide administrative services for structured settlements and terminal funding agreements written by HLA that will be retained by The Hartford.

Following the sale, The Hartford will manage invested assets of the Company for an initial term of five years and provide transition services for an estimated period of 12 to 24 months. In addition, subsequent to closing, the Company will continue to collect revenue sharing fees from The Hartford’s mutual funds business related to Hartford HLS funds held in the Company’s separate accounts.

Reserves

The Company and its insurance subsidiaries establish and carry as liabilities reserves for its insurance products to estimate for the following:

- a liability equal to the balance that accrues to the benefit of the life and annuity insurance policyholder as of the consolidated financial statement date, otherwise known as the account value;
- a liability for future policy benefits, representing the present value of future benefits to be paid to or on behalf of policyholders less the present value of future estimated net premiums;
- a liability for unpaid losses, including those that have been incurred but not yet reported or are in the course of settlement as well as estimates of expenses associated with processing and settling these claims;
- fair value reserves for living benefits embedded derivative guarantees; and
- death and living benefit reserves which are computed based on a percentage of revenues less actual claim costs.

The reserve for future policy benefits is calculated based on actuarially recognized methods using morbidity and mortality tables, which are modified to reflect the Company’s actual experience when appropriate. Liabilities for unpaid losses include estimates of amounts to settle known reported claims as well as claims related to insured events that the Company estimates have been incurred but have not yet been reported. Liabilities for future policy benefits, less the present value of future estimated net premiums and with interest thereon at certain assumed rates, are calculated at amounts that are expected to be sufficient to meet the Company’s policy obligations at their maturities or in the event of the death, disability, or survival of an insured. Other insurance liabilities include those for unearned premiums and benefits in excess of account value. Reserves for assumed reinsurance are computed in a manner that is comparable to direct insurance reserves.

Reinsurance

The Company cedes insurance to affiliated and unaffiliated insurers to enable the Company to manage capital and risk exposure. Such arrangements do not relieve the Company of its primary liability to policyholders. Failure of reinsurers to honor their obligations could result in losses to the Company. The Company evaluates the risk transfer of its reinsurance contracts, the financial condition of its reinsurers and concentrations of credit risk. Reinsurance accounting is followed for ceded transactions that provide indemnification against loss or liability relating to insurance risk (i.e. risk transfer). If the ceded transactions do not provide risk transfer, the Company accounts for these transactions as financing transactions. The Company’s procedures include careful initial selection of its reinsurers, structuring agreements to provide collateral funds where necessary, and regularly monitoring the financial condition and ratings of its reinsurers.

Investment Operations

The majority of the Company’s investment portfolios are managed by Hartford Investment Management Company (“HIMCO”). HIMCO manages the Company's portfolios to maximize economic value, and generate the returns necessary to support the Company’s various product obligations, within internally established objectives, guidelines and risk tolerances. The portfolio objectives and guidelines are developed based upon the asset/liability profile, including duration, convexity and other characteristics within specified risk tolerances. The risk tolerances considered include, but are not limited to, asset sector, credit issuer allocation limits and maximum portfolio limits for below investment grade holdings. The Company attempts to minimize adverse impacts to the portfolio and the Company’s results of operations from changes in economic conditions through asset diversification, asset allocation limits, asset/liability duration matching and through the use of derivatives. For further discussion of HIMCO’s portfolio management approach, see Part II, Item 7, MD&A – Enterprise Risk Management. Following The Hartford's sale of HLI, The Hartford will continue to manage invested assets of the Company for an initial term of five years.

Enterprise Risk Management

The Company has insurance, operational and financial risks. For discussion on how The Hartford manages these risks, see Part II, Item 7, MD&A - Enterprise Risk Management.

Regulation

State insurance laws are intended to supervise and regulate insurers with the goal of protecting policyholders and ensuring the solvency of the insurers. As such, the insurance laws and regulations grant broad authority to state insurance departments (the “Departments”) to oversee and regulate the business of insurance. The Departments monitor the financial stability of an insurer by requiring insurers to maintain certain solvency standards and minimum capital and surplus requirements; invested asset requirements; state deposits of securities; guaranty fund premiums; restrictions on the size of risks which may be insured under a single policy; and adequate reserves and other necessary provisions for unearned premiums, unpaid losses and loss adjustment expenses and other liabilities, both reported and unreported. In addition, the Departments perform periodic market and financial examinations of insurers and require insurers to file annual and other reports on the financial condition of the companies. Policyholder protection is also regulated by the Departments through licensing of insurers, agents and brokers and others; approval of premium rates and policy forms; claims administration requirements; and maintenance of minimum rates for accumulation of surrender values.

Many states also have laws regulating insurance holding company systems. These laws require insurance companies, which are formed and chartered in the state (referred to as “domestic insurers”), to register with the state department of insurance (referred to as their “domestic state or regulator”) and file information concerning the operations of companies within the holding company system that may materially affect the operations, management or financial condition of the insurers within the system. Insurance holding company regulations principally relate to (i) state insurance approval of the acquisition of domestic insurers, (ii) prior review or approval of certain transactions between the domestic insurer and its affiliates, and (iii) regulation of dividends made by the domestic insurer. All transactions within a holding company system affecting domestic insurers must be determined to be fair and equitable.

The National Association of Insurance Commissioners (“NAIC”), the organization that works to promote standardization of best practices and assists state insurance regulatory authorities and insurers, conducted the “Solvency Modernization Initiative,” (the “Solvency Initiative”). The effort focused on reviewing the U.S. financial regulatory system and financial regulation affecting insurance companies including: (1) capital requirements; (2) corporate governance and risk management; (3) group supervision; (4) statutory accounting and financial reporting; and (5) reinsurance. As a result of the Solvency Initiative, among other items, the NAIC adopted the Corporate Governance Annual Disclosure Model Act , which was enacted by the Company’s lead domestic state of Connecticut. The model law requires insurers to make an annual confidential filing regarding their corporate governance policies commencing in 2016. In addition, the NAIC adopted the Risk Management and Own Risk and Solvency Assessment Model Act (“ORSA”), which also has been adopted by Connecticut. ORSA requires insurers to maintain a risk management framework and conduct an internal risk and solvency assessment of the insurer’s material risks in normal and stressed environments. Many state insurance holding company laws, including Connecticut, have also been amended to require insurers to file an annual confidential enterprise risk report with their lead domestic regulator, disclosing material risks within the entire holding company system that could pose an enterprise risk to the insurer.

The Company sold variable life insurance, variable annuity, and some fixed guaranteed products that are “securities” registered with the SEC under the Securities Act of 1933, as amended. Some of the products have separate accounts that are registered as investment companies under the Investment Company Act of 1940, as amended (the “1940 Act”), and/or are regulated by state law. Separate account investment products are also subject to state insurance regulation. Moreover, each registered separate account is divided into sub-accounts, each of which invests in an underlying mutual fund that is also registered as an investment company under the 1940 Act.

Failure to comply with federal and state laws and regulations may result in fines, the issuance of cease-and-desist orders or suspension, termination or limitation of the activities of our operations and/or our employees.

Intellectual Property

The Hartford relies on a combination of contractual rights and copyright, trademark, patent and trade secret laws to establish and protect our intellectual property.

The Hartford has a trademark portfolio that we consider important in the marketing of our products and services, including, among others, the trademarks of The Hartford name, the Stag logo and the combination of these two trademarks. The duration of trademark registrations may be renewed indefinitely subject to country-specific use and registration requirements. We regard our trademarks as extremely valuable assets in marketing our products and services and vigorously seek to protect them against infringement. In addition, we own a number of patents and patent applications, some of which may be important to our business operations. Patents are of varying duration depending on filing date, and will typically expire at the end of their natural term.

Item 1A. RISK FACTORS

In deciding whether to invest in securities of the Company, you should carefully consider the following risks, any of which could have a material adverse effect on our business, financial condition, results of operation, or liquidity of the Company. These risks are not exclusive, and additional risks to which we are subject include, but are not limited to, the factors mentioned under "Forward-Looking Statements" above and the risks of our businesses described elsewhere in this Annual Report on Form 10-K.

The following risk factors have been organized by category for ease of use, however many of the risks may have impacts in more than one category. The occurrence of certain of them may, in turn, cause the emergence or exacerbate the effect of others. Such a combination could materially increase the severity of the impact of these risks on our business, results of operations, financial condition or liquidity.

Risks Relating to Economic, Political and Global Market Conditions

Unfavorable economic, political and global market conditions may adversely impact our business and results of operations.

The Company's investment portfolio and insurance liabilities are sensitive to changes in economic, political and global capital market conditions, such as the effect of a weak economy and changes in credit spreads, equity prices and interest rates. Weak economic conditions, such as high unemployment, low labor force participation, lower family income, a weak real estate market, lower business investment and lower consumer spending may impact the Company's profitability and may affect policyholder behavior, such as increased full and partial surrender rates. In addition, the Company's investment portfolio includes limited partnerships and other alternative investments for which changes in value are reported in earnings. These investments may be adversely impacted by political turmoil and economic volatility, including real estate market deterioration, which could impact our net investment returns and result in an adverse impact on operating results.

Below are several key factors impacted by changes in economic, political, and global market conditions and their potential effect on the Company's business and results of operation:

<u>Credit Spread Risk</u> - Credit spread exposure is reflected in the market prices of fixed income instruments where lower rated securities generally trade at a higher credit spread. If issuer credit spreads increase or widen, the market value of our investment portfolio may decline. If the credit spread widening is significant and occurs over an extended period of time, the Company may recognize other-than-temporary impairments, resulting in decreased earnings. If credit spreads tighten, the Company's net investment income associated with new purchases of fixed maturities may be reduced. In addition, the value of credit derivatives under which the Company assumes exposure or purchases protection are impacted by changes in credit spreads, with losses occurring when credit spreads widen for assumed exposure or, when credit spreads tighten if credit protection has been purchased.

Our statutory surplus is also affected by widening credit spreads as a result of the accounting for the assets and liabilities on our fixed market value adjusted ("MVA") annuities. Statutory separate account assets supporting the fixed MVA annuities are recorded at fair value. In determining the statutory reserve for the fixed MVA annuity payments we owe contract-holders, we are required to use current crediting rates. In many capital market scenarios, current crediting rates are highly correlated with market rates implicit in the fair value of statutory separate account assets. As a result, the change in the statutory reserve from period to period will likely substantially offset the change in the fair value of the statutory separate account assets. However, in periods of volatile credit markets, actual credit spreads on investment assets may increase sharply for certain sub-sectors of the overall credit market, resulting in statutory separate account asset market value losses. As actual credit spreads are not fully reflected in current crediting rates, the calculation of statutory reserves may not substantially offset the change in fair value of the statutory separate account assets, resulting in reductions in statutory surplus. This may result in the need to devote significant additional capital to support the fixed MVA product.

<u>Equity Markets Risk</u> - A decline in equity markets may result in lower earnings from our operations where fee income is earned based upon the fair value of the assets under management. A decline in equity markets may also decrease the value of equity securities and limited partnerships and other alternative investments held in the Company's general account portfolio, thereby, negatively impacting our financial condition or reported earnings. In addition, certain of our annuity products have guaranteed minimum death benefits ("GMDB") or guaranteed minimum withdrawal benefits ("GMWB") that increase when equity markets decline requiring us to hold more statutory capital. While our hedging assets seek to reduce the net economic sensitivity of our potential obligations from guaranteed benefits to market fluctuations, because of the accounting asymmetries between our hedging targets and statutory and GAAP accounting principles for our guaranteed benefits, rising equity markets and/or rising interest rates may result in statutory or GAAP losses. In early 2018, the equity markets were more volatile than in the months prior, which could be indicative of a potential decline.

Interest Rate Risk - Global economic conditions may result in the persistence of a low interest rate environment which would continue to pressure our net investment income and could result in lower margins and lower estimated gross profits on certain products. Due to the long-term nature of the Company's liabilities, such as structured settlements and guaranteed benefits on variable annuities, declines in interest rates over an extended period of time would result in our having to reinvest at lower yields, increased hedging costs, reduced spreads on our annuity products and greater capital volatility. On the other hand, a rise in interest rates, in the absence of other countervailing changes, would reduce the market value of our investment portfolio and, if long-term interest rates were to rise dramatically, certain of our products might be exposed to disintermediation risk. Disintermediation risk refers to the risk that our policyholders may surrender their contracts in a rising interest rate environment, requiring us to liquidate assets in an unrealized loss position. A decline in market value of invested assets due to an increase in interest rates could also limit our ability to realize tax benefits from previously recognized capital losses.

Concentration of our investment portfolio increases the potential for significant losses.

The concentration of our investment portfolios in any particular industry, collateral type, group of related industries or geographic sector could have an adverse effect on our investment portfolios and consequently on our business, financial condition, results of operations, and liquidity. Events or developments that have a negative impact on any particular industry, collateral type, group of related industries or geographic region may have a greater adverse effect on our investment portfolio to the extent that the portfolio is concentrated rather than diversified. Further, if issuers of securities or loans we hold are acquired, merge or otherwise consolidate with other issuers of securities or loans held by the Company, our investment portfolio's credit concentration risk to issuers could increase for a period of time, until the Company is able to sell securities to get back in compliance with the established investment credit policies .

Insurance Industry and Product Related Risks

We are vulnerable to losses from catastrophes, both natural and man-made.

Our operations are exposed to risk of loss from both natural and man-made catastrophes associated with pandemics, terrorist attacks and other events that could significantly increase our mortality exposures. Claims arising from such events could have a material adverse effect on our results of operations and liquidity, either directly or as a result of their effect on our reinsurers or other counterparties. In addition, the continued threat of terrorism and the occurrence of terrorist attacks, as well as heightened security measures and military action in response to these threats, may cause significant volatility in global financial markets which could have an adverse effect on the value of the assets in our investment portfolio and in our separate accounts.

Our program to manage interest rate and equity risk related to our variable annuity guaranteed benefits may be ineffective which could result in statutory and GAAP volatility in our earnings and potentially material charges to net income.

Some of our in-force business, especially variable annuities, offer guaranteed benefits, including GMDBs and GMWBs. These GMDBs and GMWBs expose the Company to interest rate risk and significant equity risk. A decline in equity markets would not only result in lower fee income, but would also increase our exposure to liability for benefit claims. We use reinsurance and benefit designs, such as caps, to mitigate the exposure associated with GMDBs. We also use reinsurance in combination with product management actions, such as rider fee increases, investment restrictions and buyout offers, as well as derivative instruments to attempt to minimize the claim exposure and to reduce the volatility of net income associated with the GMWB liability. We remain liable for the guaranteed benefits in the event that reinsurers or derivative counterparties are unable or unwilling to pay, which could result in a need for additional capital to support in-force business.

From time to time, we may adjust our risk management program based on contracts in force, market conditions, or other factors. While we believe that these actions improve the efficiency of our risk management related to these benefits, changes to the risk management program may result in greater statutory and GAAP earnings volatility and, based upon the types of hedging instruments used, can result in potentially material charges to net income (loss) in periods of rising equity market pricing levels, higher interest rates and declines in volatility. We are also subject to the risk that these management actions prove ineffective or that unanticipated policyholder behavior, combined with adverse market events, produces economic losses beyond the scope of the risk management techniques employed, which individually or collectively may have a material adverse effect on our business, financial condition, results of operations and liquidity.

Financial Strength, Credit and Counterparty Risks

The amount of statutory capital that we must hold to maintain our financial strength and credit ratings and meet other requirements can vary significantly from time to time and is sensitive to a number of factors outside of our control.

As a licensed insurance company, we are subject to statutory accounting standards and statutory capital and reserve requirements prescribed by insurance regulators and the National Association of Insurance Commissioners ("NAIC"). The minimum capital we must hold is based on risk-based capital ("RBC") formulas for life companies. The RBC formula for life companies establishes capital requirements relating to insurance, business, asset and interest rate risks, including equity, interest rate and expense recovery risks associated with variable annuities and group annuities that contain death benefits or certain withdrawal benefits.

In any particular year, statutory surplus amounts and RBC ratios may increase or decrease depending on a variety of factors, including:

- the amount of statutory income or losses we generate,
- the amount of additional capital we must hold,
- the amount of dividends made to our parent company,
- changes in equity market levels,
- the value of certain fixed-income and equity securities in our investment portfolio,
- the value of certain derivative instruments,
- changes in interest rates,
- changes to federal tax laws,
- admissibility of deferred tax assets, and
- changes to the NAIC RBC formulas.

Most of these factors are outside of the Company's control. The Company's financial strength and credit ratings are significantly influenced by the our statutory surplus amounts and RBC ratios. In addition, rating agencies may implement changes to their internal models that have the effect of increasing the amount of statutory capital we must hold in order to maintain our current ratings. Also, in extreme scenarios of equity market declines and other capital market volatility, the amount of additional statutory reserves that we are required to hold for our variable annuity guarantees increases at a greater than linear rate. This reduces the statutory surplus used in calculating our RBC ratios. When equity markets increase, surplus levels and RBC ratios would generally be expected to increase. However, as a result of a number of factors and market conditions, including the level of hedging costs and other risk transfer activities, statutory reserve requirements for death and withdrawal benefit guarantees and increases in RBC requirements, surplus and RBC ratios may not increase when equity markets increase. Due to these factors, projecting statutory capital and the related RBC ratios is complex. If our statutory capital resources are insufficient to maintain a particular rating and if The Hartford were not to raise additional capital, either at its discretion or because it was unable to do so, our financial strength and credit ratings might be downgraded by one or more rating agencies. Downgrades below certain thresholds could trigger counterparty rights to terminate reinsurance treaties. Downgrades could also begin to trigger potentially material collateral calls on certain of our derivative instruments and counterparty rights to terminate derivative relationships, both of which could limit our ability to purchase additional derivative instruments.

Losses due to nonperformance or defaults by counterparties can have a material adverse effect on the value of our investments, reduce our profitability or sources of liquidity.

We have credit risk with counterparties on investments, derivatives, premiums receivable and reinsurance recoverables. Among others, our counterparties include issuers of fixed maturity and equity securities we hold, borrowers of mortgage loans we hold, customers, trading counterparties, counterparties under swaps and other derivative contracts, reinsurers, clearing agents, exchanges, clearing houses and other financial intermediaries and guarantors. These counterparties may default on their obligations to us due to bankruptcy, insolvency, lack of liquidity, adverse economic conditions, operational failure, fraud, government intervention and other reasons. In addition, for exchange-traded derivatives, such as futures, options and "cleared" over-the-counter derivatives, the Company is generally exposed to the credit risk of the relevant central counterparty clearing house. Defaults by these counterparties on their obligations to us could have a material adverse effect on the value of our investments, business, financial condition, results of operations and liquidity. Additionally, if the underlying assets supporting the structured securities we invest in default on their payment obligations, our securities will incur losses.

The availability of reinsurance and our ability to recover under reinsurance contracts may not be sufficient to protect us against losses.

As an insurer, we frequently use reinsurance to reduce the effect of losses that may arise from, among other things, GMDBs and GMWBs under variable annuity contracts, and other risks that can cause unfavorable results of operations or adversely affect the sale of a line of business to an independent company. Under these reinsurance arrangements, other insurers assume a portion of our losses and related expenses; however, we remain liable as the direct insurer on all risks reinsured. Consequently, ceded reinsurance arrangements do not eliminate our obligation to pay claims, and we are subject to our reinsurers' credit risk with respect to our ability to recover amounts due from them. The inability or unwillingness of any reinsurer to meet its financial obligations to us, including the impact of any insolvency or rehabilitation proceedings involving a reinsurer that could affect the Company's access to collateral held in trust, could have a material adverse effect on our financial condition, results of operations and liquidity. This risk may be magnified by a concentration of reinsurance-related credit risk resulting from the sale of the Company's Individual Life and Retirement Products businesses. Further details of such concentration can be found in Part II, Item 7, MD&A - Enterprise Risk Management - Reinsurance.

Further, due to the inherent uncertainties as to collection and the length of time before reinsurance recoverables will be due, it is possible that future adjustments to the Company's reinsurance recoverables, net of the allowance, could be required, which could have a material adverse effect on the Company's consolidated results of operations or cash flows in a particular quarterly or annual period.

Our ability to declare and pay dividends is subject to limitations.

The payment of future dividends on our capital stock is subject to the discretion of our board of directors, which considers, among other factors, our operating results, overall financial condition, credit-risk considerations and capital requirements, as well as general business and market conditions. Our board of directors may only declare such dividends out of funds legally available for such payments. We rely on dividends from our own operations and that of our insurance company subsidiaries and other subsidiaries as the principal source of cash flow to meet our obligations. Connecticut state laws and certain other jurisdictions in which we operate limit the payment of dividends and require notice to and approval by the state insurance commissioner for the declaration or payment of dividends above certain levels. Dividends paid from our operations and that of our insurance subsidiaries are further dependent on each insurer's cash requirements. In addition, in the event of our liquidation or reorganization or that of a subsidiary, prior creditor claims may take precedence over our parent's right to a dividend or distribution except to the extent that our parent may be a creditor of ours or of one of our subsidiaries.

Risks Relating to Estimates, Assumptions and Valuations

Actual results could materially differ from the analytical models we use to assist our decision making in key areas such as capital management, hedging, and reserving.

We use models to help make decisions related to, among other things, capital management, reserving, investments, hedging, and reinsurance. Both proprietary and third party models we use incorporate numerous assumptions and forecasts about the future level and variability of interest rates, capital requirements, currency exchange rates, policyholder behavior, equity markets and inflation, among others. The models are subject to the inherent limitations of any statistical analysis as the historical internal and industry data and assumptions used in the models may not be indicative of what will happen in the future. Consequently, actual results may differ materially from our modeled results. The profitability and financial condition of the Company substantially depends on the extent to which our actual experience is consistent with assumptions we use in our models and ultimate model outputs. If, based upon these models or other factors, our estimates of capital adequacy or the risks we are exposed to prove to be materially inaccurate, our business, financial condition, results of operations or liquidity may be adversely affected.

The valuation of our securities and investments and the determination of allowances and impairments are highly subjective and based on methodologies, estimations and assumptions that are subject to differing interpretations and market conditions.

Estimated fair values of the Company's investments are based on available market information and judgments about financial instruments, including estimates of the timing and amounts of expected future cash flows and the credit standing of the issuer or counterparty. During periods of market disruption, it may be difficult to value certain of our securities if trading becomes less frequent and/or market data becomes less observable. There may be certain asset classes that were in active markets with significant observable data that become illiquid due to the financial environment. In addition, there may be certain securities whose fair value is based on one or more unobservable inputs, even during normal market conditions. As a result, the determination of the fair values of these securities may include inputs and assumptions that require more estimation and management judgment and the use of complex valuation methodologies. These fair values may differ materially from the value at which the investments may be ultimately sold. Further, rapidly changing or unprecedented credit and equity market conditions could materially impact the valuation of securities and the period-to-period changes in value could vary significantly. Decreases in value could have a material adverse effect on our business, results of operations, financial condition and liquidity.

Similarly, management's decision on whether to record an other-than-temporary impairment or write down is subject to significant judgments and assumptions regarding changes in general economic conditions, the issuer's financial condition or future recovery prospects, estimated future cash flows, the effects of changes in interest rates or credit spreads, the expected recovery period and the accuracy of third party information used in internal assessments. As a result, management's evaluations and assessments are highly judgmental and its projections of future cash flows over the life of certain securities may ultimately prove incorrect as facts and circumstances change.

If assumptions used in estimating future gross profits differ from actual experience, we may be required to accelerate the amortization of DAC and increase reserves for GMDB and GMWB on variable annuities, which could adversely affect our results of operation.

The Company has deferred acquisition costs associated with the prior sales of its variable annuity products. Deferred acquisition costs for the variable annuity products are amortized over the expected life of the contracts. The remaining deferred but not yet amortized cost is referred to as the DAC asset. We amortize these costs based on the ratio of actual gross profits in the period to the present value of current and future estimated gross profits ("EGPs"). The Company evaluates the EGPs compared to the DAC asset to determine if an impairment exists. The Company also establishes reserves for GMDB and the life contingent portion of GMWB using components of EGPs. The projection of EGPs, or components of EGPs, requires the use of certain assumptions that may not prove accurate, including those related to changes in the separate account fund returns, full or partial surrender rates, mortality, withdrawal benefit utilization, withdrawal rates, annuitization and hedging costs.

In addition, if our assumptions about policyholder behavior (e.g., full or partial surrenders, benefit utilization and annuitization) and costs related to mitigating risks, including hedging costs, prove to be inaccurate or if significant or sustained equity market declines occur, we could be required to accelerate the amortization of DAC related to variable annuity contracts, and increase reserves for GMDB and life-contingent GMWB which would result in a charge to net income.

If our businesses do not perform well, we may be required to establish a valuation allowance against the deferred income tax asset.

Our income tax expense includes deferred income taxes arising from temporary differences between the financial reporting and tax bases of assets and liabilities and carry-forwards for foreign tax credits, capital losses, and net operating losses. Deferred tax assets are assessed periodically by management to determine if it is more likely than not that the deferred income tax assets will be realized. Factors in management's determination include the performance of the business, including the ability to generate, from a variety of sources and tax planning strategies, sufficient future taxable income and capital gains before net operating loss and capital loss carry-forwards expire. If based on available information, it is more likely than not that we are unable to recognize a full tax benefit on deferred tax assets, then a valuation allowance will be established with a corresponding charge to net income (loss). Charges to increase our valuation allowance could have a material adverse effect on our results of operations and financial condition.

Strategic and Operational Risks

Our businesses may suffer and we may incur substantial costs if we are unable to access our systems and safeguard the security of our data in the event of a disaster, cyber breach or other information security incident.

We use technology to process, store, retrieve, evaluate and utilize customer and company data and information. Our information technology and telecommunications systems, in turn, interface with and rely upon third-party systems. We and our third party vendors must be able to access our systems to process premium payments, make changes to existing policies, file and pay claims and administer life and annuity products, provide customer support, manage our investment portfolios and hedge programs, report on financial results and perform other necessary business functions.

Systems failures or outages could compromise our ability to perform these business functions in a timely manner, which could harm our ability to conduct business and hurt our relationships with our business partners and customers. In the event of a disaster such as a natural catastrophe, a pandemic, an industrial accident, a cyber-attack, a blackout, a terrorist attack (including conventional, nuclear, biological, chemical or radiological) or war, systems upon which we rely may be inaccessible to our employees, customers or business partners for an extended period of time. Even if our employees and business partners are able to report to work, they may be unable to perform their duties for an extended period of time if our data or systems used to conduct our business are disabled or destroyed.

Our systems have been, and will likely continue to be, subject to viruses or other malicious codes, unauthorized access, cyber-attacks or other computer related penetrations. The frequency and sophistication of such threats continue to increase as well. While, to date, the Company is not aware of having experienced a material breach of our cyber security systems, administrative and technical controls as well as other preventive actions may be insufficient to prevent physical and electronic break-ins, denial of service, cyber-attacks or other security breaches to our systems or those of third parties with whom we do business. Such an event could compromise our confidential information as well as that of our clients and third parties, impede or interrupt our business operations and result in other negative consequences, including remediation costs, loss of revenue, additional regulatory scrutiny and litigation and reputational damage. In addition, we routinely transmit to third parties personal, confidential and proprietary information, which may be related to employees and customers, by email and other electronic means, along with receiving and storing such information on our systems. Although we attempt to protect privileged and confidential information, we may be unable to secure the information in all events, especially with clients, vendors, service providers, counterparties and other third parties who may not have appropriate controls to protect confidential information.

Our businesses must comply with regulations to control the privacy of customer, employee and third party data, and state and federal regulations regarding data privacy are becoming increasingly more complex. A misuse or mishandling of confidential or proprietary information could result in legal liability, regulatory action and reputational harm.

Third parties, including third party administrators, are also subject to cyber-breaches of confidential information, along with the other risks outlined above, any one of which may result in our incurring substantial costs and other negative consequences, including a material adverse effect on our business, reputation, financial condition, results of operations and liquidity. While we maintain cyber liability insurance that provides both third party liability and first party insurance coverages, our insurance may not be sufficient to protect against all loss.

Performance problems due to outsourcing and other third-party relationships may compromise our ability to conduct business.

We outsource certain business and administrative functions and rely on third-party vendors to perform certain functions or provide certain services on our behalf and have a significant number of information technology and business processes outsourced with a single vendor. If we are unable to reach agreement in the negotiation of contracts or renewals with certain third-party providers, or if such third-party providers experience disruptions or do not perform as anticipated, we may be unable to meet our obligations to customers and claimants, and incur higher costs which may have a material adverse effect on our business and results of operations. For other risks associated with our outsourcing of certain functions, see the immediately preceding risk factor.

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

We rely on a combination of contractual rights and copyright, trademark, patent and trade secret laws to establish and protect our intellectual property. Although we use a broad range of measures to protect our intellectual property rights, third parties may infringe or misappropriate our intellectual property. We may have to litigate to enforce and protect our intellectual property and to determine its scope, validity or enforceability, which could divert significant resources and may not prove successful. Litigation to enforce our intellectual property rights may not be successful and cost a lot of money. The inability to secure or enforce the protection of our intellectual property assets could harm our reputation and have a material adverse effect on our business and our ability to compete. We also may be subject to costly litigation in the event that another party alleges our operations or activities infringe upon their intellectual property rights, including patent rights, or violate license usage rights. Any such intellectual property claims and any resulting litigation could result in significant expense and liability for damages, and in some circumstances we could be enjoined from providing certain products or services to our customers, or utilizing and benefiting from certain patent, copyrights, trademarks, trade secrets or licenses, or alternatively could be required to enter into costly licensing arrangements with third parties, all of which could have a material adverse effect on our business, results of operations and financial condition.

Regulatory and Legal Risks

Regulatory and legislative developments could have a material adverse impact on our business, financial condition, results of operations and liquidity.

In the U.S., regulatory initiatives and legislative developments may significantly affect our operations in ways that we cannot predict.

The Dodd-Frank Act was enacted on July 21, 2010, mandating changes to the regulation of the financial services industry that could adversely affect our financial condition and results of operations. The Dodd-Frank Act requires central clearing of certain derivatives transactions and greater margin requirements for those transactions, which increases the costs of our hedging program. In addition, the proprietary trading and market making limitation of the Volcker Rule could adversely affect the pricing and liquidity of our investment securities and limitations of banking entity involvement in and ownership of certain asset-backed securities transactions could adversely affect the market for insurance-linked securities, including catastrophe bonds. It is unclear whether and to what extent Congress will make changes to the Dodd-Frank Act, and how those changes might impact The Hartford, its business, financial conditions, results of operations and liquidity.

We are subject to extensive laws and regulations that are complex, subject to change and often conflicting in their approach or intended outcomes. Compliance with these laws and regulations can increase cost.

The Company and its insurance subsidiary are regulated by the insurance departments of the states in which we are domiciled, licensed or authorized to conduct business. State regulations generally seek to protect the interests of policyholders rather than an insurer or the insurer’s shareholders and other investors. U.S. state laws grant insurance regulatory authorities broad administrative powers with respect to, among other things, licensing and authorizing lines of business, approving policy forms and premium rates, setting statutory capital and reserve requirements and limiting the types and amounts of certain investments. State insurance departments also set constraints on domestic insurer transactions with affiliates and dividends and, in many cases, must approve affiliate transactions and extraordinary dividends as well as strategic transactions such as acquisitions and divestitures.

In addition, future regulatory initiatives could be adopted at the federal or state level that could impact the profitability of our businesses. For example, the NAIC and state insurance regulators are continually reexamining existing laws and regulations, specifically focusing on modifications to statutory accounting principles, interpretations of existing laws and the development of new laws and regulations. The NAIC continues to enhance the U.S. system of insurance solvency regulation, with a particular focus on group supervision, risk-based capital, accounting and financial reporting, enterprise risk management and reinsurance. Any proposed or future legislation or NAIC initiatives, if adopted, may be more restrictive on our ability to conduct business than current regulatory requirements or may result in higher costs or increased statutory capital and reserve requirements. In addition, the Federal Reserve Board and the International Association of Insurance Supervisors ("IAIS") each have initiatives underway to develop insurance group capital standards. While the Company would not currently be subject to either of these capital standard regimes, it is possible that in the future standards similar to what is being contemplated by the Federal Reserve Board or the IAIS could apply to the Company. The NAIC is in the process of developing a U.S. group capital calculation that will employ a methodology based on aggregated risk-based capital.

Further, a particular regulator or enforcement authority may interpret a legal, accounting, or reserving issue differently than we have, exposing us to different or additional regulatory risks. The application of these regulations and guidelines by insurers involves interpretations and judgments that may be challenged by state insurance departments. The result of those potential challenges could require us to increase levels of statutory capital and reserves or incur higher operating and/or tax costs.

In addition, our asset management businesses are also subject to extensive regulation in the various jurisdictions where they operate. These laws and regulations are primarily intended to protect investors in the securities markets or investment advisory clients and generally grant supervisory authorities broad administrative powers. Compliance with these laws and regulations is costly, time consuming and personnel intensive, and may have an adverse effect on our business, financial condition, results of operations and liquidity.

Unfavorable judicial or legislative developments in claim litigation could adversely affect our results of operations or financial condition.

The Company is involved in claims litigation arising in the ordinary course of business and is also involved in legal actions outside of the ordinary course, some of which assert claims for substantial amounts. Significant changes in the legal environment could cause our ultimate liabilities to change from our current expectations. Such changes could be judicial in nature, like trends in the size of jury awards, developments in the law relating to tort liability or the liability of insurers, and rulings concerning the scope of insurance coverage or the amount or types of damages covered by insurance. Legislative developments, like changes in federal or state laws relating to the liability of policyholders or insurers, could have a similar effect. It is impossible to forecast such changes reliably, much less to predict how they might affect our loss reserves or how those changes might adversely affect our ability to price our insurance products appropriately. Thus, significant judicial or legislative developments could adversely affect the Company’s business, financial condition, results of operations and liquidity.

Changes in federal or state tax laws could adversely affect our business, financial condition, results of operations and liquidity.

Changes in federal or state tax laws and tax rates or regulations could have a material adverse effect on our profitability and financial condition. For example, the recent reduction in tax rates due to the Tax Cuts and Jobs Act reduced our deferred tax assets resulting in a charge against earnings. A reduction in tax rates or change in laws could adversely affect the Company’s ability to realize the benefits of its net operating loss carryovers and alternative minimum tax credits.

In addition, the Company’s tax return reflects certain items such as dividends received deduction, tax credits, and insurance reserve deductions. There is an increasing risk that, in the context of deficit reduction or overall tax reform, federal and/or state tax legislation could modify or eliminate these items, impacting the Company, its investments, investment strategies, and/or its policyholders. In the context of deficit reduction or overall tax reform, federal and/or state tax legislation could modify or eliminate provisions of current tax law that are beneficial to the Company, including tax-exempt bond interest, tax credits, and insurance reserve deductions, or could impose new taxes such as on goods or services purchased overseas.

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the "Tax Cuts and Jobs Act" ("Tax Reform"). Tax Reform reduced the U.S. federal corporate income tax rate from 35% to 21%. It also eliminated the corporate alternative minimum tax (AMT) and changed how existing AMT credits can be realized. Certain provisions in the law are intended to increase insurance companies' taxable earnings. The new method for discounting life loss reserves for tax purposes decreases the amount of incurred losses that are currently deductible, delaying the timing of when incurred losses and benefits may be deducted. The effect of the difference on the December 31, 2017 tax basis reserves between discounting under the existing method and the new method will be included in taxable income ratable over the next 8 years. In addition, limitations on net operating losses (NOLs) generated after December 31, 2017 will also increase the taxable income base. The exact impacts of many of the provisions will not be fully known until Treasury and the IRS provide clarification by issuing rules, regulations and advice. Furthermore, Congress may enact a technical corrections bill or other legislation that could affect how provisions of the Act apply to the Company. In response to the recent changes in the federal tax law, we could see states enact changes to their tax laws which, in turn, could affect the Company negatively. Among other risks, there is risk that these additional clarifications could increase the taxes on the Company or further increase administrative costs.

Changes in accounting principles and financial reporting requirements could adversely affect our results of operations or financial condition.

As an SEC registrant, we are currently required to prepare our financial statements in accordance with U.S. GAAP, as promulgated by the Financial Accounting Standards Board ("FASB"). Accordingly, we are required to adopt new guidance or interpretations which may have a material effect on our results of operations and financial condition that is either unexpected or has a greater impact than expected. For a description of changes in accounting standards that are currently pending and, if known, our estimates of their expected impact, see Note 1 of the consolidated financial statements.

The FASB is working on several projects that could result in significant changes in GAAP, including how we account for our long-duration insurance contracts. In particular, liabilities for life-contingent fixed annuities would be discounted using current upper-medium-grade fixed-income instrument yields rather than using historical yields, likely resulting in greater volatility in other comprehensive income. As a result, the adoption of these future accounting standards relating to insurance contracts could have a material adverse effect on our financial condition, including equity.

Item 2. PROPERTIES

The Company's principal executive offices are located in Hartford, Connecticut and it owns the facilities located in Windsor, Connecticut. The Company believes its properties and facilities are suitable and adequate for current operations. In connection with the pending sale of HLI and the Company, the Company will sell its Windsor, Connecticut facility to The Hartford Financial Services Group, Inc. See Item 1, Business - General for a further discussion of this transaction.

Item 3. LEGAL PROCEEDINGS

Litigation

The Company is involved in claims litigation arising in the ordinary course of business with respect to group and individual insurance products, such as life, disability, and accidental death and dismemberment insurance policies, and with respect to annuity contracts. The Company accounts for such activity through the establishment of reserves for future policy benefits. Management expects that the ultimate liability, if any, with respect to such ordinary-course claims litigation, after consideration of provisions made for potential losses and costs of defense, will not be material to the consolidated financial condition, results of operations or cash flows of the Company.

The Company is also involved in other kinds of legal actions, some of which assert claims for substantial amounts. Such actions have alleged, for example, bad faith in the handling of insurance claims and improper sales practices in connection with the sale of insurance and investment products. Some of these actions also seek punitive damages. Management expects that the ultimate liability, if any, with respect to such lawsuits, after consideration of provisions made for estimated losses, will not be material to the consolidated financial condition of the Company. Nonetheless, given the large or indeterminate amounts sought in certain of these actions, and the inherent unpredictability of litigation, it is possible that an adverse outcome in certain matters could, from time to time, have a material adverse effect on the Company’s consolidated financial condition, results of operations or cash flows in particular quarterly or annual periods.

PART II

Item 5. MARKET FOR HARTFORD LIFE INSURANCE COMPANY’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

All of the Company’s outstanding shares are ultimately owned by Hartford Life, Inc, which is a subsidiary of The Hartford. As of March 1, 2018 , the Company had issued and outstanding 1,000 shares of common stock, $5,690 par value per share. There is no established public trading market for the Company’s common stock.

For a discussion regarding the Company’s payment of dividends, and the restrictions related thereto, see the Capital Resources and Liquidity section of Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") under “Dividends”.

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

(Dollar amounts in millions unless otherwise stated)

The MD&A addresses the financial condition of Hartford Life Insurance Company and its subsidiaries ("Hartford Life Insurance Company" or the "Company") as of and for the year ended December 31, 2017 compared with the comparable 2016 periods. Management's narrative analysis of the results of operations is presented pursuant to General Instruction I (2) (a) of Form 10-K. This discussion should be read in conjunction with the Consolidated Financial Statements and related Notes beginning on page F-1. Certain reclassifications have been made to prior year financial information to conform to the current year presentation.

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CONSOLIDATED RESULTS OF OPERATIONS

Operating Summary

	2017	2016
Fee income and other	$ 906	$ 969
Earned premiums	105	203
Net investment income	1,281	1,373
Net realized capital (losses)	(60)	(163)
Total revenues	**2,232**	**2,382**
Benefits, losses and loss adjustment expenses	1,406	1,437
Amortization of deferred policy acquisition costs	48	114
Insurance operating costs and other expenses	400	472
Dividends to policyholders	2	3
Total benefits, losses and expenses	**1,856**	**2,026**
Income before income taxes	**376**	**356**
Income tax expense	422	74
Net (loss) income	**$ (46)**	**$ 282**

Year ended December 31, 2017 compared to the year ended December 31, 2016

The decrease in net income was primarily due to a charge to income tax expense of $396 arising from the reduction of net deferred tax assets due to the enactment of lower Federal income tax rates, partially offset by a decline in net realized capital losses. The effect of lower amortization of deferred policy acquisition costs, lower benefits, losses and loss adjustment expenses, and lower insurance operating costs and other expenses, was offset by lower earned premiums and lower fee income and other.

Fee income, earned premiums, and insurance operating costs and other expenses decreased primarily due to the continued run-off of the variable annuity block of business.

Benefits, losses and loss adjustment expenses decreased due to lower death benefits and interest credited primarily due to the continued run-off of the variable annuity block of business.

The decrease in DAC amortization was primarily driven by the effect of a favorable unlock in 2017 compared to an unfavorable unlock in 2016. For further discussion of the unlock, see MD&A - Estimated Gross Profits.

Total net investment income decreased primarily due to lower asset levels as well as lower income received from previously impaired securities. For further discussion, see MD&A - Investments Results, Net Investment Income.

Net realized capital losses decreased primarily due to the effect of transactional foreign currency revaluation, higher net gains on sales and lower impairments, partially offset by greater losses on non-qualifying foreign currency derivatives and the variable annuity hedge program. For further information, see MD&A - Investment Results, Net Realized Capital Gains (Losses).

Insurance operating costs and expenses decreased largely due to the run off of the business requiring less staff and other operating expenses.

The effective tax rate differs from the U.S. Federal statutory rate of 35% in 2017 and 2016 , primarily due to a charge of $396 as a result of Tax Reform enacted in December, 2017. Among other changes, Tax Reform reduced the Federal corporate income tax rate from 35% to 21% effective January 1, 2018 which resulted in a reduction of the Company's net deferred tax assets, including its net operating loss carryovers. For a reconciliation of the income tax provision at the U.S. Federal statutory rate to the provision for income taxes, see Note 9 - Income Taxes of Notes to Consolidated Financial Statements.

INVESTMENT RESULTS

Composition of Invested Assets

	December 31, 2017		December 31, 2016	
	Amount	Percent	Amount	Percent
Fixed maturities, available-for-sale ("AFS"), at fair value	$ 22,799	77.0%	$ 23,819	77.1%
Fixed maturities, at fair value using the fair value option ("FVO")	32	0.1%	82	0.3%
Equity securities, AFS, at fair value	154	0.5%	152	0.5%
Mortgage loans	2,872	9.7%	2,811	9.1%
Policy loans, at outstanding balance	1,432	4.9%	1,442	4.7%
Limited partnerships and other alternative investments	1,001	3.4%	930	3.0%
Other investments [1]	213	0.7%	293	0.9%
Short-term investments	1,094	3.7%	1,349	4.4%
Total investments	**$ 29,597**	**100%**	**$ 30,878**	**100%**

[1] Primarily relates to derivative instruments.

Total investments decreased since December 31, 2016 , primarily as a result of a decline in fixed maturities, AFS, and short-term investments. The decrease in fixed maturities, AFS was primarily the result of the continued runoff of the Company's business. The decrease in short-term investments was primarily due to a dividend payout and the reinvestment of short-term investments held as of December 31, 2016 into other asset classes.

Net Investment Income

	For the years ended December 31,			
	2017		2016	
(Before-tax)	Amount	Yield [1]	Amount	Yield [1]
Fixed maturities [2]	$ 995	4.5%	$ 1,049	4.6%
Equity securities	9	3.8%	8	3.7%
Mortgage loans	124	4.4%	135	4.7%
Policy loans	79	5.5%	83	5.8%
Limited partnerships and other alternative investments	75	8.3%	86	8.3%
Other [3]	54		64	
Investment expense	(55)		(52)	
Total net investment income	**$ 1,281**	**4.5%**	**$ 1,373**	**4.6%**
Total net investment income excluding limited partnerships and other alternative investments	**$ 1,206**	**4.4%**	**$ 1,287**	**4.5%**

[1] Yields calculated using annualized net investment income divided by the monthly average invested assets at cost, amortized cost, or adjusted carrying value, as applicable, excluding repurchase agreement and securities lending collateral, if any, and derivatives book value.
[2] Includes net investment income on short-term investments.
[3] Primarily includes income from derivatives that qualify for hedge accounting and hedge fixed maturities.

Year ended December 31, 2017 , compared to the year ended December 31, 2016

Total net investment income decreased primarily due to lower asset levels as well as lower income received from previously impaired securities.

The annualized net investment income yield, excluding limited partnerships and other alternative investments, decreased slightly to 4.4% in 2017 , versus 4.5% in 2016 . The decrease was primarily attributable to lower income from previously impaired securities as well as lower make-whole payment income on fixed maturities and prepayment penalties on mortgage loans.

The new money yield, excluding certain U.S. Treasury securities and cash equivalent securities, for the year ended December 31, 2017 was approximately 3.6% , which was below the average yield of sales and maturities of 3.8% for the same period. For the year ended December 31, 2017 , the new money yield of 3.6% increased slightly from 3.5% in 2016 largely due to a slight increase in interest rates.

While interest rates have risen recently, we expect the annualized net investment income yield in 2018, excluding limited partnerships and other alternative investments, to be slightly below the portfolio yield earned in 2017. This assumes the Company earns less income in 2018 from make-whole payments on fixed maturities and prepayment penalties on mortgage loans than it did in 2017 and that reinvestment rates continue to be below the average yield of sales and maturities. The estimated impact on net investment income is subject to change as the composition of the portfolio changes through portfolio management and trading activities and changes in market conditions.

Net Realized Capital Losses

	For the years ended December 31,	
(Before-tax)	**2017**	**2016**
Gross gains on sales	$ 226	$ 211
Gross losses on sales	(58)	(93)
Net other-than-temporary impairment ("OTTI") losses recognized in earnings	(14)	(28)
Valuation allowances on mortgage loans	2	—
Results of variable annuity hedge program		
GMWB derivatives, net	48	(38)
Macro hedge program	(260)	(163)
Total results of variable annuity hedge program	(212)	(201)
Transactional foreign currency revaluation	(1)	(70)
Non-qualifying foreign currency derivatives	(5)	57
Other, net [1]	2	(39)
Net realized capital losses	**$ (60)**	**$ (163)**

[1] Primarily consists of changes in value of non-qualifying derivatives including credit derivatives and interest rate derivatives used to manage duration.

Gross Gains and Losses on Sales

- Gross gains and losses on sales were primarily the result of duration, liquidity and credit management within corporate securities, equity securities and U.S Treasuries for the years ended December 31, 2017 and December 31, 2016 , respectively.

Variable Annuity Hedge Program

- For the year ended December 31, 2017 , losses on the variable annuity hedge program included losses related to the macro hedge program primarily due to losses of $180 driven by improvements in the equity markets and $85 driven by time decay of options. These losses were partially offset by net gains on the combined GMWB derivatives, net, which include the GMWB product, reinsurance, and hedging derivatives, primarily due to gains of $25 driven by time decay of options, $20 due to a decline in the equity market volatility and $20 due to policyholder behavior.
- For the year ended December 31, 2016 , the loss related to the combined GMWB derivatives, net, which include the GMWB product, reinsurance, and hedging derivatives, was primarily driven by losses of $53 due to liability/model assumption updates, $22 due to the effect of increases in equity markets and losses of $12 resulting from regression updates and other changes, partially offset by gains of $40 resulting from policyholder behavior and $29 related to an outperformance of the underlying actively managed funds compared to their respective indices. The macro hedge program loss was primarily due to a loss of $96 due to an increase in equity markets and a loss of $58 driven by time decay on options.

Other, net

- Other, net loss for the year ended December 31, 2016 , was primarily due to losses of $17 on interest rate derivatives and losses of $ 13 related to equity derivatives which were hedging against a decline in the equity market on the investment portfolio.

CRITICAL ACCOUNTING ESTIMATES

The preparation of financial statements, in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP"), requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ, and in the past have differed, from those estimates.

The Company has identified the following estimates as critical in that they involve a higher degree of judgment and are subject to a significant degree of variability:

- estimated gross profits used in the valuation and amortization of assets and liabilities associated with variable annuity and other universal life-type contracts;
- living benefits required to be fair valued (in other policyholder funds and benefits payable);
- valuation of investments and derivative instruments including evaluation of other-than-temporary impairments on available-for-sale securities and valuation allowances on mortgage loans;
- valuation allowance on deferred tax assets; and
- contingencies relating to corporate litigation and regulatory matters.

Certain of these estimates are particularly sensitive to market conditions, and deterioration and/or volatility in the worldwide debt or equity markets could have a material impact on the Consolidated Financial Statements. In developing these estimates management makes subjective and complex judgments that are inherently uncertain and subject to material change as facts and circumstances develop. Although variability is inherent in these estimates, management believes the amounts provided are appropriate based upon the facts available upon compilation of the financial statements.

Estimated Gross Profits

Estimated gross profits ("EGPs") are used in the valuation and amortization of the DAC asset. Portions of EGPs are also used in the valuation of reserves for death and other insurance benefit features on variable annuity and other universal life-type contracts.

Significant EGP-based Balances

	As of December 31,	
	2017	**2016**
DAC [1]	$ 405	$ 463
Death and Other Insurance Benefit Reserves, net of reinsurance [2]	$ 409	$ 354

[1] For additional information on DAC, see Note 6 - Deferred Policy Acquisition Costs of Notes to Consolidated Financial Statements.
[2] For additional information on death and other insurance benefit reserves, see Note 7 - Reserves for Future Policy Benefits and Separate Account Liabilities of Notes to Consolidated Financial Statements.

Charge to Income, Net of Tax, as a Result of Unlock

	For the years ended December 31,	
	2017	**2016**
DAC	$ 2	$ (74)
Death and Other Insurance Benefit Reserves	(20)	14
Total (pre-tax)	**(18)**	**(60)**
Income tax effect	(7)	(21)
Total (after-tax)	**$ (11)**	**$ (39)**

The Unlock charge in the table above includes both assumption unlocks and market unlocks.

The Unlock charge, after-tax, for the year ended December 31, 2017 was primarily due to updates to the macro hedging program cost assumption to reflect 2017 activity, and the effect of updates for variable annuities, including a reduction to the assumed general account investment rates, largely offset by separate account returns being above our aggregated estimated returns during the period.

The Unlock charge, after-tax, for the year ended December 31, 2016 was primarily due to the reduction of the fixed annuity DAC balance to zero, updates to the macro hedging program cost to reflect 2016 activity, and the effect of assumption updates for variable annuities, including to mortality. These impacts were partially offset by separate account returns being above our aggregated estimated returns during the period, largely due to an increase in equity markets, as well as the effect of reducing the assumption about expected future lapses of variable annuities.

Use of Estimated Gross Profits in Amortization and Reserving

For most variable annuity contracts, the Company estimates gross profits over 20 years as EGPs emerging subsequent to that time frame are immaterial. Contracts sold in a particular year are aggregated into cohorts. Future gross profits for each cohort are projected over the estimated lives of the underlying contracts, based on future account value projections for variable annuity products. The projection of future account values requires the use of certain assumptions including: separate account returns; separate account fund mix; fees assessed against the contract holder's account balance; full and partial surrender rates; interest credited; mortality; and the extent and duration of hedging activities and hedging costs. Changes in these assumptions and changes to other policyholder behavior assumptions such as GMWB utilization, reaction to price increases, and asset allocations cause EGPs to fluctuate which impacts earnings.

The Company determines EGPs from a single deterministic reversion to mean ("RTM") separate account return projection which is an estimation technique commonly used by insurance entities to project future separate account returns. Through this estimation technique, the Company's DAC model is adjusted to reflect actual fund performance at the end of each quarter. Through consideration of recent market returns, the Company will unlock, or adjust, projected returns over a future period so that the account value returns to the long-term expected rate of return, providing that those projected returns do not exceed certain caps.

Annual Unlock of Assumptions

In the fourth quarter of 2017, the Company completed a comprehensive policyholder behavior assumption study which resulted in a non-market related after-tax charge of $35 and incorporated the results of that study into its projection of future gross profits. Additionally, throughout the year, the Company evaluates various aspects of policyholder behavior and will revise its policyholder assumptions if credible emerging data indicates that changes are warranted. The Company will continue to evaluate its assumptions related to policyholder behavior as initiatives to reduce the size of the annuity business are implemented by management. Upon completion of an annual assumption study or evaluation of credible new information, the Company will revise its assumptions to reflect its current best estimate. These assumption revisions will change the projected account values and the related EGPs in the DAC amortization models, as well as the death and other insurance benefit reserving model.

All assumption changes that affect the estimate of future EGPs including: the update of current account values; the use of the RTM estimation technique; and policyholder behavior assumptions are considered an Unlock in the period of revision. An Unlock adjusts DAC and death and other insurance benefit reserve balances in the Consolidated Balance Sheets with an offsetting benefit or charge in the Consolidated Statements of Operations in the period of the revision. An Unlock that results in an after-tax benefit generally occurs as a result of actual experience or future expectations of product profitability being favorable compared to previous estimates. An Unlock that results in an after-tax charge generally occurs as a result of actual experience or future expectations of product profitability being unfavorable compared to previous estimates.

EGPs are also used to determine the expected excess benefits and assessments included in the measurement of death and other insurance benefit reserves. These excess benefits and assessments are derived from a range of stochastic scenarios that have been calibrated to the Company's RTM separate account returns. The determination of death and other insurance benefit reserves is also impacted by discount rates, lapses, volatilities, mortality assumptions and benefit utilization, including assumptions around annuitization rates.

Market Unlocks

In addition to updating assumptions in the fourth quarter of each year, an Unlock revises EGPs, on a quarterly basis, to reflect the Company's current best estimate assumptions and market updates of policyholder account value. The Unlock for future separate account returns is determined each quarter. Under RTM, the expected long term rate of return is 8.3% . The annual return assumed over the next five years of approximately (0.4)% was calculated based on the return needed over that period to produce an 8.3% return since March of 2009, the date the Company adopted the RTM estimation technique to project future separate account returns. Based on the expected trend of policy lapses and annuitizations, the Company expects approximately 55% of its block of variable annuities to runoff in the next 5 years.

Aggregate Recoverability

After each quarterly Unlock, the Company also tests the aggregate recoverability of DAC by comparing the DAC balance to the present value of future EGPs. The margin between the DAC balance and the present value of future EGPs for variable annuities was 35% as of December 31, 2017 . If the margin between the DAC asset and the present value of future EGPs is exhausted, then further reductions in EGPs would cause portions of DAC to be unrecoverable and the DAC asset would be written down to equal future EGPs.

Living Benefits Required to be Fair Valued

Fair values for GMWBs classified as embedded derivatives and included in other policyholder funds and benefits payable, are calculated using the income approach based upon internally developed models, because active, observable markets do not exist for those items. The fair value of these GMWBs and the related reinsurance and customized freestanding derivatives are calculated as an aggregation of the following components: Best Estimate Claim Payments; Credit Standing Adjustment; and Margins. The resulting aggregation is reconciled or calibrated, if necessary, to market information that is, or may be, available to the Company, but may not be observable by other market participants, including reinsurance discussions and transactions. The Company believes the aggregation of these components, as calibrated to the market information, results in an amount that the Company would be required to transfer to or receive from market participants in an active liquid market, if one existed, for those market participants to assume the risks associated with the guaranteed minimum benefits and the related reinsurance and customized derivatives. The fair value is likely to materially diverge from the ultimate settlement of the liability as the Company believes settlement will be based on our best estimate assumptions rather than those best estimate assumptions plus risk margins. In the absence of any transfer of the guaranteed benefit liability to a third party, the release of risk margins is likely to be reflected as realized gains in future periods' net income.

A multidisciplinary group of finance, actuarial and risk management professionals reviews and approves changes to the Company's valuation model as well as associated controls.

For further discussion on the impact of fair value changes from living benefits see Note 2 - Fair Value Measurements of Notes to the Consolidated Financial Statements, and for a discussion on the sensitivities of certain living benefits due to capital market factors see Part II, Item 7, MD&A - Variable Product Guarantee Risks and Risk Management.

Valuation of Investments and Derivative Instruments

Fixed Maturities, Equity Securities, Short-term Investments and Free-standing Derivatives

The Company generally determines fair values using valuation techniques that use prices, rates, and other relevant information evident from market transactions involving identical or similar instruments. Valuation techniques also include, where appropriate, estimates of future cash flows that are converted into a single discounted amount using current market expectations. The Company uses a "waterfall" approach comprised of the following pricing sources which are listed in priority order: quoted prices, prices from third-party pricing services, internal matrix pricing, and independent broker quotes. The fair value of free-standing derivative instruments is determined primarily using a discounted cash flow model or option model technique and incorporate counterparty credit risk. In some cases, quoted market prices for exchange-traded transactions and transactions cleared through central clearing houses ("OTC-cleared") may be used and in other cases independent broker quotes may be used. For further discussion, see the Fixed Maturities, Equity Securities, Short-term Investments and Free-standing Derivatives section in Note 2 - Fair Value Measurements of Notes to Consolidated Financial Statements. For further discussion on the GMWB customized derivative valuation methodology, see the GMWB Embedded, Customized and Reinsurance Derivatives section in fair value measurement, see Note 2 - Fair Value Measurements of Notes to Consolidated Financial Statements.

Evaluation of Other-Than-Temporary Impairments on Available-for-Sale Securities and Valuation Allowances on Mortgage Loans

Each quarter, a committee of investment and accounting professionals evaluates investments to determine if an other-than-temporary impairment ("impairment") is present for AFS securities or a valuation allowance is required for mortgage loans. This evaluation is a quantitative and qualitative process, which is subject to risks and uncertainties. For further discussion of the accounting policies, see Note 1 - Basis of Presentation and Significant Accounting Policies of Notes to Consolidated Financial Statements. For a discussion of impairments recorded, see the Other-Than-Temporary Impairments within the Investment Portfolio Risks and Risk Management section of the MD&A.

Valuation Allowance on Deferred Tax Assets

Deferred tax assets represent the tax benefit of future deductible temporary differences and tax credit carryforwards. Deferred tax assets are measured using the enacted tax rates expected to be in effect when such benefits are realized if there is no change in tax law. Under U.S. GAAP, we test the value of deferred tax assets for impairment on a quarterly basis at the entity level within each tax jurisdiction, consistent with our filed tax returns. Deferred tax assets are reduced by a valuation allowance if, based on the weight of available evidence, it is more likely than not that some portion, or all, of the deferred tax assets will not be realized. The determination of the valuation allowance for our deferred tax assets requires management to make certain judgments and assumptions. In evaluating the ability to recover deferred tax assets, we have considered all available evidence as of December 31, 2017 including past operating results, forecasted earnings, future taxable income, and prudent and feasible tax planning strategies. In the event we determine it is more likely than not that we will not be able to realize all or part of our deferred tax assets in the future, an increase to the valuation allowance would be 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 would be realized, the previously provided valuation allowance would be reversed. Our judgments and assumptions are subject to change given the inherent uncertainty in predicting future performance and specific industry and investment market conditions.

As of December 31, 2017 and 2016 , the Company had no valuation allowance. In assessing the need for a valuation allowance, management considered future taxable temporary difference reversals, future taxable income exclusive of reversing temporary differences and carryovers, taxable income in open carry back years and other tax planning strategies. From time to time, tax planning strategies could include holding a portion of debt securities with market value losses until recovery, making investments which have specific tax characteristics, and business considerations such as asset-liability matching. Management views such tax planning strategies as prudent and feasible and would implement them, if necessary, to realize the deferred tax assets.

In connection with the pending sale of HLI and subsidiaries, the Company will forego approximately $460 of deferred tax assets associated with net operating loss carryovers and foreign tax credits that will be retained by The Hartford. These deferred tax assets continue to be reflected as an asset in the accompanying financial statements as non-recoverability is contingent on the closing of the sale of the business.

Contingencies Relating to Corporate Litigation and Regulatory Matters

Management evaluates each contingent matter separately. A loss is recorded if probable and reasonably estimable. Management establishes reserves for these contingencies at its “best estimate,” or, if no one number within the range of possible losses is more probable than any other, the Company records an estimated reserve at the low end of the range of losses.

The Company has a quarterly monitoring process involving legal and accounting professionals. Legal personnel first identify outstanding corporate litigation and regulatory matters posing a reasonable possibility of loss. These matters are then jointly reviewed by accounting and legal personnel to evaluate the facts and changes since the last review in order to determine if a provision for loss should be recorded or adjusted, the amount that should be recorded, and the appropriate disclosure. The outcomes of certain contingencies currently being evaluated by the Company, which relate to corporate litigation and regulatory matters, are inherently difficult to predict, and the reserves that have been established for the estimated settlement amounts are subject to significant changes. Management expects that the ultimate liability, if any, with respect to such lawsuits, after consideration of provisions made for estimated losses, will not be material to the consolidated financial condition of the Company. In view of the uncertainties regarding the outcome of these matters, as well as the tax-deductibility of payments, it is possible that the ultimate cost to the Company of these matters could exceed the reserve by an amount that would have a material adverse effect on the Company’s consolidated results of operations and liquidity in a particular quarterly or annual period.

ENTERPRISE RISK MANAGEMENT

The Hartford’s Board of Directors (“the Board”) has ultimate responsibility for risk oversight, as described more fully in The Hartford's Proxy Statement, while management is tasked with the day-to-day management of The Hartford’s risks.

The Company manages and monitors risk through risk policies, controls and limits. At the senior management level, an Enterprise Risk and Capital Committee (“ERCC”) includes The Hartford's CEO, President, Chief Financial Officer, Chief Investment Officer, Chief Risk Officer, General Counsel and others as deemed necessary by the committee chair. The ERCC oversees the risk profile and risk management practices of the Company. A number of functional committees sit underneath the ERCC, providing oversight of specific risk areas and recommending risk mitigation strategies to the ERCC. These committees include, but are not limited to, Asset Liability Committees, Catastrophe Risk Committee, Economic Capital Executive Committee, Emerging Risk Committees, Model Oversight Committees and the Operational Risk Committee. The Hartford's enterprise risk management ("ERM") function supports the ERCC and functional committees, and is tasked with, among other things:

- risk identification and assessment;
- the development of risk appetites, tolerances, and limits;
- risk monitoring; and
- internal and external risk reporting.

The Company categorizes its main risks as insurance risk, operational risk and financial risk.

Operational Risk

Operational risk is the risk of loss resulting from inadequate or failed internal processes and systems, human error, or from external events. Operational risk is inherent in the Company's business and functional areas. Operational risks include legal; cyber and information security; models; third party vendors; technology; operations; business continuity; disaster recovery; internal and external fraud; and compliance.

Operational risk can result in financial loss, disruption of our business, regulatory actions or damage to our reputation.

Responsibility for day-to-day management of operational risk lies within each business unit and functional area. ERM provides an enterprise-wide view of the Company's operational risk on an aggregate basis. ERM is responsible for establishing, maintaining and communicating the framework, principles and guidelines of the Company's operational risk management program. Operational risk mitigation strategies include the following:

- Establishing policies and monitoring risk tolerances and exceptions;
- Conducting business risk assessments and implementing action plans where necessary;
- Validating existing crisis management protocols;
- Identifying and monitoring emerging risks; and
- Purchasing insurance coverage.

Cybersecurity Risk

The Hartford has implemented an information protection program with established governance routines that promote an adaptive approach for assessing and managing risks. The Hartford has invested to build a ‘defense-in-depth’ strategy that uses multiple security measures to protect the integrity of the Company's information assets. This ‘defense-in-depth’ strategy aligns to the National Institute of Standards and Technology (NIST) Cyber Security Framework and provides preventative, detective and responsive measures that collectively protects the company. Various cyber assurance methods, including security metrics, third party security assessments, external penetration testing, red team exercises, and cyber war game exercises are used to test the effectiveness of the overall cybersecurity control environment.

The Hartford, like many other large financial services companies, blocks attempted cyber intrusions on a daily basis. In the event of a cyber intrusion, the company invokes its Cyber Incident Response Program commensurate with the nature of the intrusion. While the actual methods employed differ based on the event, our approach employs internal teams and outside advisors with specialized skills to support the response and recovery efforts and requires elevation of issues, as necessary, to senior management.

From a governance perspective, senior members of our Enterprise Risk Management, Information Protection and Internal Audit functions provide detailed, regular reports on cybersecurity matters to The Hartford's Board, including the Finance, Investment, and Risk Management Committee (FIRMCo), which has principal responsibility for oversight of cybersecurity risk, and/or the Audit Committee, which oversees controls for the Company's major risk exposures. The topics covered by these updates include The Hartford's activities, policies and procedures to prevent, detect and respond to cybersecurity incidents, as well as lessons learned from cybersecurity incidents and internal and external testing of our protection measures. FIRMCo meets at each regular Board meeting and is briefed on cyber risks at least annually.

Financial Risk Management

Financial risks include direct and indirect risks to the Company's financial objectives coming from events that impact market conditions or prices. Some events may cause correlated movement in multiple risk factors. The primary sources of financial risks are the Company's general account assets and the liabilities and the guarantees which the company has written over various liability products, particularly its fixed and variable annuity guarantees. Consistent with its risk appetite, the Company establishes financial risk limits to control potential loss on a U.S. GAAP, statutory, and economic basis. Exposures are actively monitored, and mitigated where appropriate. The Company uses various risk management strategies, including reinsurance and over-the-counter and exchange traded derivatives with counterparties meeting the appropriate regulatory and due diligence requirements. Derivatives are utilized to achieve one of four Company-approved objectives: hedging risk arising from interest rate, equity market, commodity market, credit spread and issuer default, price or currency exchange rate risk or volatility; managing liquidity; controlling transaction costs; or entering into synthetic replication transactions. Derivative activities are monitored and evaluated by the Company's compliance and risk management teams and reviewed by senior management.

Liquidity Risk

Liquidity risk is the risk to current or prospective earnings or capital arising from the Company's inability or perceived inability to meet its contractual funding obligations when they come due.

Sources of Liquidity Risk include funding risk, company-specific liquidity risk and market liquidity risk resulting from differences in the amount and timing of sources and uses of cash as well as company-specific and general market conditions. Stressed market conditions may impact the ability to sell assets or otherwise transact business and may result in a significant loss in value.

Inadequate capital resources and liquidity could negatively affect the Company's overall financial strength and its ability to generate cash flows from its businesses, borrow funds at competitive rates, and raise new capital to meet operating and growth needs.

The Company has defined ongoing monitoring and reporting requirements to assess liquidity across the enterprise under both current and stressed market conditions. The Company measures and manages liquidity risk exposures and funding needs within prescribed limits across legal entities, taking into account legal, regulatory and operational limitations to the transferability of liquidity. The Company also monitors internal and external conditions, and identifies material risk changes and emerging risks that may impact liquidity. The Company's CFO has primary responsibility for liquidity risk.

For further discussion on liquidity see the section on Capital Resources and Liquidity.

Interest Rate Risk

Interest rate risk is the risk of financial loss due to adverse changes in the value of assets and liabilities arising from movements in interest rates. Interest rate risk encompasses exposures with respect to changes in the level of interest rates, the shape of the term structure of rates and the volatility of interest rates. Interest rate risk does not include exposure to changes in credit spreads.

The Company has exposure to interest rates arising from its fixed maturity securities and interest sensitive liabilities. In addition, certain product liabilities, including those containing GMWB or GMDB, expose the Company to interest rate risk but also have significant equity risk. These liabilities are discussed as part of the Variable Product Guarantee Risks and Risk Management section. Management also evaluates performance of certain products based on net investment spread which is, in part, influenced by changes in interest rates.

An increase in interest rates from current levels is generally a favorable development for the Company. Interest rate increases are expected to provide additional net investment income, reduce the cost of the variable annuity hedging program, and limit the potential risk of margin erosion due to minimum guaranteed crediting rates in certain products. However, if long-term interest rates rise dramatically within a six to twelve month time period, certain businesses may be exposed to disintermediation risk. Disintermediation risk refers to the risk that policyholders will surrender their contracts in a rising interest rate environment requiring the Company to liquidate assets in an unrealized loss position. An increase in interest rates may also impact the Company's tax planning strategies and in particular its ability to utilize tax benefits of previously recognized realized capital losses.

A decline in interest rates results in certain mortgage-backed and municipal securities being more susceptible to paydowns and prepayments or calls. During such periods, the Company generally will not be able to reinvest the proceeds at comparable yields. Lower interest rates will also likely result in lower net investment income, increased hedging costs associated with variable annuities and, if declines are sustained for a long period of time, it may subject the Company to reinvestment risk and possibly reduced profit margins associated with guaranteed crediting rates on certain products. Conversely, the fair value of the investment portfolio will increase when interest rates decline.

The Company manages its exposure to interest rate risk by constructing investment portfolios that maintain asset allocation limits and asset/liability duration matching targets which may include the use of derivatives. The Company analyzes interest rate risk using various models including parametric models and cash flows simulation under various market scenarios of the liabilities and their supporting investment portfolios. Key metrics that the Company uses to quantify its exposure to interest rate risk inherent in its invested assets and interest rate sensitive liabilities include duration, convexity and key rate duration.

The Company also utilizes a variety of derivative instruments to mitigate interest rate risk associated with its investment portfolio or to hedge liabilities. Interest rate caps, floors, swaps, swaptions, and futures may be used to manage portfolio duration. Interest rate swaps are primarily used to convert interest receipts or payments to a fixed or variable rate. The use of such swaps enables the Company to customize contract terms and conditions to desired objectives and manage the duration profile within established tolerances. Interest rate swaps are also used to hedge the variability in the cash flow of a forecasted purchase or sale of fixed rate securities due to changes in interest rates. As of December 31, 2017 and 2016 , notional amounts pertaining to derivatives utilized to manage interest rate risk, including offsetting positions, totaled $ 4.7 billion and $ 4.6 billion , respectively $ 4.7 billion and $ 4.5 billion , respectively, related to investments and $ 34 and $ 100 , respectively, related to liabilities. The fair value of these derivatives was $ (356) and $ (404) as of December 31, 2017 and 2016 , respectively. These amounts do not include derivatives associated with the Variable Annuity Hedging Program.

Fixed Income Investments

The fair value of fixed income investments, which include fixed maturities, commercial mortgage loans, and short-term investments, was $26.8 billion and $28.1 billion at December 31, 2017 and 2016 , respectively. The weighted average duration of the portfolio, including derivative instruments, was approximately 7.6 years and 6.8 years as of December 31, 2017 and 2016 , respectively.

Liabilities

The Company’s issued investment contracts and certain insurance product liabilities, other than non-guaranteed separate accounts, include asset accumulation vehicles such as fixed annuities, guaranteed investment products, and other investment and universal life-type contracts. The primary risk associated with these products is that, despite the use of market value adjustment features and surrender charges, the spread between investment return and credited rate may not be sufficient to earn targeted returns.

Asset accumulation vehicles primarily require a fixed rate payment, often for a specified period of time, and fixed rate annuities contain surrender values that are based upon a market value adjusted formula if held for shorter periods. In addition, certain products such as corporate owned life insurance contracts and the general account portion of variable annuity products credit interest to policyholders subject to market conditions and minimum interest rate guarantees. As of December 31, 2017 and 2016 , the Company had $ 4,728 and $ 5,187 , respectively, of liabilities for fixed annuities and $ 120 and $ 194 , respectively, of liabilities for guaranteed investment products.

The Company's issued non-investment type contracts include structured settlement contracts, terminal funding agreements, and on-benefit payout annuities (i.e., the annuitant is currently receiving benefits). The cash outflows associated with these policy liabilities are not interest rate sensitive but do vary based on the timing. Similar to investment-type products, the aggregate cash flow payment streams are relatively predictable. Products in this category may rely upon actuarial pricing assumptions (including mortality and morbidity) and have an element of cash flow uncertainty. As of December 31, 2017 and 2016 , the Company had $ 6,841 and $ 6,887 , respectively of liabilities for structured settlements and terminal funding agreements and $ 1,627 and $ 1,636 , respectively, of liabilities for on-benefit payout annuities.

Interest Rate Sensitivity

Fixed Liabilities and the Invested Assets Supporting Them

Included in the following table is the before-tax change in the net economic value of investment contracts including structured settlements, fixed annuity contracts and terminal funding agreements for which the payment rates are fixed at contract issuance and/or the investment experience is substantially absorbed by the Company's operations, along with the corresponding invested assets. Also included in this analysis are the interest rate sensitive derivatives used by the Company to hedge its exposure to interest rate risk in the investment portfolios supporting these contracts. This analysis does not include the assets and corresponding liabilities of certain insurance products such as certain life contingent annuities. Certain financial instruments, such as limited partnerships and other alternative investments, have been omitted from the analysis as the interest rate sensitivity of these investments is generally lower and less predictable than fixed income investments. Insulated separate account assets and liabilities are excluded from the analysis because gains and losses in separate accounts accrue to policyholders.

The calculation of the estimated hypothetical change in net economic value below assumes a 100 basis point upward and downward parallel shift in the yield curve.

Interest rate sensitivity of fixed liabilities and invested assets supporting them	**Change in Net Economic Value as of December 31,**			
	2017		**2016**	
Basis point shift	-100	+100	-100	+100
(Decrease) increase in economic value, before tax	$ (818)	$ 530	$ (634)	$ 409

The carrying value of fixed maturities, commercial mortgage loans and short-term investments related to the businesses included in the table above was $18.0 billion and $18.3 billion , as of December 31, 2017 and 2016 , respectively. The assets supporting the fixed liabilities are monitored and managed within set duration guidelines, and are evaluated on a daily basis, as well as annually using scenario simulation techniques in compliance with regulatory requirements.

Invested Assets Not Supporting Fixed Liabilities

The following table provides an analysis showing the estimated before-tax change in the fair value of the Company's investments and related derivatives, excluding assets supporting fixed liabilities which are included in the table above, assuming 100 basis point upward and downward parallel shifts in the yield curve as of December 31, 2017 and 2016 . Certain financial instruments, such as limited partnerships and other alternative investments, have been omitted from the analysis as the interest rate sensitivity of these investments is generally lower and less predictable than fixed income investments.

Interest rate sensitivity of invested assets not supporting fixed liabilities	**Change in Fair Value as of December 31,**			
	2017		**2016**	
Basis point shift	-100	+100	-100	+100
Increase (decrease) in fair value, before tax	$ 547	$ (460)	$ 453	$ (409)

The carrying value of fixed maturities, commercial mortgage loans and short-term investments related to the businesses included in the table above was $8.8 billion and $9.8 billion , as of December 31, 2017 and 2016 , respectively. The selection of the 100 basis point parallel shift in the yield curve was made only as an illustration of the potential hypothetical impact of such an event and should not be construed as a prediction of future market events. Actual results could differ materially from those illustrated above due to the nature of the estimates and assumptions used in the above analysis. The Company's sensitivity analysis calculation assumes that the composition of invested assets and liabilities remain materially consistent throughout the year and that the current relationship between short-term and long-term interest rates will remain constant over time. As a result, these calculations may not fully capture the impact of portfolio re-allocations, significant product sales or non-parallel changes in interest rates.

Equity Risk

Equity risk is the risk of financial loss due to changes in the value of global equities or equity indices. The Company has exposure to equity risk from assets under management and embedded derivatives within the Company's variable annuities. Equity Risk on the Company's Variable Annuity products is mitigated through various hedging programs. For further information, refer to Enterprise Risk Management, Managing Equity Risk on Variable Annuity Products.

The Company's exposure to equity risk includes the potential for lower earnings associated with certain of its businesses such as variable annuities where fee income is earned based upon the fair value of the assets under management. Declines in equity markets may also decrease the value of limited partnerships and other alternative investments. In addition, the Company offers certain guaranteed benefits, primarily associated with variable annuity products, which increases the Company's potential benefit exposure in periods that equity markets decline. For further discussion of equity risk, see the Managing Equity Risk on Variable Annuity Products section.

Reinsurance as a Risk Management Strategy

The Company utilizes reinsurance to transfer risk to affiliated and unaffiliated insurers. Reinsurance is used to transfer certain risk to reinsurance companies based on specific risk concentrations. All reinsurance processes are aligned under a single enterprise reinsurance risk management policy. Reinsurance purchasing is a centralized function across The Hartford to support a consistent strategy and to ensure that the reinsurance activities are fully integrated into the organization's risk management processes.

The Company uses reinsurance for a portion of contracts with GMWB riders issued prior to the second quarter of 2006. The Company also uses reinsurance for a majority of the GMDB NAR.

The Company cedes insurance to affiliated and unaffiliated insurers to enable the Company to manage capital and risk exposure. Such arrangements do not relieve the Company of its primary liability to policyholders. Failure of reinsurers to honor their obligations could result in losses to the Company.

The components of the gross and net reinsurance recoverables are summarized as follows:

	As of December 31,	
Reinsurance Recoverables	**2017**	**2016**
Reserve for future policy benefits and other policyholder funds and benefits payable	**$ 20,785**	**$ 20,725**
Less: Allowance for uncollectible reinsurance [1]	—	—
Net reinsurance recoverables	**$ 20,785**	**$ 20,725**

[1] No allowance for uncollectible reinsurance was required as of December 31, 2017 and 2016 .

As of December 31, 2017 , the Company has reinsurance recoverables from MassMutual and Prudential of $8.3 billion and $11.1 billion , respectively. As of December 31, 2016 , the Company has reinsurance recoverables from MassMutual and Prudential of $8.6 billion and $10.8 billion , respectively. The Company's obligations to its direct policyholders that have been reinsured to MassMutual and Prudential are secured by invested assets held in trust. As of December 31, 2017 , net of invested assets held in trust, the Company has no reinsurance-related concentrations of credit risk greater than 10% of the Company’s Consolidated Stockholder's Equity.

Managing Equity Risk on Variable Annuity Products

Most of the Company’s variable annuities include GMDB and certain contracts with GMDB also include GMWB features. Declines in the equity markets will increase the Company’s liability for these benefits. Many contracts with a GMDB include a maximum anniversary value ("MAV"), which in rising markets resets the guarantee on the anniversary to be 'at the money'. As the MAV increases, it can increase the NAR for subsequent declines in account value. Generally, a GMWB contract is ‘in the money’ if the contractholder’s guaranteed remaining balance ("GRB") becomes greater than the account value.

The NAR is generally defined as the guaranteed minimum benefit amount in excess of the contractholder’s current account value. Variable annuity account values with guarantee features were $ 40.8 billion and $ 40.7 billion as of December 31, 2017 and December 31, 2016 , respectively.

The following tables summarize the account values of the Company’s variable annuities with guarantee features and the NAR split between various guarantee features (retained net amount at risk does not take into consideration the effects of the variable annuity hedge programs currently in place as of each balance sheet date).

Total Variable Annuity Guarantees as of December 31, 2017

($ in billions)	Account Value	Gross Net Amount at Risk	Retained Net Amount at Risk	% of Contracts In the Money[2]	% In the Money[2][3]
Variable Annuity [1]					
GMDB [4]	$ 40.8	$ 2.9	$ 0.6	14%	26%
GMWB	17.8	0.2	0.1	4%	19%

Total Variable Annuity Guarantees as of December 31, 2016

($ in billions)	Account Value	Gross Net Amount at Risk	Retained Net Amount at Risk	% of Contracts In the Money[2]	% In the Money[2][3]
Variable Annuity [1]					
GMDB [4]	$ 40.7	$ 3.3	$ 0.7	28%	14%
GMWB	18.3	0.2	0.1	7%	13%

[1] Contracts with a guaranteed living benefit also have a guaranteed death benefit. The NAR for each benefit is shown; however these benefits are not additive. When a contract terminates due to death, any NAR related to GMWB is released. Similarly, when a contract goes into benefit status on a GMWB, the GMDB NAR is reduced to zero.

[2] Excludes contracts that are fully reinsured.

[3] For all contracts that are “in the money”, this represents the percentage by which the average contract was in the money.

[4] Includes contracts that had a GMDB at issue but no longer have a GMDB due to certain elections made by policyholders or their beneficiaries. Such contracts had $1.9 billion of account value as of September 30, 2017 and $1.5 billion as of December 31, 2016.

Many policyholders with a GMDB also have a GMWB. Policyholders that have a product that offers both guarantees can only receive the GMDB or GMWB. The GMDB NAR disclosed in the preceding tables is a point in time measurement and assumes that all participants utilize the GMDB on that measurement date.

The Company expects to incur GMDB payments in the future only if the policyholder has an “in the money” GMDB at their death. For policies with a GMWB rider, the company expects to incur GMWB payments in the future only if the account value is reduced over time to a specified level through a combination of market performance and periodic withdrawals, at which point the contractholder will receive an annuity equal to the GRB which is generally equal to premiums less withdrawals. For the Company’s “lifetime” GMWB products, this annuity can exceed the GRB. As the account value fluctuates with equity market returns on a daily basis and the “lifetime” GMWB payments may exceed the GRB, the ultimate amount to be paid by the Company, if any, is uncertain and could be significantly more or less than the Company’s current carried liability. For additional information on the Company’s GMWB liability, see Note 2 - Fair Value Measurements of Notes to Consolidated Financial Statements. For additional information on the Company's GMDB liability, see Note 7 - Reserves for Future Policy Benefits and Separate Account Liabilities of Notes to Consolidated Financial Statements.

Variable Annuity Market Risk Exposures

The following table summarizes the broad Variable Annuity Guarantees offered by the Company and the market risks to which the guarantee is most exposed from a U.S. GAAP accounting perspective.

Variable Annuity Guarantees [1]	U.S. GAAP Treatment [1]	Primary Market Risk Exposures [1]
GMDB and life-contingent component of the GMWB	Accumulation of the portion of fees required to cover expected claims, less accumulation of actual claims paid	Equity Market Levels
GMWB (excluding life-contingent portions)	Fair Value	Equity Market Levels / Implied Volatility / Interest Rates

[1] Each of these guarantees and the related U.S. GAAP accounting volatility will also be influenced by actual and estimated policyholder behavior.

Risk Hedging

Variable Annuity Hedging Program

The Company's variable annuity hedging program is primarily focused, through the use of reinsurance and capital market derivative instruments, on reducing the economic exposure to market risks associated with guaranteed benefits that are embedded in our variable annuity contracts. The variable annuity hedging program also considers the potential impacts on statutory capital.

Reinsurance

The Company uses reinsurance for a portion of contracts with GMWB riders issued prior to the second quarter of 2006. The Company also uses reinsurance for a majority of the GMDB NAR.

Capital Market Derivatives

GMWB Hedge Program

Under the dynamic hedging program, the Company enters into derivative contracts to hedge market risk exposures associated with the GMWB liabilities that are not reinsured. These derivative contracts include customized swaps, interest rate swaps and futures, and equity swaps, options, and futures, on certain indices including the S&P 500 index, EAFE index, and NASDAQ index.

Additionally, the Company holds customized derivative contracts to provide protection from certain capital market risks for the remaining term of specified blocks of non-reinsured GMWB riders. These customized derivative contracts are based on policyholder behavior assumptions specified at the inception of the derivative contracts. The Company retains the risk for differences between assumed and actual policyholder behavior and between the performance of the actively managed funds underlying the separate accounts and their respective indices.

While the Company actively manages this dynamic hedging program, increased U.S. GAAP earnings volatility may result from factors including, but not limited to: policyholder behavior, capital markets, divergence between the performance of the underlying funds and the hedging indices, changes in hedging positions and the relative emphasis placed on various risk management objectives.

Macro Hedge Program

The Company's macro hedging program uses derivative instruments, such as options and futures on equities and interest rates, to provide protection against the statutory tail scenario risk arising from GMWB and GMDB liabilities on the Company's statutory surplus. These macro hedges cover some of the residual risks not otherwise covered by the dynamic hedging program. Management assesses this residual risk under various scenarios in designing and executing the macro hedge program. The macro hedge program will result in additional U.S. GAAP earnings volatility as changes in the value of the macro hedge derivatives, which are designed to reduce statutory reserve and capital volatility, may not be closely aligned to changes in U.S. GAAP liabilities.

Variable Annuity Hedging Program Sensitivities

The underlying guaranteed withdrawal benefit liabilities (excluding the life contingent portion of GMWB contracts) and hedge assets within the GMWB hedge and Macro hedge programs are carried at fair value.

The following table presents our estimates of the potential instantaneous impacts from sudden market stresses related to equity market prices, interest rates, and implied market volatilities. The following sensitivities represent: (1) the net estimated difference between the change in the fair value of GMWB liabilities and the underlying hedge instruments and (2) the estimated change in fair value of the hedge instruments for the macro program, before the impacts of amortization of DAC and taxes. As noted in the preceding discussion, certain hedge assets are used to hedge liabilities that are not carried at fair value and will not have a liability offset in the U.S. GAAP sensitivity analysis. All sensitivities are measured as of December 31, 2017 and are related to the fair value of liabilities and hedge instruments in place at that date for the Company's variable annuity hedge programs. The impacts presented in the table that follows are estimated individually and measured without consideration of any correlation among market risk factors.

GAAP Sensitivity Analysis (before tax and DAC) as of December 31, 2017 [1]

	GMWB			Macro		
Equity Market Return	**-20 %**	**-10 %**	**10 %**	**-20 %**	**-10 %**	**10 %**
Potential Net Fair Value Impact	$ (8)	$ (1)	$ (3)	$ 343	$ 120	$ (90)
Interest Rates	**-50bps**	**-25bps**	**+25bps**	**-50bps**	**-25bps**	**+25bps**
Potential Net Fair Value Impact	$ (1)	$ —	$ (1)	$ 6	$ 3	$ (3)
Implied Volatilities	**10 %**	**2 %**	**-10 %**	**10 %**	**2 %**	**-10 %**
Potential Net Fair Value Impact	$ (72)	$ (14)	$ 63	$ 114	$ 21	$ (77)

[1] These sensitivities are based on the following key market levels as of December 31, 2017: 1) S&P of 2,674 ; 2) 10yr US swap rate of 2.42% ; and 3) S&P 10yr volatility of 23.80% .

The preceding sensitivity analysis is an estimate and should not be used to predict the future financial performance of the Company's variable annuity hedge programs. The actual net changes in the fair value liability and the hedging assets illustrated in the preceding table may vary materially depending on a variety of factors which include but are not limited to:

- The sensitivity analysis is only valid as of the measurement date and assumes instantaneous changes in the capital market factors and no ability to rebalance hedge positions prior to the market changes;
- Changes to the underlying hedging program, policyholder behavior, and variation in underlying fund performance relative to the hedged index, which could materially impact the liability; and
- The impact of elapsed time on liabilities or hedge assets, any non-parallel shifts in capital market factors, or correlated moves across the sensitivities.

In December 2017, the Company added hedge positions in the macro hedge program to reduce open equity risk exposure, which increased the sensitivity that changes in equity market returns would have on GAAP net income.

Foreign Currency Exchange Risk

Foreign currency exchange risk is the risk of financial loss due to changes in the relative value between currencies. The Company has foreign currency exchange risk in non-U.S. dollar denominated investments, which primarily consist of fixed maturity and equity investments, foreign denominated cash and a yen denominated fixed payout annuity.

Changes in relative values between currencies can create variability in cash flows and realized or unrealized gains and losses on changes in the fair value of assets and liabilities. Based on the fair values of the Company’s non-U.S. dollar denominated securities and derivative instruments as of December 31, 2017 and 2016 , management estimates that a hypothetical 10% unfavorable change in exchange rates would decrease the fair values by an immaterial amount.

The open foreign currency exposure of non-U.S. dollar denominated investments will most commonly be reduced through the sale of the assets or through hedges using currency futures/forwards/swaps. In order to manage the currency risk related to any non-U.S. dollar denominated liability contracts, the Company enters into foreign currency swaps or holds non-U.S. dollar denominated investments.

Non-U.S. dollar denominated fixed maturities, equities and cash

The fair values of the non-U.S. dollar denominated fixed maturities and equities at December 31, 2017 and 2016 were approximately $ 104 and $ 77 , respectively. Included in these amounts are $ 5 and $ 5 at December 31, 2017 and 2016 , respectively, related to non-U.S. dollar denominated fixed maturities and equities that directly support liabilities denominated in the same currencies. The currency risk of the remaining non-U.S. dollar denominated fixed maturities and equities are hedged with foreign currency swaps. The Company holds $216 of yen-denominated cash, of which $214 is derivative cash collateral pledged by counterparties and has an offsetting collateral liability. In addition, the Company holds $306 of euro-denominated cash which is hedged with foreign currency forwards.

The Company has entered into pay U.S. dollar, receive yen swap contracts to hedge the currency exposure between the U.S. dollar denominated assets and the yen denominated fixed liability reinsurance payments.

Non-U.S. dollar denominated funding agreement liability contracts

The Company hedged the foreign currency risk associated with these liability contracts with currency rate swaps. At December 31, 2017 and 2016 , the derivatives used to hedge foreign currency exchange risk related to foreign denominated liability contracts had a total notional amount of $ 94 and $ 94 , and a total fair value of $ (11) and $ (25) , respectively.

Financial Risk on Statutory Capital

Statutory surplus amounts and RBC ratios may increase or decrease in any period depending upon a variety of factors and may be compounded in extreme scenarios or if multiple factors occur at the same time. In general, as equity market levels and interest rates decline, the amount and volatility of both our actual or potential obligation, as well as the related statutory surplus and capital margin can be materially negatively affected, sometimes at a greater than linear rate. At times the impact of changes in certain market factors or a combination of multiple factors on RBC ratios can be counterintuitive. Factors include:

- Differences in performance of variable subaccounts relative to indices and/or realized equity and interest rate volatilities may affect RBC ratios.
- Rising equity markets will generally result in an increase in statutory surplus and RBC ratios. However, as a result of a number of factors and market conditions, including the level of hedging costs and other risk transfer activities, reserve requirements for death and living benefit guarantees and RBC requirements could increase with rising equity markets, resulting in lower RBC ratios. The Company has reinsured approximately 43% of its risk associated with GMWB and 81% of its risk associated with the aggregate GMDB exposure. These reinsurance agreements reduce the Company's exposure to changes in the statutory reserves and the related capital and RBC ratios associated with changes in the capital markets.
- A decrease in the value of certain fixed-income and equity securities in our investment portfolio, due in part to credit spreads widening, may result in a decrease in statutory surplus and RBC ratios.
- Credit spreads on invested assets may increase sharply for certain sub-sectors of the overall credit market, resulting in statutory separate account asset market value losses. As actual credit spreads are not fully reflected in the current crediting rates, the calculation of statutory reserves for fixed MVA annuities will not substantially offset the change in fair value of the statutory separate account assets resulting in reductions in statutory surplus.
- Decreases in the value of certain derivative instruments that do not get hedge accounting, may reduce statutory surplus and RBC ratios.
- Sustained low interest rates with respect to the fixed annuity business may result in a reduction in statutory surplus and an increase in NAIC required capital.
- Non-market factors, which can also impact the amount and volatility of both our actual potential obligation, as well as the related statutory surplus and capital margin, include actual and estimated policyholder behavior experience as it pertains to lapsation, partial withdrawals, and mortality.

Most of these factors are outside of the Company's control. The Company's financial strength and credit ratings are significantly influenced by its statutory surplus amounts and RBC ratios of our insurance company subsidiaries. In addition, rating agencies may implement changes to their internal models that have the effect of increasing or decreasing the amount of statutory capital we must hold in order to maintain our current ratings.

Credit Risk

Credit risk is the risk to earnings or capital due to uncertainty of an obligor's or counterparty's ability or willingness to meet its obligations in accordance with contractually agreed upon terms. Credit risk is comprised of three major factors: the risk of change in credit quality, or credit migration risk; the risk of default; and the risk of a change in value due to changes in credit spread.

The majority of the Company's credit risk is concentrated in its investment holdings but it is also present in the Company's reinsurance and insurance portfolios. A decline in creditworthiness is typically associated with an increase in an investment's credit spread, potentially resulting in an increase in other-than-temporary impairments and an increased probability of a realized loss upon sale. Premiums receivable and reinsurance recoverables are also subject to credit risk based on the counterparty's unwillingness or inability to pay.

The objective of the Company's enterprise credit risk management strategy is to identify, quantify, and manage credit risk on an aggregate portfolio basis and to limit potential losses in accordance with an established credit risk management policy. The Company primarily manages its credit risk by holding a diversified mix of investment grade issuers and counterparties across its investment, reinsurance, and insurance portfolios. Potential losses are also limited within portfolios by diversifying across geographic regions, asset types, and sectors.

The Company manages credit risk on an on-going basis through the use of various processes and analyses. Both the investment and reinsurance areas have formulated procedures for counterparty approvals and authorizations, which establish minimum levels of creditworthiness and financial stability. Credits considered for investment are subjected to underwriting reviews. Within the investment portfolio, private securities are subject to committee review for approval. Mitigation strategies vary across the three sources of credit risk, but may include:

- Investing in a portfolio of high-quality and diverse securities;
- Selling investments subject to credit risk;
- Hedging through use of single name or basket credit default swaps;
- Clearing transactions through central clearing houses that require daily variation margin;
- Entering into contracts only with strong creditworthy institutions
- Requiring collateral; and
- Non-renewing policies/contracts or reinsurance treaties.

The Company has developed credit exposure thresholds which are based upon counterparty ratings. Aggregate counterparty credit quality and exposure is monitored on a daily basis utilizing an enterprise-wide credit exposure information system that contains data on issuers, ratings, exposures, and credit limits. Exposures are tracked on a current and potential basis and aggregated by ultimate parent across investments, reinsurance receivables, insurance products with credit risk, and derivative counterparties.

As of December 31, 2017 , the Company had no investment exposure to any credit concentration risk of a single issuer, or counterparty greater than 10% of the Company's stockholder's equity, other than the U.S. government and certain U.S. government securities. For further discussion of concentration of credit risk in the investment portfolio, see the Concentration of Credit Risk section in Note 3 - Investments of Notes to Consolidated Financial Statements.

Credit Risk of Derivatives

The Company uses various derivative counterparties in executing its derivative transactions. The use of counterparties creates credit risk that the counterparty may not perform in accordance with the terms of the derivative transaction. Downgrades to the credit ratings of the Company’s insurance operating companies may have adverse implications for its use of derivatives including those used to hedge benefit guarantees of variable annuities. In some cases, downgrades may give derivative counterparties for over-the-counter ("OTC") derivatives and clearing brokers for OTC-cleared derivatives the right to cancel and settle outstanding derivative trades or require additional collateral to be posted. In addition, downgrades may result in counterparties and clearing brokers becoming unwilling to engage in or clear additional derivatives or may require collateralization before entering into any new trades. This would restrict the supply of derivative instruments commonly used to hedge variable annuity guarantees, particularly long-dated equity derivatives and interest rate swaps.

On October 23, 2017, Moody’s lowered its counterparty credit and insurer financial strength ratings on Hartford Life and Annuity Insurance Company and Hartford Life Insurance Company to Baa3. Given this downgrade action, termination rating triggers in two derivative counterparty relationships in which the Company has open derivative contracts were impacted. The Company has successfully re-negotiated the rating triggers with these counterparties. Accordingly, the Company does not expect the current hedging programs to be adversely impacted by the announcement of the downgrade of Hartford Life and Annuity Insurance Company and Hartford Life Insurance Company. In addition, as a result of the downgrade of Hartford Life and Annuity Insurance Company, the Company is required to post an additional $9 of collateral related to a single counterparty relationship.

Managing the Credit Risk of Counterparties to Derivative Instruments

The Company has derivative counterparty exposure policies which limit the Company’s exposure to credit risk. The Company monitors counterparty exposure on a monthly basis to ensure compliance with Company policies and statutory limitations. The Company’s policies with respect to derivative counterparty exposure establishes market-based credit limits, favors long-term financial stability and creditworthiness of the counterparty and typically requires credit enhancement/credit risk reducing agreements, which are monitored and evaluated by the Company’s risk management team and reviewed by senior management.

The Company minimizes the credit risk of derivative instruments by entering into transactions with high quality counterparties primarily rated A or better. The Company also generally requires that OTC derivative contracts be governed by an International Swaps and Derivatives Association ("ISDA") Master Agreement, which is structured by legal entity and by counterparty and permits right of offset. The Company enters into credit support annexes in conjunction with the ISDA agreements, which require daily collateral settlement based upon agreed upon thresholds.

The Company has developed credit exposure thresholds which are based upon counterparty ratings. Credit exposures are measured using the market value of the derivatives, resulting in amounts owed to the Company by its counterparties or potential payment obligations from the Company to its counterparties. The notional amounts of derivative contracts represent the basis upon which pay or receive amounts are calculated and are not reflective of credit risk. For purposes of daily derivative collateral maintenance, credit exposures are generally quantified based on the prior business day’s market value and collateral is pledged to and held by, or on behalf of, the Company to the extent the current value of the derivatives exceed the contractual thresholds. In accordance with industry standard and the contractual agreements, collateral is typically settled on same business day. The Company has exposure to credit risk for amounts below the exposure thresholds which are uncollateralized, as well as for market fluctuations that may occur between contractual settlement periods of collateral movements.

For the company's derivative programs, the maximum uncollateralized threshold for a derivative counterparty for a single legal entity is $ 10 . The Company currently transacts OTC derivatives in two legal entities that have a threshold greater than zero. The maximum combined threshold for a single counterparty across all legal entities that use derivatives is $ 10 . In addition, the Company may have exposure to multiple counterparties in a single corporate family due to a common credit support provider; however, the thresholds for these relationships are zero. Based on the contractual terms of the collateral agreements, these thresholds may be immediately reduced due to a downgrade in either party's credit rating. For further discussion, see the Derivative Commitments section of Note 10 - Commitments and Contingencies of Notes to Consolidated Financial Statements.

For the year ended December 31, 2017 , the Company incurred no losses on derivative instruments due to counterparty default.

Use of Credit Derivatives

The Company may also use credit default swaps to manage credit exposure or to assume credit risk to enhance yield. The Company uses credit derivatives to purchase credit protection with respect to a single entity, referenced index, or asset pool. The Company purchases credit protection through credit default swaps to economically hedge and manage credit risk of certain fixed maturity investments across multiple sectors of the investment portfolio. As of December 31, 2017 and 2016 , the notional amount related to credit derivatives that purchase credit protection was $ 80 and $ 131 , respectively, while the fair value was $ (3) and $ (3) , respectively. These amounts do not include positions that are in offsetting relationships.

The Company also enters into credit default swaps that assume credit risk as part of replication transactions. Replication transactions are used as an economical means to synthetically replicate the characteristics and performance of assets that are permissible investments under the Company's investment policies. These swaps reference investment grade single corporate issuers and baskets, which include customized diversified portfolios of corporate issuers, which are established within sector concentration limits and may be divided into tranches which possess different credit ratings. As of December 31, 2017 and 2016 , the notional amount related to credit derivatives that assume credit risk was $ 380 and $ 458 , respectively, while the fair value was $ 3 and $ 4 , respectively. These amounts do not include positions that are in offsetting relationships.

For further information on credit derivatives, see Note 4 - Derivative Instruments of Notes to Consolidated Financial Statements.

Investment Portfolio Risk

Investment Portfolio Composition

The following table presents the Company's fixed maturities, AFS, by credit quality. The credit ratings referenced throughout this section are based on availability, and are generally the midpoint of the available ratings among Moody's, S&P, Fitch and Morningstar. If no rating is available from a rating agency, then an internally developed rating is used.

Fixed Maturities by Credit Quality

	December 31, 2017			December 31, 2016		
	Amortized Cost	Fair Value	Percent of Total Fair Value	Amortized Cost	Fair Value	Percent of Total Fair Value
United States Government/Government agencies	$ 2,845	$ 3,058	13.4%	$ 3,125	$ 3,275	13.7%
AAA	1,470	1,552	6.8%	1,596	1,650	6.9%
AA	2,334	2,465	10.8%	2,427	2,561	10.8%
A	6,874	7,718	33.9%	7,288	7,857	33.0%
BBB	6,142	6,702	29.4%	6,650	7,019	29.5%
BB & below	1,249	1,304	5.7%	1,421	1,457	6.1%
Total fixed maturities, AFS	**$ 20,914**	**$ 22,799**	**100%**	**$ 22,507**	**$ 23,819**	**100%**

The fair value of AFS securities decreased, as compared with December 31, 2016 , due to the continued run-off of the Company's business. Fixed maturities, FVO, are not included in the preceding table. For further discussion on FVO securities, see Note 2 - Fair Value Measurements of Notes to Consolidated Financial Statements.

The following table presents the Company's AFS securities by type, as well as fixed maturities and equity, FVO.

Securities by Type

	December 31, 2017													December 31, 2016							
	Cost or Amortized Cost		Gross Unrealized Gains		Gross Unrealized losses		Fair Value		Percent of Total Fair Value		Cost or Amortized Cost		Gross Unrealized Gains		Gross Unrealized losses		Fair Value		Percent of Total Fair Value		
Asset backed securities ("ABS")																					
Consumer loans	$	646	$	4	$	(10)	$	640	2.8%	$	828	$	4	$	(26)	$	806	3.4%			
Other		175		5		(1)		179	0.8%		183		5		(1)		187	0.8%			
Collateralized debt obligations ("CDOs")																					
Collateralized loan obligations ("CLOs")		883		2		—		885	3.9%		742		2		(2)		742	3.1%			
Other		3		—		—		3	—%		151		47		—		198	0.8%			
Commercial mortgage-backed securities ("CMBS")																					
Agency backed [1]		697		9		(10)		696	3.1%		584		8		(8)		584	2.5%			
Bonds		1,116		30		(10)		1,136	5.0%		1,242		32		(19)		1,255	5.3%			
Interest only ("IOs")		248		6		(2)		252	1.1%		309		5		(7)		307	1.3%			
Corporate																					
Basic industry		677		74		—		751	3.3%		651		46		(6)		691	2.9%			
Capital goods		972		85		(2)		1,055	4.6%		846		79		(6)		919	3.9%			
Consumer cyclical		648		56		(1)		703	3.1%		751		54		(3)		802	3.4%			
Consumer non-cyclical		1,774		196		(6)		1,964	8.6%		2,155		159		(18)		2,296	9.6%			
Energy		1,358		167		(4)		1,521	6.7%		1,336		110		(9)		1,437	6.0%			
Financial services		2,349		264		(5)		2,608	11.4%		2,774		200		(15)		2,959	12.4%			
Tech./comm.		1,695		278		(3)		1,970	8.6%		1,863		185		(8)		2,040	8.5%			
Transportation		512		45		—		557	2.4%		524		34		(4)		554	2.3%			
Utilities		2,443		306		(10)		2,739	12.0%		2,665		233		(25)		2,873	12.1%			
Other		159		12		(1)		170	0.8%		112		11		(1)		122	0.5%			
Foreign govt./govt. agencies		379		30		(2)		407	1.8%		337		18		(10)		345	1.4%			
Municipal bonds																					
Taxable		1,125		142		(1)		1,266	5.5%		1,098		97		(6)		1,189	5.0%			
Residential mortgage-backed securities ("RMBS")																					
Agency		481		12		(1)		492	2.2%		927		22		(11)		938	3.9%			
Non-agency		202		1		(1)		202	0.9%		69		—		(1)		68	0.3%			
Alt-A		43		3		—		46	0.2%		48		2		—		50	0.2%			
Sub-prime		662		25		—		687	3.0%		698		10		(4)		704	3.0%			
U.S. Treasuries		1,667		206		(3)		1,870	8.2%		1,614		153		(14)		1,753	7.4%			
Fixed maturities, AFS	**$**	**20,914**	**$**	**1,958**	**$**	**(73)**	**$**	**22,799**	**100%**	**$**	**22,507**	**$**	**1,516**	**$**	**(204)**	**$**	**23,819**	**100%**			
Equity securities																					
Financial services		40		8		—		48	31.2%		69		1		(1)		69	—			
Other		100		6		—		106	68.8%		73		11		(1)		83	—			
Equity securities, AFS		**140**		**14**		**—**		**154**	**100%**		**142**		**12**		**(2)**		**152**	**—**			
Total AFS securities	**$**	**21,054**	**$**	**1,972**	**$**	**(73)**	**$**	**22,953**		**$**	**22,649**	**$**	**1,528**	**$**	**(206)**	**$**	**23,971**				
Fixed maturities, FVO							**$**	**32**								**$**	**82**				

[1] Includes securities with pools of loans issued by the Small Business Administration which are backed by the full faith and credit of the U.S. government.

The decline in the fair value of AFS securities as compared to December 31, 2016 was due to the continued run-off of the Company's business, partially offset by an increase in valuations due to tighter credit spreads.

European Exposure

The European economy performed better than expected in 2017, propelled by resilient private consumption, stronger growth around the world and lower unemployment. While some economic conditions have improved, sluggish wage growth points towards continued accommodative monetary policy throughout Europe in 2018. The Company manages the credit risk associated with the European securities within the investment portfolio on an on-going basis using several processes which are supported by macroeconomic analysis and issuer credit analysis. For additional details regarding the Company's management of credit risk, see the Credit Risk section of this MD&A.

As of December 31, 2017, the Company's European investment exposure had an amortized cost and fair value of $1.7 billion and $1.9 billion , respectively, or 6% of total invested assets; as of December 31, 2016, amortized cost and fair value totaled $1.8 billion and $1.9 billion , respectively. The investment exposure largely relates to corporate entities which are domiciled in or generate a significant portion of their revenue within the United Kingdom, the Netherlands, Germany and Switzerland. As of December 31, 2017 and 2016, the weighted average credit quality of European investments was BBB+ and A- , respectively. Entities domiciled in the United Kingdom comprise the Company's largest exposure; as of December 31, 2017 and 2016, the U.K. exposure totals less than 3% of total invested assets and largely relates to industrial and financial services securities and has an average credit rating of BBB+ . The majority of the European investments are U.S. dollar-denominated, and those securities that are British pound or euro-denominated are hedged to U.S. dollars. For a discussion of foreign currency risks, see the Foreign Currency Exchange Risk section of this MD&A.

Financial Services

The Company's investment in the financial services sector is predominantly through investment grade banking and insurance institutions. The following table presents the Company's fixed maturities and equity, AFS securities in the financial services sector that are included in the preceding Securities by Type table.

	December 31, 2017			December 31, 2016		
	Amortized Cost	**Fair Value**	**Net Unrealized Gain/(Loss)**	**Amortized Cost**	**Fair Value**	**Net Unrealized Gain/(Loss)**
AAA	$ 8	$ 9	$ 1	$ 5	$ 5	$ —
AA	181	197	16	319	335	16
A	1,224	1,368	144	1,360	1,462	102
BBB	836	915	79	971	1,028	57
BB & below	140	167	27	188	198	10
Total [1]	**$ 2,389**	**$ 2,656**	**$ 267**	**$ 2,843**	**$ 3,028**	**$ 185**

[1] Includes equity, AFS securities with an amortized cost and fair value of $40 and $48 , respectively as of December 31, 2017 and an amortized cost and fair value of $69 and $69 , respectively, as of December 31, 2016 included in the AFS by type table above.

The Company's investment in the financial services sector decreased , as compared to December 31, 2016 , primarily due to sales of corporate securities.

Commercial Real Estate

Through December 31, 2017 , commercial real estate market conditions, including property prices, occupancies, financial conditions, transaction volume, and delinquencies, remained mostly favorable and delinquencies remained very low. In addition, the availability of credit has has been adequate to refinance loans that have come due.

The following table presents the Company's exposure to CMBS bonds by current credit quality and vintage year included in the preceding Securities by Type table. Credit protection represents the current weighted average percentage of the outstanding capital structure subordinated to the Company's investment holding that is available to absorb losses before the security incurs the first dollar loss of principal and excludes any equity interest or property value in excess of outstanding debt.

Exposure to CMBS Bonds

	December 31, 2017											
	AAA		**AA**		**A**		**BBB**		**BB and Below**		**Total**	
Vintage Year [1]	**Amortized Cost**	**Fair Value**	**Amortized Cost**	**Fair Value**	**Amortized Cost**	**Fair Value**	**Amortized Cost**	**Fair Value**	**Amortized Cost**	**Fair Value**	**Amortized Cost**	**Fair Value**
2008 & Prior	$ 71	$ 80	$ 36	$ 40	$ —	$ —	$ —	$ —	$ 1	$ 1	$ 108	$ 121
2009	—	—	8	8	—	—	—	—	—	—	8	8
2011	14	14	—	—	—	—	—	—	—	—	14	14
2012	21	22	—	—	10	10	13	12	—	—	44	44
2013	16	16	94	96	51	53	3	4	—	—	164	169
2014	16	17	23	23	31	31	5	5	3	4	78	80
2015	95	95	89	87	48	49	22	23	7	7	261	261
2016	98	98	127	124	43	44	34	35	—	—	302	301
2017	20	20	101	101	—	—	16	17	—	—	137	138
Total	**$ 351**	**$ 362**	**$ 478**	**$ 479**	**$ 183**	**$ 187**	**$ 93**	**$ 96**	**$ 11**	**$ 12**	**$ 1,116**	**$ 1,136**
Credit protection	**31.2%**		**20.8%**		**13.8%**		**11.1%**		**7.9%**		**22.0%**	

	December 31, 2016											
	AAA		**AA**		**A**		**BBB**		**BB and Below**		**Total**	
Vintage Year [1]	**Amortized Cost**	**Fair Value**	**Amortized Cost**	**Fair Value**	**Amortized Cost**	**Fair Value**	**Amortized Cost**	**Fair Value**	**Amortized Cost**	**Fair Value**	**Amortized Cost**	**Fair Value**
2008 & Prior	$ 156	$ 168	$ 95	$ 101	$ 53	$ 53	$ 5	$ 5	$ 2	$ 1	$ 311	$ 328
2009	8	9	—	—	—	—	—	—	—	—	8	9
2010	—	—	8	8	—	—	—	—	—	—	8	8
2011	14	15	—	—	5	5	—	—	—	—	19	20
2012	22	22	—	—	18	18	14	13	—	—	54	53
2013	16	16	84	87	69	71	4	4	—	—	173	178
2014	16	17	23	23	30	31	—	—	—	—	69	71
2015	114	113	89	87	50	50	30	30	—	—	283	280
2016	94	92	140	134	38	37	45	45	—	—	317	308
Total	**$ 440**	**$ 452**	**$ 439**	**$ 440**	**$ 263**	**$ 265**	**$ 98**	**$ 97**	**$ 2**	**$ 1**	**$ 1,242**	**$ 1,255**
Credit protection	**33.2%**		**21.5%**		**19.3%**		**14.5%**		**6.0%**		**24.6%**	

[1] The vintage year represents the year the pool of loans was originated.

The Company has exposure to commercial mortgage loans as presented in the following table. These loans are collateralized by a variety of commercial properties and are diversified both geographically throughout the United States and by property type. These loans are primarily in the form of whole loans, where the Company is the sole lender, but may include participations. Loan participations are loans where the Company has purchased or retained a portion of an outstanding loan or package of loans and participates on a pro-rata basis in collecting interest and principal pursuant to the terms of the participation agreement. As of December 31, 2017 , loans within the Company's mortgage loan portfolio that have had extensions or restructurings other than what is allowable under the original terms of the contract are immaterial.

Commercial Mortgage Loans

	December 31, 2017			December 31, 2016		
	Amortized Cost [1]	**Valuation Allowance**	**Carrying Value**	**Amortized Cost [1]**	**Valuation Allowance**	**Carrying Value**
Whole loans	$ 2,763	$ —	$ 2,763	$ 2,711	$ (19)	$ 2,692
A-Note participations	109	—	109	119	—	119
Total	**$ 2,872**	**$ —**	**$ 2,872**	**$ 2,830**	**$ (19)**	**$ 2,811**

[1] Amortized cost represents carrying value prior to valuation allowances, if any.

During 2017 , the Company funded $389 of commercial whole loans with a weighted average loan-to-value ("LTV") ratio of 70% and a weighted average yield of 3.9% . The Company continues to originate commercial whole loans within primary markets, such as office, industrial and multi-family, focusing on loans with strong LTV ratios and high quality property collateral. There were no mortgage loans held for sale as of December 31, 2017 or December 31, 2016 .

Valuation Allowances on Mortgage Loans

For the year ended December 31, 2017 , the valuation allowances on mortgage loans decreased $19 , largely driven by the foreclosure of a loan. Following the conclusion of the loan's foreclosure process, the property transferred at its carrying value, net of the valuation allowance, to a real-estate owned investment during 2017. For the year ended December 31, 2016 , there was no change in valuation allowances on mortgage loans.

Municipal Bonds

The following table presents the Company's exposure to municipal bonds by type and weighted average credit quality included in the preceding Securities by Type tables.

	December 31, 2017			December 31, 2016		
	Amortized Cost	**Fair Value**	**Weighted Average Credit Quality**	**Amortized Cost**	**Fair Value**	**Weighted Average Credit Quality**
General Obligation	$ 198	$ 229	AA-	$ 201	$ 222	AA-
Pre-Refunded [1]	—	—		10	10	AAA
Revenue						
Transportation	192	213	A+	220	239	A
Health Care	41	45	AA	37	39	AA
Water & Sewer	41	43	AA-	41	41	AA-
Education	137	155	AA	136	149	AA
Sales Tax	34	40	AA	64	72	AA-
Leasing [2]	162	185	AA-	93	106	A+
Power	126	139	A	150	154	A
Housing	49	53	A+	53	56	A+
Other	145	164	A	93	101	A
Total Revenue	927	1,037	A+	887	957	A+
Total Municipal	**$ 1,125**	**$ 1,266**	**A+**	**$ 1,098**	**$ 1,189**	**A+**

[1] Pre-Refunded bonds are bonds for which an irrevocable trust containing sufficient U.S. treasury, agency, or other securities has been established to fund the remaining payments of principal and interest.

[2] Leasing revenue bonds are generally the obligations of a financing authority established by the municipality that leases facilities back to a municipality. The notes are typically secured by lease payments made by the municipality that is leasing the facilities financed by the issue. Lease payments may be subject to annual appropriation by the municipality or the municipality may be obligated to appropriate general tax revenues to make lease payments.

As of December 31, 2017 and December 31, 2016 , the largest issuer concentrations were the state of California , the Oregon School Boards Association , and Ohio American Municipal Power, Inc. , which each comprised less than 6% of the municipal bond portfolio and were comprised of general obligation and revenue bonds .

Limited Partnerships and Other Alternative Investments

The following table presents the Company’s investments in limited partnerships and other alternative investments which include hedge funds, real estate funds, and private equity funds. Since December 31, 2015, the Company has reduced the allocation to hedge funds. Real estate funds consist of investments primarily in real estate equity funds and joint ventures, including some funds with public market exposure. Private equity funds primarily consist of investments in funds whose assets typically consist of a diversified pool of investments in small to mid-sized non-public businesses with high growth potential as well as limited exposure to public markets.

Limited Partnerships and Other Alternative Investments Investment Income

	For the years ended December 31,			
	2017		2016	
	Amount	Yield	Amount	Yield
Hedge funds	$ 6	4.6%	$ (2)	(0.7)%
Real estate funds	18	12.3%	10	6.8 %
Private equity and other funds	51	8.1%	78	12.9 %
Total	**$ 75**	**8.3%**	**$ 86**	**8.3 %**

Investments in Limited Partnerships and Other Alternative Investments

	December 31, 2017		December 31, 2016	
	Amount	Percent	Amount	Percent
Hedge funds	$ 141	14.1%	$ 141	15.2%
Real estate funds	159	15.9%	141	15.2%
Private equity and other funds	701	70.0%	648	69.6%
Total	**$ 1,001**	**100%**	**$ 930**	**100%**

Available-for-Sale Securities — Unrealized Loss Aging

Total gross unrealized losses were $73 as of December 31, 2017 , and have improved $133 , or 65% , from December 31, 2016 , due to tighter credit spreads . As of December 31, 2017 , $71 of the gross unrealized losses were associated with securities depressed less than 20% of cost or amortized cost. The remaining $2 of gross unrealized losses were associated with securities depressed greater than 20%. The securities depressed more than 20% are primarily securities with exposure to commercial real estate and corporate securities in the energy sector that decreased in value primarily due to wider credit spreads since the securities were purchased.

As part of the Company’s ongoing security monitoring process, the Company has reviewed its AFS securities in an unrealized loss position and concluded that these securities are temporarily depressed and are expected to recover in value as the securities approach maturity or as market spreads tighten. For these securities in an unrealized loss position where a credit impairment has not been recorded, the Company’s best estimate of expected future cash flows are sufficient to recover the amortized cost basis of the security. Furthermore, the Company neither has an intention to sell nor does it expect to be required to sell these securities. For further information regarding the Company’s impairment analysis, see Other-Than-Temporary Impairments in the Investment Portfolio Risks and Risk Management section of this MD&A.

The following tables present the Company’s unrealized loss aging for AFS securities by length of time the security was in a continuous unrealized loss position.

	December 31, 2017				December 31, 2016			
Consecutive Months	**Items**	**Cost or Amortized Cost**	**Fair Value**	**Unrealized Loss**	**Items**	**Cost or Amortized Cost**	**Fair Value**	**Unrealized Loss**
Three months or less	498	$ 1,643	$ 1,636	$ (7)	1,142	$ 4,359	$ 4,264	$ (95)
Greater than three to six months	241	837	827	(10)	290	770	738	(32)
Greater than six to nine months	89	218	216	(2)	62	190	178	(12)
Greater than nine to eleven months	47	53	52	(1)	45	170	165	(5)
Twelve months or more	379	1,495	1,442	(53)	358	1,225	1,163	(62)
Total	**1,254**	**$ 4,246**	**$ 4,173**	**$ (73)**	**1,897**	**$ 6,714**	**$ 6,508**	**$ (206)**

The following table presents the Company’s unrealized loss aging for AFS securities continuously depressed over 20% by length of time (also included in the table above).

	December 31, 2017				December 31, 2016			
Consecutive Months	**Items**	**Cost or Amortized Cost**	**Fair Value**	**Unrealized Loss**	**Items**	**Cost or Amortized Cost**	**Fair Value**	**Unrealized Loss**
Three months or less	34	$ 3	$ 2	$ (1)	39	$ 2	$ 2	$ —
Greater than three to six months	16	—	—	—	13	1	1	—
Greater than six to nine months	7	—	—	—	10	4	3	(1)
Greater than nine to eleven months	5	—	—	—	5	—	—	—
Twelve months or more	21	3	2	(1)	26	7	4	(3)
Total	**83**	**$ 6**	**$ 4**	**$ (2)**	**93**	**$ 14**	**$ 10**	**$ (4)**

Other-Than-Temporary Impairments

The following table presents the Company’s impairments recognized in earnings by security type.

	For the years ended December 31,	
	2017	**2016**
Credit Impairments		
CMBS	$ 1	$ 1
Corporate	13	21
Total Credit Impairments	14	22
Equity Impairments	—	2
Intent-to-Sell Impairments		
Corporate	—	4
Total Intent-to-Sell Impairments	—	4
Total Impairments	**$ 14**	**$ 28**

Year ended December 31, 2017

For the year ended December 31, 2017 , impairments recognized in earnings were comprised of credit impairments of $14 . For the year ended December 31, 2017, there were no securities that the Company intends to sell ("intent-to-sell impairments") or impairments on equity securities.

For the year ended December 31, 2017 , credit impairments were primarily related to two corporate securities and were identified through security specific reviews and resulted from changes in the financial condition of the issuers. The Company incorporates its best estimate of future performance using internal assumptions and judgments that are informed by economic and industry specific trends, as well as our expectations with respect to security specific developments.

Non-credit impairments recognized in other comprehensive income were $2 for the year ended December 31, 2017 . These non-credit impairments represent the excess of the Company's best estimate of the discounted future cash flows over the fair value.

Future impairments may develop as the result of changes in intent-to-sell specific securities or if actual results underperform current modeling assumptions, which may be the result of, but are not limited to, macroeconomic factors and security-specific performance below current expectations.

Year ended December 31, 2016

For the year ended December 31, 2016 , impairments recognized in earnings were comprised of intent-to-sell impairments of $4 and credit impairments of $22 , both of which were primarily concentrated in corporate securities. Also, impairments recognized in earnings included impairments on equity securities of $2 that were in an unrealized loss position and the Company no longer believed the securities would recover in the foreseeable future.

CAPITAL RESOURCES AND LIQUIDITY

Capital resources and liquidity represent the overall strength of Hartford Life Insurance Company and its ability to generate strong cash flows, borrow funds at competitive rates and to meet operating needs over the next twelve months.

Liquidity Requirements and Sources of Capita l

The Hartford has an intercompany liquidity agreement that allows for short-term advances of funds among The Hartford Financial Services Group, Inc. ("HFSG Holding Company") and certain affiliates of up to $2.0 billion for liquidity and other general corporate purposes. The Connecticut Insurance Department ("CTDOI") granted approval for certain affiliated insurance companies that are parties to the agreement to treat receivables from a parent, including the HFSG Holding Company, as admitted assets for statutory accounting purposes. As of December 31, 2017 , there were no amounts outstanding from the HFSG Holding Company.

Derivative Commitments

Certain of the Company's derivative agreements contain provisions that are tied to the financial strength ratings, as set by nationally recognized statistical rating agencies, of the individual legal entity that entered into the derivative agreement. If the legal entity's financial strength were to fall below certain ratings, the counterparties to the derivative agreements could demand immediate and ongoing full collateralization and in certain instances demand immediate settlement of all outstanding derivative positions traded under each impacted bilateral agreement. The settlement amount is determined by netting the derivative positions transacted under each agreement. If the termination rights were to be exercised by the counterparties, it could impact the legal entity's ability to conduct hedging activities by increasing the associated costs and decreasing the willingness of counterparties to transact with the legal entity. The aggregate fair value of all derivative instruments with credit-risk-related contingent features that are in a net liability position as of December 31, 2017 , was $692 . Of this $692 the legal entities have posted collateral of $847 , which is inclusive of initial margin requirements, in the normal course of business. In addition, the Company has posted collateral of $ 31 associated with a customized GMWB derivative. Based on derivative market values as of December 31, 2017 , a downgrade of one or two levels below the current financial strength ratings by either Moody's or S&P would not require additional assets to be posted as collateral. These collateral amounts could change as derivative market values change, as a result of changes in our hedging activities or to the extent changes in contractual terms are negotiated. The nature of the collateral that we would post, if required, would be primarily in the form of U.S. Treasury bills, U.S. Treasury notes and government agency securities.

On October 23, 2017, Moody's lowered its counterparty credit and insurer financial strength ratings on Hartford Life and Annuity Insurance Company and Hartford Life Insurance Company to Baa3. Given this downgrade action, termination rating triggers in two derivative counterparty relationships in which the Company has open derivative contracts were impacted. The Company has successfully re-negotiated the rating triggers with these counterparties. Accordingly, the Company does not expect the current hedging programs to be adversely impacted by the announcement of the downgrade of Hartford Life and Annuity Insurance Company and Hartford Life Insurance Company. In addition, as a result of the downgrade of Hartford Life and Annuity Insurance Company, the Company is required to post an additional $9 of collateral related to a single counterparty relationship.

As of December 31, 2017 , the aggregate notional amount and fair value of derivative relationships that could be subject to immediate termination in the event of a downgrade of one level below the current financial strength ratings was $ 1.5 billion and $ 12 , respectively. These amounts could change as derivative market values change, as a result of changes in our hedging activities or to the extent changes in contractual terms are negotiated.

Insurance Operations

Total general account contractholder obligations are supported by $ 30 billion of cash and total general account invested assets to meet liquidity needs. As of December 31, 2017 , the Company's fixed maturities, short-term investments, and cash are summarized as follows:

Fixed maturities	$	22,831
Short-term investments		1,094
Cash		537
Less: Derivative collateral		1,039
Total	**$**	**23,423**

Capital resources available to fund liquidity upon contractholder surrender or termination are a function of the legal entity in which the liquidity requirement resides. Obligations related to life and annuity insurance products will be generally funded by both HLIC and Hartford Life and Annuity Insurance Company ("HLAI"); obligations related to retirement and institutional investment products will be generally funded by HLIC.

The Company is a member of the Federal Home Loan Bank of Boston ("FHLBB"). Membership allows the Company access to collateralized advances, which may be used to support various spread-based business and enhance liquidity management. FHLBB membership requires the company to own member stock and advances require the purchase of activity stock. The amount of advances that can be taken are dependent on the asset types pledged to secure the advances. The Connecticut Department of Insurance ("CTDOI") will permit the Company to pledge up to $0.9 billion in qualifying assets to secure FHLBB advances for 2018. The pledge limit is recalculated annually based on statutory admitted assets and capital and surplus. The Company would need to seek the prior approval of the CTDOI in order to exceed these limits. As of December 31, 2017 , HLIC had no advances outstanding under the FHLBB facility.

Contractholder Obligations	**As of December 31, 2017**	
Total Contractholder obligations	$	159,552
Less: Separate account assets [1]		115,834
General account contractholder obligations	**$**	**43,718**
Composition of General Account Contractholder Obligations		
Contracts without a surrender provision and/or fixed payout dates [2]	$	18,789
Fixed MVA annuities [3]		4,690
Other [4]		20,239
General account contractholder obligations	**$**	**43,718**

[1] *In the event customers elect to surrender separate account assets, the Company will use the proceeds from the sale of the assets to fund the surrender, and the Company's liquidity position will not be impacted. In many instances the Company will receive a percentage of the surrender amount as compensation for early surrender (surrender charge), increasing the Company's liquidity position. In addition, a surrender of variable annuity separate account or general account assets (see the following) will decrease the Company's obligation for payments on guaranteed living and death benefits.*

[2] *Relates to contracts such as payout annuities, institutional notes, term life, group benefit contracts, or death and living benefit reserves, which cannot be surrendered for cash.*

[3] *Relates to annuities that are recorded in the general account under U.S. GAAP as the contractholders are subject to the Company's credit risk, although these annuities are held in a statutory separate account. In the statutory separate account, the Company is required to maintain invested assets with a fair value greater than or equal to the MVA surrender value of the Fixed MVA contract. In the event assets decline in value at a greater rate than the MVA surrender value of the Fixed MVA contract, the Company is required to contribute additional capital to the statutory separate account. The Company will fund these required contributions with operating cash flows or short-term investments. In the event that operating cash flows or short-term investments are not sufficient to fund required contributions, the Company may have to sell other invested assets at a loss, potentially resulting in a decrease in statutory surplus. As the fair value of invested assets in the statutory separate account are at least equal to the MVA surrender value of the Fixed MVA contract, surrender of Fixed MVA annuities will have an insignificant impact on the liquidity requirements of the Company.*

[4] *Surrenders of, or policy loans taken from, as applicable, these general account liabilities, may be funded through operating cash flows of the Company, available short-term investments, or the Company may be required to sell fixed maturity investments to fund the surrender payment. These obligations include the general account option for individual variable annuities and the variable life contracts of the former Individual Life business, the general account option for annuities of the former Retirement Plans business and universal life contracts sold by the former Individual Life business. Sales of fixed maturity investments could result in the recognition of significant realized losses and insufficient proceeds to fully fund the surrender amount. In this circumstance, the Company may need to take other actions, including enforcing certain contract provisions which could restrict surrenders and/or slow or defer payouts. The Company has ceded reinsurance in connection with the sales of its Retirement Plans and Individual Life businesses to MassMutual and Prudential, respectively. The reinsurance transactions do not extinguish the Company's primary liability on the insurance policies issued under these businesses.*

Off-Balance Sheet Arrangements and Aggregate Contractual Obligations

The Company does not have any off-balance sheet arrangements that are reasonably likely to have a material effect on the financial condition, results of operations, liquidity, or capital resources of the Company, except for unfunded commitments to purchase investments in limited partnerships and other alternative investments, private placements, and mortgage loans of $787 as disclosed in Note 10 - Commitments and Contingencies of Notes to Consolidated Financial Statements.

The following table summarizes the Company's contractual obligations as of December 31, 2017 :

	Payments due by period				
	Total	**Less than 1 year**	**1-3 years**	**3-5 years**	**More than 5 years**
Life and annuity obligations [1]	$ 249,271	$ 16,269	$ 28,125	$ 24,100	$ 180,777
Operating lease obligations [2]	6	1	2	1	2
Purchase obligations [3]	956	931	22	2	1
Other liabilities reflected on the balance sheet [4]	1,586	1,397	188	1	—
Total	**$ 251,819**	**$ 18,598**	**$ 28,337**	**$ 24,104**	**$ 180,780**

[1] Estimated life and annuity obligations include death claims, other charges associated with policyholder reserves, policy surrenders and policyholder dividends, offset by expected future deposits on in-force contracts. Estimated life and annuity obligations are based on mortality, morbidity and lapse assumptions comparable with the Company's historical experience, modified for recent observed trends. The Company has also assumed market growth and interest crediting consistent with other assumptions. In contrast to this table, the majority of the Company's obligations are recorded on the balance sheet at the current account values and do not incorporate an expectation of future market growth, interest crediting, or future deposits. Therefore, the estimated obligations presented in this table significantly exceed the liabilities recorded in reserve for future policy benefits, other policyholder funds and benefits payable, and separate account liabilities. Due to the significance of the assumptions used, the amounts presented could materially differ from actual results.

[2] Includes future minimum lease payments on operating lease agreements.

[3] Included in purchase obligations is $40 relating to contractual commitments to purchase various goods and services such as maintenance and information technology in the normal course of business. Purchase obligations exclude contracts that are cancelable without penalty, or contracts that do not specify minimum levels of goods or services to be purchased.

[4] Includes consumer notes of $8 . Consumer notes include principal payments, contractual interest for fixed rate notes, and interest based on current rates for floating rate notes.

Dividends

Dividends to the Company from its insurance subsidiaries are restricted by insurance regulation. The payment of dividends by Connecticut-domiciled insurers is limited under the insurance holding company laws of Connecticut. These laws require notice to and approval by the state insurance commissioner for the declaration or payment of any dividend, which, together with other dividends or distributions made within the preceding twelve months, exceeds the greater of (i) 10% of the insurer's policyholder surplus as of December 31 of the preceding year or (ii) net income (or net gain from operations, if such company is a life insurance company) for the twelve-month period ending on the thirty-first day of December last preceding, in each case determined under statutory insurance accounting principles. In addition, if any dividend of a domiciled insurer exceeds the insurer's earned surplus or certain other thresholds as calculated under applicable state insurance law, the dividend requires the prior approval of the domestic regulator. In addition to statutory limitations on paying dividends, the Company also takes other items into consideration when determining dividends from subsidiaries. These considerations include, but are not limited to, expected earnings and capitalization of the subsidiary, regulatory capital requirements and liquidity requirements of the individual operating company.

In 2017, HLIC paid dividends of $1.4 billion of which $800 was a return of capital used by The Hartford to help fund Hartford Life and Accident Insurance Company's ("HLA") acquisition of the Aetna's U.S. group life and disability business. $550 of the $800 return of capital was funded through an extraordinary dividend from HLAI to the Company and approved by the CTDOI.

On December 4, 2017, The Hartford announced it had entered into a definitive agreement to sell the Company's parent, Hartford Life Inc., to a group of investors led by Cornell Capital LLC, Atlas Merchant Capital LLC, TRB Advisors LP, Global Atlantic Financial Group, Pine Brook and J. Safara Group. Prior to the expected close in 2018, the Company anticipates paying an additional $300 in dividends to its parent, subject to approval by the CTDOI. The sale is anticipated to close by June 30, 2018, subject to regulatory approval and other closing conditions.

Cash Flows

	2017	2016	2015
Net cash provided by operating activities	$ 797	$ 784	$ 682
Net cash provided by investing activities	$ 1,466	$ 864	$ 1,446
Net cash used for financing activities	$ (2,280)	$ (1,399)	$ (2,081)
Cash - end of year	$ 537	$ 554	$ 305

Net cash provided by operating activities increased in 2017 as compared to 2016 primarily due to decreases in claims and benefits paid as well as a decrease in operating expenses, largely offset by a decrease in fee income and federal income tax refunds.

Net cash provided by investing activities in 2017 primarily relates to net proceeds from available-for-sale securities of approximately $1.6 billion . Net cash provided by investing activities in 2016 primarily relates to net proceeds from available-for-sale securities of approximately $1.5 billion , partially offset by net payments for short-term investments of $ 769 . Net cash provided by investing activities in 2015 primarily relates to net proceeds from short-term investments of approximately $1.6 billion.

Net cash used for financing activities in 2017 relates to net payments for deposits, transfers and withdrawals for investment and universal life-type contracts of approximately $1.2 billion and the return of capital to the parent of approximately $1.4 billion , partially offset by a $360 net increase in securities loaned or sold under agreements to repurchase. Net cash used for financing activities in 2016 relates to net payments for deposits, transfers and withdrawals for investment and universal life-type contracts of approximately $0.9 billion and the return of capital to the parent of approximately $0.8 billion . Net cash used for financing activities in 2015 relates to the return of capital to the parent of approximately $1.0 billion and net payments for deposits, transfers and withdrawals for investment and universal life-type contracts of approximately $1.3 billion.

Operating cash flows in all periods have been adequate to meet liquidity requirements.

Ratings

Ratings can have an impact on the Company's reinsurance and derivative contracts. There can be no assurance that the Company's ratings will continue for any given period of time or that they will not be changed. In the event the Company's ratings are downgraded, reinsurance contracts may be adversely impacted and the Company may be required to post additional collateral on certain derivative contracts.

On October 23, 2017, Moody's Investor Service downgraded the insurance financial strength rating of Hartford Life Insurance Company and Hartford Life & Annuity Insurance Company to Baa3 from Baa2.

The following ratings actions were announced in connection with The Hartford's definitive agreement to sell Hartford Life Inc. and its life and annuity operating subsidiaries, Hartford Life Insurance Company and Hartford Life and Annuity Insurance Company.

On December 4, 2017, Moody's Investors Service placed its ratings for Hartford Life Insurance Company and Hartford Life and Annuity Insurance Company, both rated Baa3 for insurance financial strength, under review for further downgrade, and downgraded the senior debt rating of Hartford Life, Inc. to Ba3 from Baa2 with a continuing review for downgrade.

On December 4, 2017, S&P Global Ratings lowered its issuer credit rating on Hartford Life Inc. to BB/B from BBB/A-2. At the same time, they lowered the issuer and financial strength ratings on Hartford Life Insurance Company and Hartford Life and Annuity Insurance Company to BBB from BBB+. The above ratings were placed on CreditWatch with Negative implications.

On December 5, 2017, A.M. Best downgraded the financial strength rating to B++ (Good) from A- (Excellent) and the long-term issuer credit ratings to bbb+ from a- of Hartford Life Insurance Company and Hartford Life and Annuity Insurance Company. Additionally, A.M. Best downgraded the long-term issuer credit rating to bbb- from bbb of Hartford Life Inc. Concurrently, A.M. Best has placed all credit ratings for these entities under review with developing implications.

The following table summarizes Hartford Life Insurance Company's significant member companies' financial ratings from the major independent rating organizations as of February 27, 2018 :

Insurance Financial Strength Ratings:	A.M. Best	Standard & Poor's	Moody's
Hartford Life Insurance Company	B++	BBB	Baa3
Hartford Life and Annuity Insurance Company	B++	BBB	Baa3

These ratings are not a recommendation to buy or hold any of the Company's securities and they may be revised or revoked at any time at the sole discretion of the rating organization.

The agencies consider many factors in determining the final rating of an insurance company. One consideration is the relative level of statutory capital and surplus, (referred to collectively as "statutory capital") necessary to support the business written and is reported in accordance with accounting practices prescribed by the applicable state insurance department.

Statutory Capital

The Company’s stockholder's equity, as prepared using U.S. GAAP, was $6.7 billion as of December 31, 2017 . The Company’s estimated aggregate statutory capital and surplus, as prepared in accordance with the National Association of Insurance Commissioners’ Accounting Practices and Procedures Manual (“U.S. STAT”), was $3.6 billion as of December 31, 2017 .

Significant differences between U.S. GAAP stockholder’s equity and aggregate statutory capital prepared in accordance with U.S. STAT include the following:

- Costs incurred by the Company to acquire insurance policies are deferred under U.S. GAAP while those costs are expensed immediately under U.S. STAT.
- Temporary differences between the book and tax basis of an asset or liability which are recorded as deferred tax assets are evaluated for recoverability under U.S. GAAP while those amounts deferred are subject to limitations under U.S. STAT.
- The assumptions used in the determination of benefit reserves are prescribed under U.S. STAT, while the assumptions used under U.S. GAAP are generally the Company’s best estimates. The methodologies for determining life insurance reserve amounts are also different. For example, reserving for living benefit reserves under U.S. STAT is generally addressed by the Commissioners’ Annuity Reserving Valuation Methodology and the related Actuarial Guidelines, while under U.S. GAAP, those same living benefits are either embedded derivatives recorded at fair value or are recorded as additional minimum guarantee benefit reserves. The sensitivity of these life insurance reserves to changes in equity markets, as applicable, will be different between U.S. GAAP and U.S. STAT.
- The difference between the amortized cost and fair value of fixed maturity and other investments, net of tax, is recorded as an increase or decrease to the carrying value of the related asset and to equity under U.S. GAAP, while U.S. STAT only records certain securities at fair value, such as equity securities and certain lower rated bonds required by the NAIC to be recorded at the lower of amortized cost or fair value.
- U.S. STAT for life insurance companies establishes a formula reserve for realized and unrealized losses due to default and equity risks associated with certain invested assets (the Asset Valuation Reserve), while U.S. GAAP does not. Also, for those realized gains and losses caused by changes in interest rates, U.S. STAT for life insurance companies defers and amortizes the gains and losses, caused by changes in interest rates, into income over the original life to maturity of the asset sold (the Interest Maintenance Reserve) while U.S. GAAP does not.

In addition, certain assets, including a portion of premiums receivable and fixed assets, are non-admitted (recorded at zero value and charged against surplus) under U.S. STAT. U.S. GAAP generally evaluates assets based on their recoverability.

Risk-based Capital

The Company's U.S. insurance companies' states of domicile impose risk-based capital (“RBC”) requirements. The requirements provide a means of measuring the minimum amount of statutory capital appropriate for an insurance company to support its overall business operations, based on its size and risk profile. Regulatory compliance is determined by a ratio of a company's total adjusted capital (“TAC”) to its authorized control level RBC (“ACL RBC”). Companies below specific trigger points or ratios are classified within certain levels, each of which requires specified corrective action. The minimum level of TAC before corrective action commences (“Company Action Level”) is two times the ACL RBC. The adequacy of a company's capital is determined by the ratio of a company's TAC to its Company Action Level, known as the "RBC ratio". The Company and all of its operating insurance subsidiaries had RBC ratios in excess of the minimum levels required by the applicable insurance regulations. The RBC ratios for the Company and its principal life insurance operating subsidiaries were all in excess of 300% of their Company Action Levels as of December 31, 2017 and 2016 . The reporting of RBC ratios is not intended for the purpose of ranking any insurance company, or for use in connection with any marketing, advertising or promotional activities.

Contingencies

Legal Proceedings

For further information on other contingencies, see Note 10 - Commitments and Contingencies of Notes to Consolidated Financial Statements.

Legislative and Regulatory Developments

Tax Reform

At the end of 2017, Congress passed and the president signed, the Tax Cuts and Jobs Act of 2017 ("Tax Reform"), which enacted significant reforms to the U.S. tax code. The major areas of interest to the Company include the reduction of the corporate tax rate from 35% to 21% and the repeal of the corporate alternative minimum tax (AMT) and the refunding of AMT credits. We continue to analyze Tax Reform for other potential impacts. The U.S. Treasury and IRS will develop guidance implementing Tax Reform, and Congress may consider additional technical corrections to the legislation. Tax proposals and regulatory initiatives which have been or are being considered by Congress and/or the U.S. Treasury Department could have a material effect on the Company and its insurance businesses. The nature and timing of any Congressional or regulatory action with respect to any such efforts is unclear. For additional information on risks to the Company related to Tax Reform, please see the risk factor entitled "Changes in federal or state tax laws could adversely affect our business, financial condition, results of operations and liquidity" under "Risk Factors" in Part I.

Guaranty Fund and Other Insurance-related Assessments

For a discussion regarding Guaranty Fund and Other Insurance-related Assessments, see Note 10 - Commitments and Contingencies of Notes to Consolidated Financial Statements.

IMPACT OF NEW ACCOUNTING STANDARDS

For a discussion of accounting standards, see Note 1 - Basis of Presentation and Significant Accounting Policies of Notes to Consolidated Financial Statements.

Item 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

The Company's principal executive officer and its principal financial officer, based on their evaluation of the Company's disclosure controls and procedures (as defined in Exchange Act Rule 13a-15(e)) have concluded that the Company's disclosure controls and procedures are effective for the purposes set forth in the definition thereof in Exchange Act Rule 13a-15(e) as of December 31, 2017 .

Management's Annual Report on Internal Control Over Financial Reporting

The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting for the Company as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934.

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

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

The Company's management assessed its internal controls over financial reporting as of December 31, 2017 in relation to criteria for effective internal control over financial reporting described in " *Internal Control-Integrated Framework (2013)* " issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment under those criteria, The Company's management concluded that its internal control over financial reporting was effective as of December 31, 2017 .

This annual report does not include an attestation report of the company's registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's registered public accounting firm pursuant to rules of the Securities and Exchange Commission that permit the Company to provide only management's report in this annual report.

Changes in Internal Control Over Financial Reporting

There were no changes in the Company's internal control over financial reporting that occurred during the Company's fourth fiscal quarter of 2017 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

PART III

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The following table presents fees for professional services rendered by Deloitte & Touche LLP, the member firms of Deloitte Touche Tohmatsu, and their respective affiliates (collectively, the “Deloitte Entities”) for the audit of the Company’s annual financial statements, audit-related services, tax services and all other services for the years ended December 31, 2017 and 2016 .

(amounts are in whole dollars)	Year Ended December 31, 2017	Year Ended December 31, 2016
(1) Audit fees	$ 4,065,000	$ 5,877,000
(2) Audit-related fees [1]	—	12,500
(3) Tax fees	—	—
(4) All other fees	—	—
Total	**$ 4,065,000**	**$ 5,889,500**

[1] Fees for the year ended December 31, 2016 principally consisted of procedures related to a legal entity reorganization project.

The Hartford’s Audit Committee (the “Committee”) concluded that the provision of the non-audit services provided to The Hartford by the Deloitte Entities during 2017 and 2016 was compatible with maintaining the Deloitte Entities’ independence.

The Committee has established policies requiring pre-approval of audit and non-audit services provided by the independent registered public accounting firm. The policies require that the Committee pre-approve specifically described audit, and audit-related services, annually. For the annual pre-approval, the Committee approves categories of audit services, audit-related services and related fee budgets. For all pre-approvals, the Committee considers whether such services are consistent with the rules of the SEC and the Public Company Accounting Oversight Board on auditor independence. The independent registered public accounting firm and management report to the Committee on a timely basis regarding the services rendered by and actual fees paid to the independent registered public accounting firm to ensure that such services are within the limits approved by the Committee. The Committee’s policies require specific pre-approval of all tax services, internal control-related services and all other permitted services on an individual project basis. As provided by the Committee’s policies, the Committee has delegated to its Chairman the authority to address any requests for pre-approval of services between Committee meetings, up to a maximum of $100 thousand. The Chairman must report any pre-approvals to the full Committee at its next scheduled meeting.

PART IV

Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) Documents filed as a part of this report:

(1) **Consolidated Financial Statements.** See Index to Consolidated Financial Statements and Schedules elsewhere herein.

(2) **Consolidated Financial Statement Schedules.** See Index to Consolidated Financial Statement and Schedules elsewhere herein.

(3) **Exhibits.** See Exhibit Index elsewhere herein.

HARTFORD LIFE INSURANCE COMPANY
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS AND SCHEDULES

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholder of
Hartford Life Insurance Company
Hartford, Connecticut

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Hartford Life Insurance Company and subsidiaries (the "Company") as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive income, shareholders' equity, and cash flows, for each of the three years in the period ended December 31, 2017, and the related notes and the consolidated financial statement schedules listed in the Index at Item 15 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with the accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

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/ DELOITTE & TOUCHE LLP
Hartford, Connecticut
March 1, 2018

We have served as the Company's auditor since 2002.

HARTFORD LIFE INSURANCE COMPANY AND SUBSIDIARIES

Consolidated Statements of Operations

(In millions)	For the years ended December 31, 2017	2016	2015
Revenues			
Fee income and other	$ 906	$ 969	$ 1,097
Earned premiums	105	203	92
Net investment income	1,281	1,373	1,456
Net realized capital gains (losses):			
Total other-than-temporary impairment (“OTTI”) losses	(16)	(29)	(63)
OTTI losses recognized in other comprehensive income	2	1	2
Net OTTI losses recognized in earnings	(14)	(28)	(61)
Other net realized capital losses	(46)	(135)	(85)
Total net realized capital losses	(60)	(163)	(146)
Total revenues	**2,232**	**2,382**	**2,499**
Benefits, losses and expenses			
Benefits, loss and loss adjustment expenses	1,406	1,437	1,402
Amortization of deferred policy acquisition costs ("DAC")	48	114	69
Insurance operating costs and other expenses	400	472	524
Reinsurance gain on disposition	—	—	(28)
Dividends to policyholders	2	3	2
Total benefits, losses and expenses	**1,856**	**2,026**	**1,969**
Income before income taxes	**376**	**356**	**530**
Income tax expense	422	74	30
Net (loss) income	**$ (46)**	**$ 282**	**$ 500**

See Notes to Consolidated Financial Statements.

HARTFORD LIFE INSURANCE COMPANY AND SUBSIDIARIES
Consolidated Statements of Comprehensive Income (Loss)

(In millions)	Year Ended December 31, 2017	2016	2015
Net (loss) income	**$ (46)**	**$ 282**	**$ 500**
Other comprehensive income (loss):			
Change in net unrealized gain on securities	329	154	(615)
Change in net gain on cash-flow hedging instruments	(28)	(25)	(13)
OCI, net of tax	**301**	**129**	**(628)**
Comprehensive income (loss)	**$ 255**	**$ 411**	**$ (128)**

See Notes to Consolidated Financial Statements.

HARTFORD LIFE INSURANCE COMPANY AND SUBSIDIARIES
Consolidated Balance Sheets

(In millions, except for share data)	As of December 31, 2017	2016
Assets		
Investments:		
Fixed maturities, available-for-sale, at fair value (amortized cost of $20,914 and $22,507)	$ 22,799	$ 23,819
Fixed maturities, at fair value using the fair value option	32	82
Equity securities, available-for-sale, at fair value (cost of $140 and $142)	154	152
Mortgage loans (net of allowance for loan losses of $0 and $19)	2,872	2,811
Policy loans, at outstanding balance	1,432	1,442
Limited partnerships and other alternative investments	1,001	930
Other investments	213	293
Short-term investments	1,094	1,349
Total investments	29,597	30,878
Cash	537	554
Premiums receivable and agents' balances, net	15	18
Reinsurance recoverables	20,785	20,725
Deferred policy acquisition costs	405	463
Deferred income taxes, net	556	1,437
Other assets	1,003	606
Separate account assets	115,834	115,665
Total assets	**$ 168,732**	**$ 170,346**
Liabilities		
Reserve for future policy benefits	$ 14,482	$ 14,000
Other policyholder funds and benefits payable	29,228	30,588
Other liabilities	2,508	2,272
Separate account liabilities	115,834	115,665
Total liabilities	**162,052**	**162,525**
Commitments and Contingencies (Note 10)		
Stockholder's Equity		
Common stock—1,000 shares authorized, issued and outstanding, par value $5,690	6	6
Additional paid-in capital	3,539	4,935
Accumulated other comprehensive income, net of tax	1,023	722
Retained earnings	2,112	2,158
Total stockholder's equity	**6,680**	**7,821**
Total liabilities and stockholder's equity	**$ 168,732**	**$ 170,346**

See Notes to Consolidated Financial Statements.

HARTFORD LIFE INSURANCE COMPANY AND SUBSIDIARIES
Consolidated Statements of Changes in Stockholder's Equity

	Year Ended December 31,		
(In millions, except for share data)	**2017**	**2016**	**2015**
Common Stock	**$ 6**	**$ 6**	**$ 6**
Additional Paid-in Capital			
Additional Paid-in Capital, beginning of period	4,935	5,687	6,688
Return of capital to parent	(1,396)	(752)	(1,001)
Additional Paid-in Capital, end of period	**3,539**	**4,935**	**5,687**
Retained Earnings			
Retained Earnings, beginning of period	2,158	1,876	1,376
Net (loss) income	(46)	282	500
Retained Earnings, end of period	**2,112**	**2,158**	**1,876**
Accumulated Other Comprehensive Income, net of tax			
Accumulated Other Comprehensive Income, net of tax, beginning of period	722	593	1,221
Total other comprehensive income	301	129	(628)
Accumulated Other Comprehensive Income, net of tax, end of period	**1,023**	**722**	**593**
Total Stockholder's Equity	**$ 6,680**	**$ 7,821**	**$ 8,162**

See Notes to Consolidated Financial Statements.

HARTFORD LIFE INSURANCE COMPANY AND SUBSIDIARIES
Consolidated Statements of Cash Flows

	For the years ended December 31,		
(In millions)	**2017**	**2016**	**2015**
Operating Activities			
Net (loss) income	$ (46)	$ 282	$ 500
Adjustments to reconcile net (loss) income to net cash provided by operating activities			
Net realized capital losses	60	163	146
Amortization of deferred policy acquisition costs	48	114	69
Additions to deferred policy acquisition costs	(2)	(7)	(7)
Reinsurance gain on disposition	—	—	(28)
Depreciation and amortization (accretion), net	31	9	(14)
Other operating activities, net	143	33	38
Change in assets and liabilities:			
Decrease (increase) in reinsurance recoverables	4	117	(14)
(Decrease) increase in accrued and deferred income taxes	(5)	278	(62)
Impact of tax reform on accrued and deferred income taxes	396	—	—
Increase in unpaid losses and loss adjustment expenses, reserve for future policy benefits, and unearned premiums	387	111	276
Net changes in other assets and other liabilities	(219)	(316)	(222)
Net cash provided by operating activities	**797**	**784**	**682**
Investing Activities			
Proceeds from the sale/maturity/prepayment of:			
Fixed maturities, available-for-sale	10,315	10,152	11,465
Fixed maturities, fair value option	50	68	107
Equity securities, available-for-sale	203	321	586
Mortgage loans	396	371	467
Partnerships	113	395	252
Payments for the purchase of:			
Fixed maturities and short-term investments, available-for-sale	(8,713)	(8,889)	(11,755)
Fixed maturities, fair value option	—	(29)	(67)
Equity securities, available-for-sale	(199)	(58)	(535)
Mortgage loans	(469)	(263)	(282)
Partnerships	(235)	(151)	(199)
Net payments for derivatives	(283)	(261)	(167)
Net increase (decrease) in policy loans	12	2	(31)
Net additions to property and equipment	(18)	—	—
Net proceeds from (payments for) short-term investments	251	(769)	1,604
Other investing activities, net	43	(25)	1
Net cash provided by investing activities	**1,466**	**864**	**1,446**
Financing Activities			
Deposits and other additions to investment and universal life-type contracts	4,549	4,162	4,674
Withdrawals and other deductions from investment and universal life-type contracts	(13,749)	(14,871)	(16,972)
Net transfers from separate accounts related to investment and universal life-type contracts	7,969	9,811	10,987
Net increase in securities loaned or sold under agreements to repurchase	360	268	264
Return of capital to parent	(1,396)	(752)	(1,001)
Net repayments at maturity or settlement of consumer notes	(13)	(17)	(33)
Net cash used for financing activities	**(2,280)**	**(1,399)**	**(2,081)**
Net (decrease) increase in cash	(17)	249	47
Cash — beginning of year	554	305	258
Cash — end of year	**$ 537**	**$ 554**	**$ 305**
Supplemental Disclosure of Cash Flow Information			
Income tax received (paid)	57	210	(80)

See Notes to Consolidated Financial Statements.

1 . Basis of Presentation and Significant Accounting Policies

Basis of Presentation

Hartford Life Insurance Company (together with its subsidiaries, “HLIC”, “Company”, “we” or “our”) is a provider of insurance and investment products in the United States (“U.S.”) and is a wholly-owned subsidiary of Hartford Life, Inc., a Delaware corporation ("HLI"). The Hartford Financial Services Group, Inc. (“The Hartford”) is the ultimate parent of the Company.

During the year ended December 31, 2017 , the Company paid dividends of $1.4 billion to its parent.

The Consolidated Financial Statements have been prepared on the basis of accounting principles generally accepted in the United States of America (“U.S. GAAP”), which differ materially from the accounting practices prescribed by various insurance regulatory authorities.

Consolidation

The Consolidated Financial Statements include the accounts of HLIC and entities the Company directly or indirectly has a controlling financial interest in which the Company is required to consolidate. Entities in which HLIC has significant influence over the operating and financing decisions but is not required to consolidate are reported using the equity method. All intercompany transactions and balances between HLIC and its subsidiaries have been eliminated.

Use of Estimates

The preparation of financial statements, in conformity with U.S. GAAP, requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

The most significant estimates include those used in determining estimated gross profits used in the valuation and amortization of assets and liabilities associated with variable annuity and other universal life-type contracts; evaluation of other-than-temporary impairments on available-for-sale securities and valuation allowances on investments; living benefits required to be fair valued; valuation of investments and derivative instruments; valuation allowance on deferred tax assets; and contingencies relating to corporate litigation and regulatory matters. Certain of these estimates are particularly sensitive to market conditions, and deterioration and/or volatility in the worldwide debt or equity markets could have a material impact on the Consolidated Financial Statements.

Reclassifications

Certain reclassifications have been made to prior year financial information to conform to the current year presentation.

Sale of Life and Annuity Run-off Business

On December 3, 2017, the Company’s indirect parent, Hartford Holdings, Inc. ("HHI") entered into a definitive agreement to sell Hartford Life, Inc. ("HLI"), the Company's direct parent, to a group of investors led by Cornell Capital LLC, Atlas Merchant Capital LLC, TRB Advisors LP, Global Atlantic Financial Group, Pine Brook and J. Safra Group. Under the terms of the purchase and sale agreement, the investor group will form a limited partnership that will acquire HLI, a holding company, and HLI’s life and annuity operating subsidiaries, including the Company.

Future Adoption of New Accounting Standards

Reclassification of Effect of Tax Rate Change from AOCI to Retained Earnings

In February, the FASB issued new accounting guidance for the effect on deferred tax assets and liabilities related to items recorded in accumulated other comprehensive income ("AOCI") resulting from legislated tax reform enacted on December 22, 2017. The tax reform reduced the federal tax rate applied to the Company’s deferred tax balances from 35% to 21% on enactment. Under U.S. GAAP the Company recorded the total effect of the change in enacted tax rates on deferred tax balances in the income tax expense component of net income. The new accounting guidance permits the Company to reclassify $193 out of AOCI and into retained earnings for the “stranded” amount in AOCI that resulted from recording the tax effects of unrealized investment gains at a 35% tax rate because the 14 point reduction in tax rate was recognized in net income instead of other comprehensive income. The Company will adopt the new guidance as of January 1, 2018 and make this $193 reclassification.

1 . Basis of Presentation and Significant Accounting Policies (continued)

Hedging Activities

The FASB issued updated guidance on hedge accounting. The updates allow hedge accounting for new types of interest rate hedges of financial instruments and simplify documentation requirements to qualify for hedge accounting. In addition, any gain or loss from hedge ineffectiveness will be reported in the same income statement line with the effective hedge results and the hedged transaction. For cash flow hedges, the ineffectiveness will be recognized in earnings only when the hedged transaction affects earnings; otherwise, the ineffectiveness gains or losses will remain in AOCI. Under current accounting, total hedge ineffectiveness is reported separately in realized gains and losses apart from the hedged transaction. The updated guidance is effective January 1, 2019 through a cumulative effect adjustment that will reclassify cumulative ineffectiveness on open cash flow hedges from retained earnings to AOCI. Early adoption is permitted as of the beginning of a year. The Company has not yet determined the timing for adoption or estimated the effect on the Company's financial statements.

Financial Instruments - Credit Losses

The FASB issued updated guidance for recognition and measurement of credit losses on financial instruments. The new guidance will replace the "incurred loss" approach with an "expected loss" model for recognizing credit losses for instruments carried at other than fair value, which will initially result in the recognition of greater allowances for losses. The allowance will be an estimate of credit losses expected over the life of debt instruments, such as mortgage loans, reinsurance recoverables and receivables. Credit losses on fixed maturities available-for-sale ("AFS") carried at fair value will continue to be measured like other-than-temporary impairments ("OTTI"); however, the losses will be recognized through an allowance and no longer as an adjustment to the cost basis. Recoveries of OTTI will be recognized as reversals of valuation allowances and no longer accreted as investment income through an adjustment to the investment yield. The allowance on fixed maturities AFS cannot cause the net carrying value to be below fair value and, therefore, it is possible that future increases in fair value due to decreases in market interest rates could cause the reversal of a valuation allowance and increase net income. The new guidance also requires purchased financial assets with a more-than-insignificant amount of credit deterioration since original issuance to be recorded based on contractual amounts due and an initial allowance recorded at the date of purchase. The guidance is effective January 1, 2020 through a cumulative-effect adjustment to retained earnings for the change in the allowance for credit losses for debt instruments carried at other than fair value. No allowance will be recognized at adoption for fixed maturities AFS; rather, their cost basis will be evaluated for an allowance for credit losses prospectively. The Company expects to adopt the updated guidance January 1, 2020, as required, although earlier adoption is permitted as of January 1, 2019. The Company has not yet determined the effect on the Company's consolidated financial statements and the ultimate impact of the adoption will depend on the composition of the debt instruments and market conditions at the adoption date. Significant implementation matters yet to be addressed include estimating lifetime expected losses on debt instruments carried at other than fair value, determining the impact of valuation allowances on net investment income from fixed maturities AFS, updating our investment accounting system functionality to maintain adjustable valuation allowance on fixed maturities, AFS, subject to a fair value floor, and developing a detailed implementation plan.

Financial Instruments - Recognition and Measurement

The FASB issued updated guidance for the recognition and measurement of financial instruments. The new guidance will require investments in equity securities to be measured at fair value with any changes in valuation reported in net income except for investments that are consolidated or are accounted for under the equity method of accounting. The new guidance will also require a deferred tax asset resulting from net unrealized losses on available-for-sale fixed maturities that are recognized in AOCI to be evaluated for recoverability in combination with the Company's other deferred tax assets. Under existing guidance, the Company measures investments in equity securities, AFS, at fair value with changes in fair value reported in other comprehensive income. As required, the Company will adopt the guidance effective January 1, 2018 through a cumulative effect adjustment to retained earnings. Early adoption is not allowed. The impact to the Company will be increased volatility in net income beginning in 2018. Any difference in the evaluation of deferred tax assets may also affect stockholder's equity. Cash flows will not be affected. The impact will depend on the composition of the Company's investment portfolio in the future and changes in fair value of the Company's investments. As of January 1, 2018, the Company will reclassify from AOCI to retained earnings net unrealized gains of $11 related to equity securities, AFS having a fair value of $154 . Had the new accounting guidance been in place since the beginning of 2017 , the Company would have recognized mark-to-market gains of $3 after-tax in net income for the year ended December 31, 2017 .

Revenue Recognition

The FASB issued updated guidance for recognizing revenue. The guidance excludes insurance contracts and financial instruments. Revenue is to be recognized when, or as, goods or services are transferred to customers in an amount that reflects the consideration that an entity is expected to receive in exchange for those goods or services, and this accounting guidance is similar to current accounting for many transactions. The Company will adopt the guidance on January 1, 2018, as required, and the adoption will have no effect on the Company's financial position, results of operations or cash flows.

1 . Basis of Presentation and Significant Accounting Policies (continued)

Significant Accounting Policies

The Company’s significant accounting policies are as follows:

Segment Information

The Company has no reportable segments and is comprised of the run-off operations of annuity, institutional and private-placement life insurance businesses. The Company's determination that it has no reportable segments is based on the fact that the Company's chief operating decision maker reviews the Company's financial performance at a consolidated level.

Revenue Recognition

For investment and universal life-type contracts, the amounts collected from policyholders are considered deposits and are not included in revenue. Fee income for variable annuity and other universal life-type contracts consists of policy charges for policy administration, cost of insurance charges and surrender charges assessed against policyholders’ account balances and are recognized in the period in which services are provided. For the Company’s traditional life products, premiums are recognized as revenue when due from policyholders.

Income Taxes

The Company recognizes taxes payable or refundable for the current year and deferred taxes for the tax consequences of temporary differences between the financial reporting and tax basis of assets and liabilities. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years the temporary differences are expected to reverse. A deferred tax provision is recorded for the tax effects of differences between the Company's current taxable income and its income before tax under generally accepted accounting principles in the Consolidated Statements of Operations. For deferred tax assets, the Company records a valuation allowance that is adequate to reduce the total deferred tax asset to an amount that will more likely than not be realized.

The Company is included in The Hartford’s consolidated U.S. Federal income tax return. The Company and The Hartford have entered into a tax sharing agreement under which each member in the consolidated U.S. Federal income tax return will make payments between them such that, with respect to any period, the amount of taxes to be paid by the Company, subject to certain tax adjustments, is consistent with the “parent down” approach. Under this approach, the Company’s deferred tax assets and tax attributes are considered realized by it so long as the group is able to recognize (or currently use) the related deferred tax asset or attribute. Thus the need for a valuation allowance is determined at the consolidated return level rather than at the level of the individual entities comprising the consolidated group.

Investments

Overview

The Company’s investments in fixed maturities include bonds, structured securities, redeemable preferred stock and commercial paper. Most of these investments, along with certain equity securities, which include common and non-redeemable preferred stocks, are classified as available-for-sale ("AFS") and are carried at fair value. The after-tax difference between fair value and cost or amortized cost is reflected in stockholders’ equity as a component of AOCI, after adjustments for the effect of deducting certain life and annuity deferred policy acquisition costs and reserve adjustments. Effective January 1, 2018, equity securities will be measured at fair value with any changes in valuation reported in net income. For further information, see Financial Instruments - Recognition and Measurement discussion above. Fixed maturities for which the Company elected the fair value option are classified as FVO, generally certain securities that contain embedded credit derivatives, and are carried at fair value with changes in value recorded in realized capital gains and losses. Policy loans are carried at outstanding balance. Mortgage loans are recorded at the outstanding principal balance adjusted for amortization of premiums or discounts and net of valuation allowances. Short-term investments are carried at amortized cost, which approximates fair value. Limited partnerships and other alternative investments are reported at their carrying value and are primarily accounted for under the equity method with the Company’s share of earnings included in net investment income. Recognition of income related to limited partnerships and other alternative investments is delayed due to the availability of the related financial information, as private equity and other funds are generally on a three-month delay and hedge funds on a one-month delay. Accordingly, income for the years ended December 31, 2017 , 2016 , and 2015 may not include the full impact of current year changes in valuation of the underlying assets and liabilities of the funds, which are generally obtained from the limited partnerships and other alternative investments’ general partners. Other investments primarily consist of derivative instruments which are carried at fair value.

1 . Basis of Presentation and Significant Accounting Policies (continued)

Net Realized Capital Gains and Losses

Net realized capital gains and losses from investment sales are reported as a component of revenues and are determined on a specific identification basis. Net realized capital gains and losses also result from fair value changes in fixed maturities and equity securities FVO, and derivatives contracts (both free-standing and embedded) that do not qualify, or are not designated, as a hedge for accounting purposes, as well as ineffectiveness on derivatives that qualify for hedge accounting treatment, and the change in value of certain fair-value hedging instruments and their associated hedged item . Impairments and mortgage loan valuation allowances are recognized as net realized capital losses in accordance with the Company’s impairment and mortgage loan valuation allowance policies as discussed in Note 3 - Investments of Notes to Consolidated Financial Statements. Foreign currency transaction remeasurements are also included in net realized capital gains and losses.

Net Investment Income

Interest income from fixed maturities and mortgage loans is recognized when earned on the constant effective yield method based on estimated timing of cash flows. The amortization of premium and accretion of discount for fixed maturities also takes into consideration call and maturity dates that produce the lowest yield. For securitized financial assets subject to prepayment risk, yields are recalculated and adjusted periodically to reflect historical and/or estimated future prepayments using the retrospective method; however, if these investments are impaired and for certain other asset-backed securities, any yield adjustments are made using the prospective method. Prepayment fees and make-whole payments on fixed maturities and mortgage loans are recorded in net investment income when earned. For equity securities, dividends are recognized as investment income on the ex-dividend date. Limited partnerships and other alternative investments primarily use the equity method of accounting to recognize the Company’s share of earnings; however, for a portion of those investments, the Company used investment fund accounting applied to a wholly-owned fund of funds which was liquidated during 2016. For impaired debt securities, the Company accretes the new cost basis to the estimated future cash flows over the expected remaining life of the security by prospectively adjusting the security’s yield, if necessary. The Company’s non-income producing investments were not material for the years ended December 31, 2017 , 2016 and 2015 .

Derivative Instruments

Overview

The Company utilizes a variety of over-the-counter ("OTC"), transactions cleared through central clearing houses ("OTC-cleared") and exchange traded derivative instruments as part of its overall risk management strategy as well as to enter into replication transactions . The types of instruments may include swaps, caps, floors, forwards, futures and options to achieve one of four Company-approved objectives:

- to hedge risk arising from interest rate, equity market, commodity market, credit spread and issuer default, price or currency exchange rate risk or volatility;
- to manage liquidity;
- to control transaction costs;
- to enter into synthetic replication transactions.

Interest rate and credit default swaps involve the periodic exchange of cash flows with other parties, at specified intervals, calculated using agreed upon rates or other financial variables and notional principal amounts. Generally, little to no cash or principal payments are exchanged at the inception of the contract. Typically, at the time a swap is entered into, the cash flow streams exchanged by the counterparties are equal in value.

Interest rate cap and floor contracts entitle the purchaser to receive from the issuer at specified dates, the amount, if any, by which a specified market rate exceeds the cap strike interest rate or falls below the floor strike interest rate, applied to a notional principal amount. A premium payment determined at inception is made by the purchaser of the contract and no principal payments are exchanged.

Forward contracts are customized commitments that specify a rate of interest or currency exchange rate to be paid or received on an obligation beginning on a future start date and are typically settled in cash.

Financial futures are standardized commitments to either purchase or sell designated financial instruments, at a future date, for a specified price and may be settled in cash or through delivery of the underlying instrument. Futures contracts trade on organized exchanges. Margin requirements for futures are met by pledging securities or cash, and changes in the futures’ contract values are settled daily in cash.

Option contracts grant the purchaser, for a premium payment, the right to either purchase from or sell to the issuer a financial instrument at a specified price, within a specified period or on a stated date. The contracts may reference commodities, which grant the purchaser the right to either purchase from or sell to the issuer commodities at a specified price, within a specified period or on a stated date. Option contracts are typically settled in cash.

1 . Basis of Presentation and Significant Accounting Policies (continued)

Foreign currency swaps exchange an initial principal amount in two currencies, agreeing to re-exchange the currencies at a future date, at an agreed upon exchange rate. There may also be a periodic exchange of payments at specified intervals calculated using the agreed upon rates and exchanged principal amounts.

The Company’s derivative transactions conducted in insurance company subsidiaries are used in strategies permitted under the derivative use plans required by the State of Connecticut and the State of New York insurance departments.

Accounting and Financial Statement Presentation of Derivative Instruments and Hedging Activities

Derivative instruments are recognized on the Consolidated Balance Sheets at fair value and are reported in Other Investments and Other Liabilities. For balance sheet presentation purposes, the Company has elected to offset the fair value amounts, income accruals, and related cash collateral receivables and payables of OTC derivative instruments executed in a legal entity and with the same counterparty or under a master netting agreement, which provides the Company with the legal right of offset.

The Company clears certain interest rate swap and credit default swap derivative transactions through central clearing houses. OTC-cleared derivatives require initial collateral at the inception of the trade in the form of cash or highly liquid securities, such as U.S. Treasuries and government agency investments. Central clearing houses also require additional cash as variation margin based on daily market value movements. For information on collateral, see the derivative collateral arrangements section in Note 4 - Derivative Instruments of Notes to Consolidated Financial Statements. In addition, OTC-cleared transactions include price alignment amounts either received or paid on the variation margin, which are reflected in realized capital gains and losses or, if characterized as interest, in net investment income.

On the date the derivative contract is entered into, the Company designates the derivative as (1) a hedge of the fair value of a recognized asset or liability (“fair value” hedge), (2) a hedge of the variability in cash flows of a forecasted transaction or of amounts to be received or paid related to a recognized asset or liability (“cash flow” hedge), (3) a hedge of a net investment in a foreign operation (“net investment” hedge) or (4) held for other investment and/or risk management purposes, which primarily involve managing asset or liability related risks and do not qualify for hedge accounting.

Fair Value Hedges - Changes in the fair value of a derivative that is designated and qualifies as a fair value hedge, along with the changes in the fair value of the hedged asset or liability that is attributable to the hedged risk, are recorded in current period earnings as net realized capital gains and losses with any differences between the net change in fair value of the derivative and the hedged item representing the hedge ineffectiveness. Periodic cash flows and accruals of income/expense ("periodic derivative net coupon settlements") are recorded in the line item of the Consolidated Statements of Operations in which the cash flows of the hedged item are recorded.

Cash Flow Hedges - Changes in the fair value of a derivative that is designated and qualifies as a cash flow hedge, including foreign-currency cash flow hedges, are recorded in AOCI and are reclassified into earnings when the variability of the cash flow of the hedged item impacts earnings. Gains and losses on derivative contracts that are reclassified from AOCI to current period earnings are included in the line item in the Consolidated Statements of Operations in which the cash flows of the hedged item are recorded. Any hedge ineffectiveness is recorded immediately in current period earnings as net realized capital gains and losses. Periodic derivative net coupon settlements are recorded in the line item of the Consolidated Statements of Operations in which the cash flows of the hedged item are recorded. Cash flows from cash flow hedges are presented in the same category as the cash flows from the items being hedged in the Consolidated Statement of Cash Flows.

Other Investment and/or Risk Management Activities - The Company’s other investment and/or risk management activities primarily relate to strategies used to reduce economic risk or replicate permitted investments and do not receive hedge accounting treatment. Changes in the fair value, including periodic derivative net coupon settlements, of derivative instruments held for other investment and/or risk management purposes are reported in current period earnings as net realized capital gains and losses.

1 . Basis of Presentation and Significant Accounting Policies (continued)

Hedge Documentation and Effectiveness Testing

To qualify for hedge accounting treatment, a derivative must be highly effective in mitigating the designated changes in fair value or cash flow of the hedged item. At hedge inception, the Company formally documents all relationships between hedging instruments and hedged items, as well as its risk-management objective and strategy for undertaking each hedge transaction. The documentation process includes linking derivatives that are designated as fair value, cash flow, or net investment hedges to specific assets or liabilities on the balance sheet or to specific forecasted transactions and defining the effectiveness and ineffectiveness testing methods to be used. The Company also formally assesses both at the hedge's inception and ongoing on a quarterly basis, whether the derivatives that are used in hedging transactions have been and are expected to continue to be highly effective in offsetting changes in fair values, cash flows or net investment in foreign operations of hedged items. Hedge effectiveness is assessed primarily using quantitative methods as well as using qualitative methods. Quantitative methods include regression or other statistical analysis of changes in fair value or cash flows associated with the hedge relationship. Qualitative methods may include comparison of critical terms of the derivative to the hedged item. Hedge ineffectiveness of the hedge relationships are measured each reporting period using the "Change in Variable Cash Flows Method", the "Change in Fair Value Method", the "Hypothetical Derivative Method", or the "Dollar Offset Method".

Discontinuance of Hedge Accounting

The Company discontinues hedge accounting prospectively when (1) it is determined that the qualifying criteria are no longer met; (2) the derivative is no longer designated as a hedging instrument; or (3) the derivative expires or is sold, terminated or exercised.

When hedge accounting is discontinued because it is determined that the derivative no longer qualifies as an effective fair value hedge, the derivative continues to be carried at fair value on the balance sheet with changes in its fair value recognized in current period earnings. Changes in the fair value of the hedged item attributable to the hedged risk is no longer adjusted through current period earnings and the existing basis adjustment is amortized to earnings over the remaining life of the hedged item through the applicable earnings component associated with the hedged item.

When cash flow hedge accounting is discontinued because the Company becomes aware that it is not probable that the forecasted transaction will occur, the derivative continues to be carried on the balance sheet at its fair value, and gains and losses that were accumulated in AOCI are recognized immediately in earnings.

In other situations in which hedge accounting is discontinued, including those where the derivative is sold, terminated or exercised, amounts previously deferred in AOCI are reclassified into earnings when earnings are impacted by the hedged item.

Embedded Derivatives

The Company purchases investments and has previously issued financial products that contain embedded derivative instruments. When it is determined that (1) the embedded derivative possesses economic characteristics that are not clearly and closely related to the economic characteristics of the host contract and (2) a separate instrument with the same terms would qualify as a derivative instrument, the embedded derivative is bifurcated from the host for measurement purposes. The embedded derivative, which is reported with the host instrument in the Consolidated Balance Sheets, is carried at fair value with changes in fair value reported in net realized capital gains and losses.

Credit Risk

Credit risk is defined as the risk of financial loss due to uncertainty of an obligor's or counterparty's ability or willingness to meet its obligations in accordance with agreed upon terms. Credit exposures are measured using the market value of the derivatives, resulting in amounts owed to the Company by its counterparties or potential payment obligations from the Company to its counterparties. The Company generally requires that OTC derivative contracts, other than certain forward contracts, be governed by International Swaps and Derivatives Association ("ISDA") agreements which are structured by legal entity and by counterparty, and permit right of offset. Some agreements require daily collateral settlement based upon agreed upon thresholds. For purposes of daily derivative collateral maintenance, credit exposures are generally quantified based on the prior business day's market value and collateral is pledged to and held by, or on behalf of, the Company to the extent the current value of the derivatives exceed the contractual thresholds. For the Company's domestic derivative programs, the maximum uncollateralized threshold for a derivative counterparty for a single legal entity is $10 . The Company also minimizes the credit risk of derivative instruments by entering into transactions with high quality counterparties primarily rated A or better, which are monitored and evaluated by the Company's risk management team and reviewed by senior management. OTC-cleared derivatives are governed by clearing house rules. Transactions cleared through a central clearing house reduce risk due to their ability to require daily variation margin and act as an independent valuation source. In addition, the Company monitors counterparty credit exposure on a monthly basis to ensure compliance with Company policies and statutory limitations.

Cash

Cash represents cash on hand and demand deposits with banks or other financial institutions.

1 . Basis of Presentation and Significant Accounting Policies (continued)

Reinsurance

The Company cedes insurance to affiliated and unaffiliated insurers in order to limit its maximum losses and to diversify its exposures and provide statutory surplus relief. Such arrangements do not relieve the Company of its primary liability to policyholders. Failure of reinsurers to honor their obligations could result in losses to the Company. The Company also assumes reinsurance from other insurers.

Reinsurance accounting is followed for ceded and assumed transactions that provide indemnification against loss or liability relating to insurance risk (i.e., risk transfer). To meet risk transfer requirements, a reinsurance agreement must include insurance risk, consisting of underwriting, investment, and timing risk, and a reasonable possibility of a significant loss to the reinsurer. If the ceded and assumed transactions do not meet risk transfer requirements, the Company accounts for these transactions as financing transactions.

Premiums, benefits, losses and loss adjustment expenses reflect the net effects of ceded and assumed reinsurance transactions. Included in other assets are prepaid reinsurance premiums, which represent the portion of premiums ceded to reinsurers applicable to the unexpired terms of the reinsurance agreements. Included in reinsurance recoverables are balances due from reinsurance companies for paid and unpaid losses and loss adjustment expenses and are presented net of any necessary allowance for uncollectible reinsurance.

The Company reinsures certain of its risks to other reinsurers under yearly renewable term, coinsurance, and modified coinsurance arrangements, and variations thereof. The cost of reinsurance related to long-duration contracts is accounted for over the life of the underlying reinsured policies using assumptions consistent with those used to account for the underlying policies.

The Company evaluates the financial condition of its reinsurers and concentrations of credit risk. Reinsurance is placed with reinsurers that meet strict financial criteria established by the Company.

Deferred Policy Acquisition Costs

Deferred policy acquisition costs ("DAC") represent costs that are directly related to the acquisition of new and renewal insurance contracts and incremental direct costs of contract acquisition that are incurred in transactions with either independent third parties or employees. Such costs primarily include commissions, premium taxes, costs of policy issuance and underwriting, and certain other expenses that are directly related to successfully issued contracts.

For universal life-type contracts (including variable annuities), the DAC asset is amortized over the estimated life of the contracts acquired in proportion to the present value of estimated gross profits ("EGPs"). The Company also uses the present value EGPs to determine reserves for universal life type contracts (including variable annuities) with death or other insurance benefits such as guaranteed minimum death, life-contingent guaranteed minimum withdrawal and universal life insurance secondary guarantee benefits. These benefits are accounted for and collectively referred to as death and other insurance benefit reserves and are held in addition to the account value liability representing policyholder funds.

For most life insurance product contracts, including variable annuities, the Company estimates gross profits over 20 years as EGPs emerging subsequent to that time frame are immaterial. Contracts sold in a particular year are aggregated into cohorts. Future gross profits for each cohort are projected over the estimated lives of the underlying contracts, based on future account value projections for variable annuity products. The projection of future account values requires the use of certain assumptions including: separate account returns; separate account fund mix; fees assessed against the contract holder’s account balance; f ull and partial surrender rates; interest credited; mortality; and the extent and duration of hedging activities and hedging costs.

The Company determines EGPs from a single deterministic reversion to mean ("RTM") separate account return projection which is an estimation technique commonly used by insurance entities to project future separate account returns. Through this estimation technique, the Company’s DAC model is adjusted to reflect actual fund performance at the end of each quarter. Through a consideration of recent market returns, the Company will unlock ("Unlock"), or adjust, projected returns over a future period so that the account value returns to the long-term expected rate of return, providing that those projected returns do not exceed certain caps. This Unlock for future separate account returns is determined each quarter.

In the fourth quarter of 2017, the Company completed a comprehensive policyholder behavior assumption study which resulted in a non-market related after-tax charge and incorporated the results of that study into its projection of future gross profits. Additionally, throughout the year, the Company evaluates various aspects of policyholder behavior and will revise its policyholder assumptions if credible emerging data indicates that changes are warranted. The Company will continue to evaluate its assumptions related to policyholder behavior as initiatives to reduce the size of the variable annuity business are implemented by management. Upon completion of an annual assumption study or evaluation of credible new information, the Company will revise its assumptions to reflect its current best estimate. These assumption revisions will change the projected account values and the related EGPs in the DAC models, as well as, EGPs used in the death and other insurance benefit reserving models.

1 . Basis of Presentation and Significant Accounting Policies (continued)

All assumption changes that affect the estimate of future EGPs including the update of current account values, the use of the RTM estimation technique, and policyholder behavior assumptions are considered an Unlock in the period of revision. An Unlock adjusts the DAC and death and other insurance benefit reserve balances in the Consolidated Balance Sheets with an offsetting benefit or charge in the Consolidated Statements of Operations in the period of the revision. An Unlock revises EGPs to reflect the Company's current best estimate assumptions. The Company also tests the aggregate recoverability of DAC by comparing the existing DAC balance to the present value of future EGPs. An Unlock that results in an after-tax benefit generally occurs as a result of actual experience or future expectations of product profitability being favorable compared to previous estimates. An Unlock that results in an after-tax charge generally occurs as a result of actual experience or future expectations of product profitability being unfavorable compared to previous estimates.

Policyholders may exchange contracts or make modifications to existing contracts. If the new contract or the modification results in a substantially changed replacement contract, the existing DAC is written off through income. If the new or modified contract is not substantially changed, the existing DAC continues to be amortized and incremental costs are expensed in the period incurred.

Reserve for Future Policy Benefits

Reserve for Future Policy Benefits on Universal Life-type Contracts

Certain contracts classified as universal life-type include death and other insurance benefit features including guaranteed minimum death benefit ("GMDB") and the life-contingent portion of guaranteed minimum withdrawal benefit ("GMWB") riders offered with variable annuity contracts, as well as secondary guarantee benefits offered with universal life insurance contracts. Universal life insurance secondary guarantee benefits ensure that the policy will not terminate, and will continue to provide a death benefit, even if there is insufficient policy value to cover the monthly deductions and charges. GMDB riders on variable annuities provide a death benefit during the accumulation phase that is generally equal to the greater of (a) the contract value at death or (b) premium payments less any prior withdrawals and may include adjustments that increase the benefit, such as for maximum anniversary value ("MAV"). For the Company's products with GMWB riders, the withdrawal benefit can exceed the guaranteed remaining balance ("GRB"), which is generally equal to premiums less withdrawals. In addition to recording an account value liability that represents policyholder funds, the Company records a death and other insurance benefit liability for GMDBs, the life-contingent portion of GMWBs and the universal life insurance secondary guarantees. This death and other insurance benefit liability is reported in reserve for future policy benefits in the Company's Consolidated Balance Sheets. Changes in the death and other insurance benefit reserves are recorded in benefits, losses and loss adjustment expenses in the Company's Consolidated Statements of Operations.

The death and other insurance benefit liability is determined by estimating the expected present value of the benefits in excess of the policyholder's expected account value in proportion to the present value of total expected assessments and investment margin. Total expected assessments are the aggregate of all contract charges, including those for administration, mortality, expense, and surrender. The liability is accrued as actual assessments are earned. The expected present value of benefits and assessments are generally derived from a set of stochastic scenarios that have been calibrated to our RTM separate account returns and assumptions including market rates of return, volatility, discount rates, lapse rates and mortality experience. Consistent with the Company's policy on the Unlock, the Company regularly evaluates estimates used and adjusts the liability, with a related charge or credit to benefits, losses and loss adjustment expenses. For further information on the Unlock, see the Deferred Policy Acquisition Costs accounting policy section within this footnote.

The Company reinsures a portion of its in-force GMDB and all of its universal life insurance secondary guarantees. Net reinsurance costs are recognized ratably over the accumulation period based on total expected assessments.

Reserve for Future Policy Benefits on Traditional Annuity and Other Contracts

Traditional annuities recorded within the reserve for future policy benefits primarily include life-contingent contracts in the payout phase such as structured settlements and terminal funding agreements. Other contracts within the reserve for policyholder benefits include whole life and guaranteed term life insurance contracts. The reserve for future policy benefits is calculated using standard actuarial methods considering the present value of future benefits and related expenses to be paid less the present value of the portion of future premiums required using assumptions "locked in" at the time the policies were issued, including discount rate, withdrawal, mortality and expense assumptions deemed appropriate at the issue date. Future policy benefits are computed at amounts that, with additions from any estimated premiums to be received and with interest on such reserves compounded annually at assumed rates, are expected to be sufficient to meet the Company's policy obligations at their maturities or in the event of an insured's death. While assumptions are locked in upon issuance of new contracts and annuitizations of existing contracts, significant changes in experience or assumptions may require the Company to establish premium deficiency reserves. Premium deficiency reserves, if any, are established based on current assumptions without considering a provision for adverse deviation. Changes in or deviations from the assumptions used can significantly affect the Company's reserve levels and results from operations.

1 . Basis of Presentation and Significant Accounting Policies (continued)

Other Policyholder Funds and Benefits Payable

Other policyholder funds and benefits payable primarily include the non-variable account values associated with variable annuity and other universal life-type contracts, investment contracts, the non-life contingent portion of GMWBs that are accounted for as embedded derivatives at fair value as well as other policyholder account balances associated with our life insurance businesses. Investment contracts are non-life contingent and include institutional and governmental deposits, structured settlements and fixed annuities. The liability for investment contracts is equal to the balance that accrues to the benefit of the contract holder as of the financial statement date, which includes the accumulation of deposits plus credited interest, less withdrawals, payments and assessments through the financial statement date. For discussion of fair value of GMWBs that represent embedded derivatives, see Note 2 - Fair Value Measurements of Notes to Consolidated Financial Statements.

Separate Account Liabilities

The Company records the variable account value portion of variable annuities, variable life insurance products and institutional and governmental investment contracts within separate accounts. Separate account assets are reported at fair value and separate account liabilities are reported at amounts consistent with separate account assets. Investment income and gains and losses from those separate account assets accrue directly to the policyholder, who assumes the related investment risk, and are offset by change in the related liability. Changes in the value of separate account assets and separate account liabilities are reported in the same line item in the Consolidated Statements of Operations. The Company earns fee income for investment management, certain administrative services and mortality and expense risks.

2. Fair Value Measurements

The Company carries certain financial assets and liabilities at estimated fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market in an orderly transaction between market participants. Our fair value framework includes a hierarchy that gives the highest priority to the use of quoted prices in active markets, followed by the use of market observable inputs, followed by the use of unobservable inputs. The fair value hierarchy levels are as follows:

Level 1	Fair values based primarily on unadjusted quoted prices for identical assets, or liabilities, in active markets that the Company has the ability to access at the measurement date.
Level 2	Fair values primarily based on observable inputs, other than quoted prices included in Level 1, or based on prices for similar assets and liabilities.
Level 3	Fair values derived when one or more of the significant inputs are unobservable (including assumptions about risk). With little or no observable market, the determination of fair values uses considerable judgment and represents the Company's best estimate of an amount that could be realized in a market exchange for the asset or liability. Also included are securities that are traded within illiquid markets and/or priced by independent brokers.

The Company will classify the financial asset or liability by level based upon the lowest level input that is significant to the determination of the fair value. In most cases, both observable inputs (e.g., changes in interest rates) and unobservable inputs (e.g., changes in risk assumptions) are used to determine fair values that the Company has classified within Level 3.

2. Fair Value Measurements (continued)

Assets and (Liabilities) Carried at Fair Value by Hierarchy Level as of December 31, 2017

	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets accounted for at fair value on a recurring basis				
Fixed maturities, AFS				
Asset backed securities ("ABS")	$ 819	$ —	$ 806	$ 13
Collateralized debt obligations ("CDOs")	888	—	815	73
Commercial mortgage-backed securities ("CMBS")	2,084	—	2,058	26
Corporate	14,038	—	13,595	443
Foreign government/government agencies	407	—	406	1
Municipal	1,266	—	1,228	38
Residential mortgage-backed securities ("RMBS")	1,427	—	735	692
U.S. Treasuries	1,870	284	1,586	—
Total fixed maturities	22,799	284	21,229	1,286
Fixed maturities, FVO	32	—	32	—
Equity securities, trading [1]	12	12	—	—
Equity securities, AFS	154	61	47	46
Derivative assets				
Credit derivatives	1	—	1	—
Foreign exchange derivatives	(1)	—	(1)	—
Interest rate derivatives	47	—	47	—
GMWB hedging instruments	69	—	35	34
Macro hedge program	19	—	—	19
Total derivative assets [2]	135	—	82	53
Short-term investments	1,094	807	287	—
Reinsurance recoverable for GMWB	36	—	—	36
Modified coinsurance reinsurance contracts	55	—	55	—
Separate account assets [3]	113,302	73,538	38,677	185
Total assets accounted for at fair value on a recurring basis	**$ 137,619**	**$ 74,702**	**$ 60,409**	**$ 1,606**
Liabilities accounted for at fair value on a recurring basis				
Other policyholder funds and benefits payable				
GMWB embedded derivative	$ (75)	$ —	$ —	$ (75)
Total other policyholder funds and benefits payable	(75)	—	—	(75)
Derivative liabilities				
Foreign exchange derivatives	(187)	—	(187)	—
Interest rate derivatives	(403)	—	(374)	(29)
GMWB hedging instruments	(2)	—	(2)	—
Macro hedge program	4	—	—	4
Total derivative liabilities [4]	(588)	—	(563)	(25)
Total liabilities accounted for at fair value on a recurring basis	**$ (663)**	**$ —**	**$ (563)**	**$ (100)**

2. Fair Value Measurements (continued)

Assets and (Liabilities) Carried at Fair Value by Hierarchy Level as of December 31, 2016

	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets accounted for at fair value on a recurring basis				
Fixed maturities, AFS				
ABS	$ 993	$ —	$ 956	$ 37
CDOs	940	—	680	260
CMBS	2,146	—	2,125	21
Corporate	14,693	—	14,127	566
Foreign government/government agencies	345	—	328	17
Municipal	1,189	—	1,117	72
RMBS	1,760	—	1,049	711
U.S. Treasuries	1,753	230	1,523	—
Total fixed maturities	23,819	230	21,905	1,684
Fixed maturities, FVO	82	—	82	—
Equity securities, trading [1]	11	11	—	—
Equity securities, AFS	152	20	88	44
Derivative assets				
Credit derivatives	(1)	—	(1)	—
Foreign exchange derivatives	4	—	4	—
Interest rate derivatives	30	—	30	—
GMWB hedging instruments	74	—	14	60
Macro hedge program	128	—	8	120
Total derivative assets [2]	235	—	55	180
Short-term investments	1,349	637	712	—
Reinsurance recoverable for GMWB	73	—	—	73
Modified coinsurance reinsurance contracts	68	—	68	—
Separate account assets [3]	111,634	71,606	38,856	201
Total assets accounted for at fair value on a recurring basis	**$ 137,423**	**$ 72,504**	**$ 61,766**	**$ 2,182**
Liabilities accounted for at fair value on a recurring basis				
Other policyholder funds and benefits payable				
GMWB embedded derivative	$ (241)	$ —	$ —	$ (241)
Equity linked notes	(33)	—	—	(33)
Total other policyholder funds and benefits payable	(274)	—	—	(274)
Derivative liabilities				
Credit derivatives	1	—	1	—
Equity derivatives	33	—	33	—
Foreign exchange derivatives	(247)	—	(247)	—
Interest rate derivatives	(434)	—	(404)	(30)
GMWB hedging instruments	20	—	(1)	21
Macro hedge program	50	—	3	47
Total derivative liabilities [4]	(577)	—	(615)	38
Total liabilities accounted for at fair value on a recurring basis	**$ (851)**	**$ —**	**$ (615)**	**$ (236)**

[1] Included in other investments on the Consolidated Balance Sheets.

[2] Includes OTC and OTC-cleared derivative instruments in a net positive fair value position after consideration of the accrued interest and impact of collateral posting requirements which may be imposed by agreements, clearing house rules, and applicable law. See footnote 4 to this table for derivative liabilities.

[3] Approximately $2.5 billion and $4.0 billion of investment sales receivable, as of December 31, 2017 and December 31, 2016 , respectively, are excluded from this disclosure requirement because they are trade receivables in the ordinary course of business where the carrying amount approximates fair value. Included in the total fair value amount are $ 0.9 billion and $1.0 billion of investments, as of December 31, 2017 and December 31, 2016 , respectively, for which the fair value is estimated using the net asset value per unit as a practical expedient which are excluded from the disclosure requirement to classify amounts in the fair value hierarchy.

[4] Includes OTC and OTC-cleared derivative instruments in a net negative fair value position (derivative liability) after consideration of the accrued interest and impact of collateral posting requirements which may be imposed by agreements, clearing house rules and applicable law.

2. Fair Value Measurements (continued)

Fixed Maturities, Equity Securities, Short-term Investments, and Free-standing Derivatives

Valuation Techniques

The Company generally determines fair values using valuation techniques that use prices, rates, and other relevant information evident from market transactions involving identical or similar instruments. Valuation techniques also include, where appropriate, estimates of future cash flows that are converted into a single discounted amount using current market expectations. The Company uses a "waterfall" approach comprised of the following pricing sources and techniques, which are listed in priority order:

- Quoted prices, unadjusted, for identical assets or liabilities in active markets, which are classified as Level 1.
- Prices from third-party pricing services, which primarily utilize a combination of techniques. These services utilize recently reported trades of identical, similar, or benchmark securities making adjustments for market observable inputs available through the reporting date. If there are no recently reported trades, they may use a discounted cash flow technique to develop a price using expected cash flows based upon the anticipated future performance of the underlying collateral discounted at an estimated market rate. Both techniques develop prices that consider the time value of future cash flows and provide a margin for risk, including liquidity and credit risk. Most prices provided by third-party pricing services are classified as Level 2 because the inputs used in pricing the securities are observable. However, some securities that are less liquid or trade less actively are classified as Level 3. Additionally, certain long-dated securities, including certain municipal securities, foreign government/government agency securities, and bank loans, include benchmark interest rate or credit spread assumptions that are not observable in the marketplace and are thus classified as Level 3.
- Internal matrix pricing, which is a valuation process internally developed for private placement securities for which the Company is unable to obtain a price from a third-party pricing service. Internal pricing matrices determine credit spreads that, when combined with risk-free rates, are applied to contractual cash flows to develop a price. The Company develops credit spreads using market based data for public securities adjusted for credit spread differentials between public and private securities, which are obtained from a survey of multiple private placement brokers. The market-based reference credit spread considers the issuer's financial strength and term to maturity, using an independent public security index and trade information, while the credit spread differential considers the non-public nature of the security. Securities priced using internal matrix pricing are classified as Level 2 because the inputs are observable or can be corroborated with observable data.
- Independent broker quotes, which are typically non-binding and use inputs that can be difficult to corroborate with observable market based data. Brokers may use present value techniques using assumptions specific to the security types, or they may use recent transactions of similar securities. Due to the lack of transparency in the process that brokers use to develop prices, valuations that are based on independent broker quotes are classified as Level 3.

The fair value of free-standing derivative instruments are determined primarily using a discounted cash flow model or option model technique and incorporate counterparty credit risk. In some cases, quoted market prices for exchange-traded and OTC-cleared derivatives may be used and in other cases independent broker quotes may be used. The pricing valuation models primarily use inputs that are observable in the market or can be corroborated by observable market data. The valuation of certain derivatives may include significant inputs that are unobservable, such as volatility levels, and reflect the Company's view of what other market participants would use when pricing such instruments. Unobservable market data is used in the valuation of customized derivatives that are used to hedge certain GMWB variable annuity riders. See the section "GMWB Embedded, Customized, and Reinsurance Derivatives" below for further discussion of the valuation model used to value these customized derivatives.

Valuation Controls

The fair value process for investments is monitored by the Valuation Committee, which is a cross-functional group of senior management within the Company that meets at least quarterly. The purpose of the committee is to oversee the pricing policy and procedures, as well as to approve changes to valuation methodologies and pricing sources. Controls and procedures used to assess third-party pricing services are reviewed by the Valuation Committee, including the results of annual due-diligence reviews.

There are also two working groups under the Valuation Committee: a Securities Fair Value Working Group ("Securities Working Group") and a Derivatives Fair Value Working Group ("Derivatives Working Group"). The working groups, which include various investment, operations, accounting and risk management professionals, meet monthly to review market data trends, pricing and trading statistics and results, and any proposed pricing methodology changes.

2. Fair Value Measurements (continued)

The Securities Working Group reviews prices received from third parties to ensure that the prices represent a reasonable estimate of the fair value. The group considers trading volume, new issuance activity, market trends, new regulatory rulings and other factors to determine whether the market activity is significantly different than normal activity in an active market. A dedicated pricing unit follows up with trading and investment sector professionals and challenges prices of third-party pricing services when the estimated assumptions used differ from what the unit believes a market participant would use. If the available evidence indicates that pricing from third-party pricing services or broker quotes is based upon transactions that are stale or not from trades made in an orderly market, the Company places little, if any, weight on the third party service's transaction price and will estimate fair value using an internal process, such as a pricing matrix.

The Derivatives Working Group reviews the inputs, assumptions and methodologies used to ensure that the prices represent a reasonable estimate of the fair value. A dedicated pricing team works directly with investment sector professionals to investigate the impacts of changes in the market environment on prices or valuations of derivatives. New models and any changes to current models are required to have detailed documentation and are validated to a second source. The model validation documentation and results of validation are presented to the Valuation Committee for approval.

The Company conducts other monitoring controls around securities and derivatives pricing including, but not limited to, the following:

- Review of daily price changes over specific thresholds and new trade comparison to third-party pricing services.
- Daily comparison of OTC derivative market valuations to counterparty valuations.
- Review of weekly price changes compared to published bond prices of a corporate bond index.
- Monthly reviews of price changes over thresholds, stale prices, missing prices, and zero prices.
- Monthly validation of prices to a second source for securities in most sectors and for certain derivatives.

In addition, The Hartford's enterprise-wide Operational Risk Management function, led by the Chief Risk Officer, is responsible for model risk management and provides an independent review of the suitability and reliability of model inputs, as well as an analysis of significant changes to current models.

Valuation Inputs
Quoted prices for identical assets in active markets are considered Level 1 and consist of on-the-run U.S. Treasuries, money market funds, exchange-traded equity securities, open-ended mutual funds, short-term investments, and exchange traded futures and option contracts.

2. Fair Value Measurements (continued)

Valuation Inputs Used in Level 2 and 3 Measurements for Securities and Freestanding Derivatives

Level 2 Primary Observable Inputs	Level 3 Primary Unobservable Inputs
Fixed Maturity Investments	
Structured securities (includes ABS, CDOs CMBS and RMBS)	
• Benchmark yields and spreads • Monthly payment information • Collateral performance, which varies by vintage year and includes delinquency rates, loss severity rates and refinancing assumptions • Credit default swap indices Other inputs for ABS and RMBS: • Estimate of future principal prepayments, derived based on the characteristics of the underlying structure • Prepayment speeds previously experienced at the interest rate levels projected for the collateral	• Independent broker quotes • Credit spreads beyond observable curve • Interest rates beyond observable curve Other inputs for less liquid securities or those that trade less actively, including subprime RMBS: • Estimated cash flows • Credit spreads, which include illiquidity premium • Constant prepayment rates • Constant default rates • Loss severity
Corporates	
• Benchmark yields and spreads • Reported trades, bids, offers of the same or similar securities • Issuer spreads and credit default swap curves Other inputs for investment grade privately placed securities that utilize internal matrix pricing : • Credit spreads for public securities of similar quality, maturity, and sector, adjusted for non-public nature	• Independent broker quotes • Credit spreads beyond observable curve • Interest rates beyond observable curve Other inputs for below investment grade privately placed securities: • Independent broker quotes • Credit spreads for public securities of similar quality, maturity, and sector, adjusted for non-public nature
U.S Treasuries, Municipals, and Foreign government/government agencies	
• Benchmark yields and spreads • Issuer credit default swap curves • Political events in emerging market economies • Municipal Securities Rulemaking Board reported trades and material event notices • Issuer financial statements	• Independent broker quotes • Credit spreads beyond observable curve • Interest rates beyond observable curve
Equity Securities	
• Quoted prices in markets that are not active	• For privately traded equity securities, internal discounted cash flow models utilizing earnings multiples or other cash flow assumptions that are not observable
Short Term Investments	
• Benchmark yields and spreads • Reported trades, bids, offers • Issuer spreads and credit default swap curves • Material event notices and new issue money market rates	Not applicable
Derivatives	
Credit derivatives	
• Swap yield curve • Credit default swap curves	Not applicable
Equity derivatives	
• Equity index levels • Swap yield curve	• Independent broker quotes • Equity volatility
Foreign exchange derivatives	
• Swap yield curve • Currency spot and forward rates • Cross currency basis curves	Not applicable
Interest rate derivatives	
• Swap yield curve	• Independent broker quotes • Interest rate volatility

2. Fair Value Measurements (continued)

Significant Unobservable Inputs for Level 3 - Securities

Assets accounted for at fair value on a recurring basis	Fair Value	Predominant Valuation Technique	Significant Unobservable Input	Minimum	Maximum	Weighted Average [1]	Impact of Increase in Input on Fair Value [2]
As of December 31, 2017							
CMBS [3]	$ 15	Discounted cash flows	Spread (encompasses prepayment, default risk and loss severity)	9bps	1,816bps	457bps	Decrease
Corporate [4]	190	Discounted cash flows	Spread	103bps	1,000bps	355bps	Decrease
Municipal [3]	22	Discounted cash flows	Spread	192bps	250bps	228bps	Decrease
RMBS [3]	692	Discounted cash flows	Spread	24bps	463bps	77bps	Decrease
			Constant prepayment rate	—%	25%	6%	Decrease [5]
			Constant default rate	—%	7%	4%	Decrease
			Loss severity	—%	100%	65%	Decrease
As of December 31, 2016							
CMBS [3]	$ 9	Discounted cash flows	Spread (encompasses prepayment, default risk and loss severity)	10bps	1,273bps	249bps	Decrease
Corporate [4]	265	Discounted cash flows	Spread	122bps	1,021bps	373bps	Decrease
Municipal [3]	56	Discounted cash flows	Spread	135bps	286bps	195bps	Decrease
RMBS [3]	704	Discounted cash flows	Spread	16bps	1,830bps	189bps	Decrease
			Constant prepayment rate	—%	20%	4%	Decrease [5]
			Constant default rate	1%	10%	5%	Decrease
			Loss severity	—%	100%	75%	Decrease

[1] The weighted average is determined based on the fair value of the securities.
[2] Conversely, the impact of a decrease in input would have the opposite impact to the fair value as that presented in the table.
[3] Excludes securities for which the Company based fair value on broker quotations.
[4] Excludes securities for which the Company bases fair value on broker quotations; however, included are broker-priced lower-rated private placement securities for which the Company receives spread and yield information to corroborate the fair value.
[5] Decrease for above market rate coupons and increase for below market rate coupons.

2. Fair Value Measurements (continued)

Significant Unobservable Inputs for Level 3 - Freestanding Derivatives

	Fair Value	Predominant Valuation Technique	Significant Unobservable Input	Minimum	Maximum	Impact of Increase in Input on Fair Value [1]
As of December 31, 2017						
Interest rate derivatives						
Interest rate swaps	$ (29)	Discounted cash flows	Swap curve beyond 30 years	2%	3%	Decrease
GMWB hedging instruments						
Equity variance swaps	(26)	Option model	Equity volatility	19%	19%	Increase
Equity options	1	Option model	Equity volatility	27%	30%	Increase
Customized swaps	59	Discounted cash flows	Equity volatility	7%	30%	Increase
Macro hedge program						
Equity options [2]	29	Option model	Equity volatility	18%	31%	Increase
As of December 31, 2016						
Interest rate derivatives						
Interest rate swaps	$ (29)	Discounted cash flows	Swap curve beyond 30 years	3%	3%	Decrease
GMWB hedging instruments						
Equity variance swaps	(36)	Option model	Equity volatility	20%	23%	Increase
Equity options	17	Option model	Equity volatility	27%	30%	Increase
Customized swaps	100	Discounted cash flows	Equity volatility	12%	30%	Increase
Macro hedge program						
Equity options	188	Option model	Equity volatility	17%	28%	Increase

[1] Conversely, the impact of a decrease in input would have the opposite impact to the fair value as that presented in the table. Changes are based on long positions, unless otherwise noted. Changes in fair value will be inversely impacted for short positions.
[2] Excludes derivatives for which the Company bases fair value on broker quotations.

The tables above exclude the portion of ABS, index options and certain corporate securities for which fair values are predominately based on independent broker quotes. While the Company does not have access to the significant unobservable inputs that independent brokers may use in their pricing process, the Company believes brokers likely use inputs similar to those used by the Company and third-party pricing services to price similar instruments. As such, in their pricing models, brokers likely use estimated loss severity rates, prepayment rates, constant default rates and credit spreads. Therefore, similar to non-broker priced securities, increases in these inputs would generally cause fair values to decrease. For the year ended December 31, 2017 , no significant adjustments were made by the Company to broker prices received.

Transfers between Levels

Transfers of securities among the levels occur at the beginning of the reporting period. The amount of transfers from Level 1 to Level 2 was $773 and $563 , for the years ended December 31, 2017 and 2016 , respectively, which represented previously on-the-run U.S. Treasury securities that are now off-the-run. For the years ended December 31, 2017 and 2016 , there were no transfers from Level 2 to Level 1. See the fair value roll-forward tables for the years ended December 31, 2017 and 2016 , for the transfers into and out of Level 3.

2. Fair Value Measurements (continued)

GMWB Embedded, Customized and Reinsurance Derivatives

GMWB Embedded Derivatives	The Company formerly offered certain variable annuity products with GMWB riders that provide the policyholder with a GRB which is generally equal to premiums less withdrawals. If the policyholder's account value is reduced to a specified level through a combination of market declines and withdrawals but the GRB still has value, the Company is obligated to continue to make annuity payments to the policyholder until the GRB is exhausted. When payments of the GRB are not life-contingent, the GMWB represents an embedded derivative carried at fair value reported in other policyholder funds and benefits payable in the Consolidated Balance Sheets with changes in fair value reported in net realized capital gains and losses.
Free-standing Customized Derivatives	The Company holds free-standing customized derivative contracts to provide protection from certain capital markets risks for the remaining term of specified blocks of non-reinsured GMWB riders. These customized derivatives are based on policyholder behavior assumptions specified at the inception of the derivative contracts. The Company retains the risk for differences between assumed and actual policyholder behavior and between the performance of the actively managed funds underlying the separate accounts and their respective indices. These derivatives are reported in the Consolidated Balance Sheets within other investments or other liabilities, as appropriate, after considering the impact of master netting agreements.
GMWB Reinsurance Derivative	The Company has reinsurance arrangements in place to transfer a portion of its risk of loss due to GMWB. These arrangements are recognized as derivatives carried at fair value and reported in reinsurance recoverables in the Consolidated Balance Sheets. Changes in the fair value of the reinsurance agreements are reported in net realized capital gains and losses.

Valuation Techniques

Fair values for GMWB embedded derivatives, free-standing customized derivatives and reinsurance derivatives are classified as Level 3 in the fair value hierarchy and are calculated using internally developed models that utilize significant unobservable inputs because active, observable markets do not exist for these items. In valuing the GMWB embedded derivative, the Company attributes to the derivative a portion of the expected fees to be collected over the expected life of the contract from the contract holder equal to the present value of future GMWB claims. The excess of fees collected from the contract holder in the current period over the portion of fees attributed to the embedded derivative in the current period are associated with the host variable annuity contract and reported in fee income.

Valuation Controls

Oversight of the Company's valuation policies and processes for GMWB embedded, reinsurance, and customized derivatives is performed by a multidisciplinary group comprised of finance, actuarial and risk management professionals. This multidisciplinary group reviews and approves changes and enhancements to the Company's valuation model as well as associated controls.

Valuation Inputs

The fair value for each of the non-life contingent GMWBs, the free-standing customized derivatives and the GMWB reinsurance derivative is calculated as an aggregation of the following components: Best Estimate Claim Payments; Credit Standing Adjustment; and Margins. The Company believes the aggregation of these components results in an amount that a market participant in an active liquid market would require, if such a market existed, to assume the risks associated with the guaranteed minimum benefits and the related reinsurance and customized derivatives. Each component described in the following discussion is unobservable in the marketplace and requires subjectivity by the Company in determining its value.

Best Estimate Claim Payments

The Best Estimate Claim Payments are calculated based on actuarial and capital market assumptions related to projected cash flows, including the present value of benefits and related contract charges, over the lives of the contracts, incorporating unobservable inputs including expectations concerning policyholder behavior. These assumptions are input into a stochastic risk neutral scenario process that is used to determine the valuation and involves numerous estimates and subjective judgments regarding a number of variables.

The Company monitors various aspects of policyholder behavior and may modify certain of its assumptions, including living benefit lapses and withdrawal rates, if credible emerging data indicates that changes are warranted. In addition, the Company will continue to evaluate policyholder behavior assumptions should we implement further initiatives to reduce the size of the variable annuity business. At a minimum, all policyholder behavior assumptions are reviewed and updated at least annually as part of the Company's annual fourth-quarter comprehensive study to refine its estimate of future gross profits. In addition, the Company recognizes non-market-based updates driven by the relative outperformance (underperformance) of the underlying actively managed funds as compared to their respective indices.

2. Fair Value Measurements (continued)

Credit Standing Adjustment

The credit standing adjustment is an estimate of the additional amount that market participants would require in determining fair value to reflect the risk that GMWB benefit obligations or the GMWB reinsurance recoverables will not be fulfilled. The Company incorporates a blend of observable Company and reinsurer credit default spreads from capital markets, adjusted for market recoverability.

Margins

The behavior risk margin adds a margin that market participants would require, in determining fair value, for the risk that the Company's assumptions about policyholder behavior could differ from actual experience. The behavior risk margin is calculated by taking the difference between adverse policyholder behavior assumptions and best estimate assumptions.

Valuation Inputs Used in Levels 2 and 3 Measurements for GMWB Embedded, Customized and Reinsurance Derivatives

Level 2 Primary Observable Inputs	Level 3 Primary Unobservable Inputs
• Risk-free rates as represented by the Eurodollar futures, LIBOR deposits and swap rates to derive forward curve rates • Correlations of 10 years of observed historical returns across underlying well-known market indices • Correlations of historical index returns compared to separate account fund returns • Equity index levels	• Market implied equity volatility assumptions Assumptions about policyholder behavior, including: • Withdrawal utilization • Withdrawal rates • Lapse rates • Reset elections

Significant Unobservable Inputs for Level 3 GMWB Embedded Customized and Reinsurance Derivatives

	Unobservable Inputs (Minimum)	Unobservable Inputs (Maximum)	Impact of Increase in Input on Fair Value Measurement [1]
As of December 31, 2017			
Withdrawal Utilization [2]	15%	100%	Increase
Withdrawal Rates [3]	—%	8%	Increase
Lapse Rates [4]	—%	40%	Decrease
Reset Elections [5]	30%	75%	Increase
Equity Volatility [6]	7%	30%	Increase
As of December 31, 2016			
	Unobservable Inputs (Minimum)	**Unobservable Inputs (Maximum)**	**Impact of Increase in Input on Fair Value Measurement [1]**
Withdrawal Utilization [2]	15%	100%	Increase
Withdrawal Rates [3]	—%	8%	Increase
Lapse Rates [4]	—%	40%	Decrease
Reset Elections [5]	20%	75%	Increase
Equity Volatility [6]	12%	30%	Increase

[1] Conversely, the impact of a decrease in input would have the opposite impact to the fair value as that presented in the table.
[2] Range represents assumed cumulative percentages of policyholders taking withdrawals.
[3] Range represents assumed cumulative annual amount withdrawn by policyholders.
[4] Range represents assumed annual percentages of full surrender of the underlying variable annuity contracts across all policy durations for in force business.
[5] Range represents assumed cumulative percentages of policyholders that would elect to reset their guaranteed benefit base.
[6] Range represents implied market volatilities for equity indices based on multiple pricing sources.

Separate Account Assets

Separate account assets are primarily invested in mutual funds. Other separate account assets include fixed maturities, limited partnerships, equity securities, short-term investments and derivatives that are valued in the same manner, and using the same pricing sources and inputs, as those investments held by the Company. For limited partnerships in which fair value represents the separate account's share of the NAV, 51% and 39% were subject to significant liquidation restrictions as of December 31, 2017 and December 31, 2016 , respectively. Total limited partnerships that do not allow any form of redemption were 21% and 11% , as of December 31, 2017 and December 31, 2016 , respectively. Separate account assets classified as Level 3 primarily include long-dated bank loans, subprime RMBS, and commercial mortgage loans.

2. Fair Value Measurements (continued)

Level 3 Assets and Liabilities Measured at Fair Value on a Recurring Basis Using Significant Unobservable Inputs

The Company uses derivative instruments to manage the risk associated with certain assets and liabilities. However, the derivative instrument may not be classified with the same fair value hierarchy level as the associated asset or liability. Therefore, the realized and unrealized gains and losses on derivatives reported in the Level 3 roll-forward may be offset by realized and unrealized gains and losses of the associated assets and liabilities in other line items of the financial statements.

Fair Value Roll-forwards for Financial Instruments Classified as Level 3 for the Year Ended December 31, 2017

		Total realized/unrealized gains (losses)							
	Fair value as of January 1, 2017	Included in net income [1] [2] [6]	Included in OCI [3]	Purchases	Settlements	Sales	Transfers into Level 3 [4]	Transfers out of Level 3 [4]	Fair value as of December 31, 2017
Assets									
Fixed Maturities, AFS									
ABS	$ 37	$ —	$ —	$ 14	$ (6)	$ —	$ 6	$ (38)	$ 13
CDOs	260	14	(17)	147	(107)	(19)	—	(205)	73
CMBS	21	—	1	33	(4)	—	—	(25)	26
Corporate	566	(8)	23	111	(7)	(95)	78	(225)	443
Foreign Govt./Govt. Agencies	17	—	1	3	(2)	—	—	(18)	1
Municipal	72	—	4	—	(1)	(5)	—	(32)	38
RMBS	711	—	19	155	(185)	—	—	(8)	692
Total Fixed Maturities, AFS	1,684	6	31	463	(312)	(119)	84	(551)	1,286
Equity Securities, AFS	44	—	(4)	6	—	—	—	—	46
Freestanding Derivatives									
Interest rate	(30)	1	—	—	—	—	—	—	(29)
GMWB hedging instruments	81	(47)	—	—	—	—	—	—	34
Macro hedge program	167	10	—	9	—	(163)	—	—	23
Total Freestanding Derivatives [5]	218	(36)	—	9	—	(163)	—	—	28
Reinsurance Recoverable for GMWB	73	(52)	—	—	15	—	—	—	36
Separate Accounts	201	3	6	152	(8)	(53)	11	(127)	185
Total Assets	**$ 2,220**	**$ (79)**	**$ 33**	**$ 630**	**$ (305)**	**$ (335)**	**$ 95**	**$ (678)**	**$ 1,581**
(Liabilities)									
Other Policyholder Funds and Benefits Payable									
Guaranteed Withdrawal Benefits	(241)	231	—	—	(65)	—	—	—	(75)
Equity Linked Notes	(33)	(4)	—	—	37	—	—	—	—
Total Other Policyholder Funds and Benefits Payable	(274)	227	—	—	(28)	—	—	—	(75)
Total Liabilities	**$ (274)**	**$ 227**	**$ —**	**$ —**	**$ (28)**	**$ —**	**$ —**	**$ —**	**$ (75)**

2. Fair Value Measurements (continued)

Fair Value Roll-forwards for Financial Instruments Classified as Level 3 for the Year Ended December 31, 2016

	Fair value as of January 1, 2016	Total realized/unrealized gains (losses) Included in net income [1] [2] [6]	Total realized/unrealized gains (losses) Included in OCI [3]	Purchases	Settlements	Sales	Transfers into Level 3 [4]	Transfers out of Level 3 [4]	Fair value as of December 31, 2016
Assets									
Fixed Maturities, AFS									
ABS	$ 5	$ —	$ —	$ 35	$ (2)	$ (2)	$ 5	$ (4)	$ 37
CDOs	330	(1)	(14)	62	(117)	—	—	—	260
CMBS	62	—	(2)	43	(13)	(2)	—	(67)	21
Corporate	534	(6)	10	87	(63)	(126)	368	(238)	566
Foreign Govt./Govt. Agencies	17	—	1	8	(4)	(5)	—	—	17
Municipal	49	—	—	16	(1)	—	8	—	72
RMBS	628	(1)	4	268	(154)	(26)	2	(10)	711
Total Fixed Maturities, AFS	1,625	(8)	(1)	519	(354)	(161)	383	(319)	1,684
Fixed Maturities, FVO	2	—	—	1	—	(1)	—	(2)	—
Equity Securities, AFS	38	(1)	6	4	—	(3)	—	—	44
Freestanding Derivatives									
Equity	—	(8)	—	8	—	—	—	—	—
Interest rate	(29)	(1)	—	—	—	—	—	—	(30)
GMWB hedging instruments	135	(60)	—	—	—	—	—	6	81
Macro hedge program	147	(38)	—	63	(6)	—	—	1	167
Total Freestanding Derivatives [5]	253	(107)	—	71	(6)	—	—	7	218
Reinsurance Recoverable for GMWB	83	(24)	—	—	14	—	—	—	73
Separate Accounts	139	(1)	(3)	320	(15)	(78)	17	(178)	201
Total Assets	**$ 2,140**	**$ (141)**	**$ 2**	**$ 915**	**$ (361)**	**$ (243)**	**$ 400**	**$ (492)**	**$ 2,220**
(Liabilities)									
Other Policyholder Funds and Benefits Payable									
Guaranteed Withdrawal Benefits	(262)	88	—	—	(67)	—	—	—	(241)
Equity Linked Notes	(26)	(7)	—	—	—	—	—	—	(33)
Total Other Policyholder Funds and Benefits Payable	(288)	81	—	—	(67)	—	—	—	(274)
Total Liabilities	**$ (288)**	**$ 81**	**$ —**	**$ —**	**$ (67)**	**$ —**	**$ —**	**$ —**	**$ (274)**

[1] The Company classifies realized and unrealized gains (losses) on GMWB reinsurance derivatives and GMWB embedded derivatives as unrealized gains (losses) for purposes of disclosure in this table because it is impracticable to track on a contract-by-contract basis the realized gains (losses) for these derivatives and embedded derivatives.

[2] Amounts in these rows are generally reported in net realized capital gains (losses). The realized/unrealized gains (losses) included in net income for separate account assets are offset by an equal amount for separate account liabilities, which results in a net zero impact on net income for the Company. All amounts are before income taxes and amortization of DAC.

[3] All amounts are before income taxes and amortization of DAC.

[4] Transfers in and/or (out) of Level 3 are primarily attributable to the availability of market observable information and the re-evaluation of the observability of pricing inputs.

[5] Derivative instruments are reported in this table on a net basis for asset (liability) positions and reported in the Consolidated Balance Sheets in other investments and other liabilities.

[6] Includes both market and non-market impacts in deriving realized and unrealized gains (losses).

2. Fair Value Measurements (continued)

Changes in Unrealized Gains (Losses) included in Net Income for Financial Instruments Classified as Level 3 Still Held at Year End

	December 31, 2017 [1] [2]	December 31, 2016 [1] [2]
Assets		
Fixed Maturities, AFS		
CMBS	$ —	$ (1)
Corporate	(1)	(13)
Total Fixed Maturities, AFS	(1)	(14)
Equity Securities, AFS	—	(1)
Freestanding Derivatives		
Interest Rate	1	—
GMWB hedging instruments	(61)	(52)
Macro hedge program	(77)	(33)
Total Freestanding Derivatives	(137)	(85)
Reinsurance Recoverable for GMWB	(52)	(24)
Separate Accounts	1	—
Total Assets	**$ (189)**	**$ (124)**
(Liabilities)		
Other Policyholder Funds and Benefits Payable		
Guaranteed Withdrawal Benefits	$ 231	$ 88
Equity Linked Notes	(4)	(7)
Total Other Policyholder Funds and Benefits Payable	227	81
Total Liabilities	**$ 227**	**$ 81**

[1] All amounts in these rows are reported in net realized capital gains (losses). The realized/unrealized gains (losses) included in net income for separate account assets are offset by an equal amount for separate account liabilities, which results in a net zero impact on net income for the Company. All amounts are before income taxes and amortization of DAC.

[2] Amounts presented are for Level 3 only and therefore may not agree to other disclosures included herein.

Fair Value Option

The Company has elected the fair value option for certain securities that contain embedded credit derivatives with underlying credit risk, related to residential real estate, and these securities are included within Fixed Maturities, FVO on the Consolidated Balance Sheets.

The Company also previously elected the fair value option for certain equity securities in order to align the accounting with total return swap contracts that hedged the risk associated with the investments. The swaps did not qualify for hedge accounting and the change in value of both the equity securities and the total return swaps were recorded in net realized capital gains and losses. These equity securities were classified within equity securities, AFS on the Consolidated Balance Sheets. Income earned from FVO securities was recorded in net investment income and changes in fair value were recorded in net realized capital gains and losses. The Company did not hold any of these equity securities as of December 31, 2017 or December 31, 2016 .

2. Fair Value Measurements (continued)

Changes in Fair Value of Assets using the Fair Value Option

	For the year ended December 31,		
	2017	2016	2015
Assets			
Fixed maturities, FVO			
CDOs	$ —	$ —	$ 1
Corporate	—	—	(3)
Foreign government	—	—	2
RMBS	—	3	—
Total fixed maturities, FVO	**$ —**	**$ 3**	**$ —**
Equity, FVO	1	(34)	(12)
Total realized capital gains (losses)	**$ 1**	**$ (31)**	**$ (12)**

Fair Value of Assets and Liabilities using the Fair Value Option

	As of December 31,	
	2017	2016
Assets		
Fixed maturities, FVO		
RMBS	$ 32	$ 82
Total fixed maturities, FVO	**$ 32**	**$ 82**

Financial Assets and Liabilities Not Carried at Fair Value

	Fair Value Hierarchy Level	Carrying Amount	Fair Value
	December 31, 2017		
Assets			
Policy loans	Level 3	$ 1,432	$ 1,432
Mortgage loans	Level 3	$ 2,872	$ 2,941
Liabilities			
Other policyholder funds and benefits payable [1]	Level 3	$ 5,905	$ 6,095
Consumer notes [2] [3]	Level 3	$ 8	$ 8
Assumed investment contracts [3]	Level 3	$ 342	$ 361
	December 31, 2016		
Assets			
Policy loans	Level 3	$ 1,442	$ 1,442
Mortgage loans	Level 3	$ 2,811	$ 2,843
Liabilities			
Other policyholder funds and benefits payable [1]	Level 3	$ 6,436	$ 6,626
Consumer notes [2] [3]	Level 3	$ 20	$ 20
Assumed investment contracts [3]	Level 3	$ 487	$ 526

[1] Excludes group accident and health and universal life insurance contracts, including corporate owned life insurance.
[2] Excludes amounts carried at fair value and included in preceding disclosures.
[3] Included in other liabilities in the Consolidated Balance Sheets.

Fair values for policy loans were determined using current loan coupon rates, which reflect the current rates available under the contracts. As a result, the fair value approximates the carrying value of the policy loans.

Fair values for mortgage loans were estimated using discounted cash flow calculations based on current lending rates for similar type loans. Current lending rates reflect changes in credit spreads and the remaining terms of the loans.

2. Fair Value Measurements (continued)

Fair values for other policyholder funds and benefits payable and assumed investment contracts, not carried at fair value, are estimated based on the cash surrender values of the underlying policies or by estimating future cash flows discounted at current interest rates adjusted for credit risk.

Fair values for consumer notes were estimated using discounted cash flow calculations using current interest rates adjusted for estimated loan durations.

3. Investments

Net Investment Income

	For the years ended December 31,		
(Before-tax)	2017	2016	2015
Fixed maturities [1]	$ 995	$ 1,049	$ 1,095
Equity securities	9	8	7
Mortgage loans	124	135	152
Policy loans	79	83	82
Limited partnerships and other alternative investments	75	86	97
Other investments [2]	54	64	82
Investment expenses	(55)	(52)	(59)
Total net investment income	**$ 1,281**	**$ 1,373**	**$ 1,456**

[1] Includes net investment income on short-term investments.
[2] Includes income from derivatives that hedge fixed maturities and qualify for hedge accounting.

Net Realized Capital Losses

	For the years ended December 31,		
(Before-tax)	2017	2016	2015
Gross gains on sales	$ 226	$ 211	$ 239
Gross losses on sales	(58)	(93)	(211)
Net OTTI losses recognized in earnings	(14)	(28)	(61)
Valuation allowances on mortgage loans	2	—	(4)
Results of variable annuity hedge program			
GMWB derivatives, net	48	(38)	(87)
Macro hedge program	(260)	(163)	(46)
Total results of variable annuity hedge program	(212)	(201)	(133)
Transactional foreign currency revaluation	(1)	(70)	(4)
Non-qualifying foreign currency derivatives	(5)	57	(16)
Other, net [1]	2	(39)	44
Net realized capital losses	**$ (60)**	**$ (163)**	**$ (146)**

[1] Includes non-qualifying derivatives, excluding variable annuity hedge program and foreign currency derivatives, of $(13) , $(12) , and $46 , respectively for 2017 , 2016 and 2015 .

Net realized capital gains and losses from investment sales are reported as a component of revenues and are determined on a specific identification basis. Before tax, net gains and losses on sales and impairments previously reported as unrealized gains or losses in AOCI were $153 , $89 and $(27) for the years ended December 31, 2017 , 2016 and 2015 , respectively.

Sales of AFS Securities

	For the years ended December 31,		
	2017	2016	2015
Fixed maturities, AFS			
Sale proceeds	$ 7,979	$ 7,409	$ 9,454
Gross gains	211	206	195
Gross losses	(56)	(85)	(161)
Equity securities, AFS			
Sale proceeds	$ 203	$ 321	$ 586
Gross gains	13	4	26
Gross losses	(1)	(8)	(26)

Sales of AFS securities in 2017 were primarily a result of duration and liquidity management, as well as tactical changes to the portfolio as a result of changing market conditions.

3. Investments (continued)

Recognition and Presentation of Other-Than-Temporary Impairments

The Company will record an other-than-temporary impairment ("OTTI") for fixed maturities and certain equity securities with debt-like characteristics (collectively "debt securities") if the Company intends to sell or it is more likely than not that the Company will be required to sell the security before a recovery in value. A corresponding charge is recorded in net realized capital losses equal to the difference between the fair value and amortized cost basis of the security.

The Company will also record an OTTI for those debt securities for which the Company does not expect to recover the entire amortized cost basis. For these securities, the excess of the amortized cost basis over its fair value is separated into the portion representing a credit OTTI, which is recorded in net realized capital losses, and the remaining non-credit amount, which is recorded in OCI. The credit OTTI amount is the excess of its amortized cost basis over the Company's best estimate of discounted expected future cash flows. The non-credit amount is the excess of the best estimate of the discounted expected future cash flows over the fair value. The Company's best estimate of discounted expected future cash flows becomes the new cost basis and accretes prospectively into net investment income over the estimated remaining life of the security.

The Company's best estimate of expected future cash flows is a quantitative and qualitative process that incorporates information received from third-party sources along with certain internal assumptions regarding the future performance. The Company considers, but is not limited to (a) changes in the financial condition of the issuer and the underlying collateral, (b) whether the issuer is current on contractually obligated interest and principal payments, (c) credit ratings, (d) payment structure of the security and (e) the extent to which the fair value has been less than the amortized cost of the security.

For non-structured securities, assumptions include, but are not limited to, economic and industry-specific trends and fundamentals, security-specific developments, industry earnings multiples and the issuer's ability to restructure and execute asset sales.

For structured securities, assumptions include, but are not limited to, various performance indicators such as historical and projected default and recovery rates, credit ratings, current and projected delinquency rates, loan-to-value ("LTV") ratios, average cumulative collateral loss rates that vary by vintage year, prepayment speeds, and property value declines. These assumptions require the use of significant management judgment and include the probability of issuer default and estimates regarding timing and amount of expected recoveries which may include estimating the underlying collateral value.

The Company will also record an OTTI for equity securities where the decline in the fair value is deemed to be other-than-temporary. A corresponding charge is recorded in net realized capital losses equal to the difference between the fair value and cost basis of the security. The previous cost basis less the impairment becomes the new cost basis. The Company's evaluation and assumptions used to determine an equity OTTI include, but is not limited to, (a) the length of time and extent to which the fair value has been less than the cost of the security, (b) changes in the financial condition, credit rating and near-term prospects of the issuer, (c) whether the issuer is current on preferred stock dividends and (d) the intent and ability of the Company to retain the investment for a period of time sufficient to allow for recovery. For the remaining equity securities which are determined to be temporarily impaired, the Company asserts its intent and ability to retain those equity securities until the price recovers.

Impairments in Earnings by Type

	For the years ended December 31,		
	2017	2016	2015
Intent-to-sell impairments	$ —	$ 4	$ 24
Credit impairments	14	22	23
Impairments on equity securities	—	2	14
Total impairments	**$ 14**	**$ 28**	**$ 61**

3. Investments (continued)

Cumulative Credit Impairments

	For the years ended December 31,		
(Before-tax)	2017	2016	2015
Balance as of beginning of period	$ (170)	$ (211)	$ (296)
Additions for credit impairments recognized on [1]:			
Securities not previously impaired	(1)	(9)	(11)
Securities previously impaired	(13)	(13)	(12)
Reductions for credit impairments previously recognized on:			
Securities that matured or were sold during the period	82	44	58
Securities the Company made the decision to sell or more likely than not will be required to sell	—	—	1
Securities due to an increase in expected cash flows	14	19	49
Balance as of end of period	**$ (88)**	**$ (170)**	**$ (211)**

[1] These additions are included in the net OTTI losses recognized in earnings in the Consolidated Statements of Operations.

Available-for-Sale Securities

AFS Securities by Type

	December 31, 2017					December 31, 2016				
	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Non-Credit OTTI [1]	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Non-Credit OTTI [1]
ABS	$ 821	$ 9	$ (11)	$ 819	$ —	$ 1,011	$ 9	$ (27)	$ 993	$ —
CDOs	886	2	—	888	—	893	49	(2)	940	—
CMBS	2,061	45	(22)	2,084	(1)	2,135	45	(34)	2,146	(1)
Corporate	12,587	1,483	(32)	14,038	—	13,677	1,111	(95)	14,693	—
Foreign govt./govt. agencies	379	30	(2)	407	—	337	18	(10)	345	—
Municipal	1,125	142	(1)	1,266	—	1,098	97	(6)	1,189	—
RMBS	1,388	41	(2)	1,427	—	1,742	34	(16)	1,760	—
U.S. Treasuries	1,667	206	(3)	1,870	—	1,614	153	(14)	1,753	—
Total fixed maturities, AFS	**20,914**	**1,958**	**(73)**	**22,799**	**(1)**	**22,507**	**1,516**	**(204)**	**23,819**	**(1)**
Equity securities, AFS	140	14	—	154	—	142	12	(2)	152	—
Total AFS securities	**$ 21,054**	**$ 1,972**	**$ (73)**	**$ 22,953**	**$ (1)**	**$ 22,649**	**$ 1,528**	**$ (206)**	**$ 23,971**	**$ (1)**

[1] Represents the amount of cumulative non-credit OTTI losses recognized in OCI on securities that also had credit impairments. These losses are included in gross unrealized losses as of December 31, 2017 and 2016 .

Fixed maturities, AFS, by Contractual Maturity Year

	December 31, 2017		December 31, 2016	
Contractual Maturity	Amortized Cost	Fair Value	Amortized Cost	Fair Value
One year or less	$ 844	$ 850	$ 722	$ 727
Over one year through five years	3,498	3,580	4,184	4,301
Over five years through ten years	3,178	3,321	3,562	3,649
Over ten years	8,238	9,830	8,258	9,303
Subtotal	15,758	17,581	16,726	17,980
Mortgage-backed and asset-backed securities	5,156	5,218	5,781	5,839
Total fixed maturities, AFS	**$ 20,914**	**$ 22,799**	**$ 22,507**	**$ 23,819**

Estimated maturities may differ from contractual maturities due to security call or prepayment provisions. Due to the potential for variability in payment speeds (i.e. prepayments or extensions), mortgage-backed and asset-backed securities are not categorized by contractual maturity.

3. Investments (continued)

Concentration of Credit Risk

The Company aims to maintain a diversified investment portfolio including issuer, sector and geographic stratification, where applicable, and has established certain exposure limits, diversification standards and review procedures to mitigate credit risk.

The Company had no investment exposure to any credit concentration risk of a single issuer greater than 10% of the Company's stockholder's equity , other than the U.S. government and certain U.S. government securities as of December 31, 2017 or December 31, 2016 . As of December 31, 2017 , other than U.S. government and certain U.S. government agencies, the Company’s three largest exposures by issuer were HSBC Holdings PLC, Microsoft Corporation, and National Grid PLC, which each comprised less than 1% of total invested assets. As of December 31, 2016 , other than U.S. government and certain U.S. government agencies, the Company’s three largest exposures by issuer were National Grid PLC, HSBC Holdings PLC, and Oracle Corp., which each comprised less than 1% of total invested assets.

The Company’s three largest exposures by sector as of December 31, 2017 , were financial services, utilities, and CMBS which comprised approximately 9% , 9% and 7% , respectively, of total invested assets. The Company’s three largest exposures by sector as of December 31, 2016 were financial services, utilities, and consumer non-cyclical which comprised approximately 10% , 9% and 7% , respectively, of total invested assets.

Unrealized Losses on AFS Securities

Unrealized Loss Aging for AFS Securities by Type and Length of Time as of December 31, 2017

	Less Than 12 Months			12 Months or More			Total		
	Amortized Cost	Fair Value	Unrealized Losses	Amortized Cost	Fair Value	Unrealized Losses	Amortized Cost	Fair Value	Unrealized Losses
ABS	$ 158	$ 157	$ (1)	$ 219	$ 209	$ (10)	$ 377	$ 366	$ (11)
CDOs	242	242	—	37	37	—	279	279	—
CMBS	524	517	(7)	346	331	(15)	870	848	(22)
Corporate	1,082	1,074	(8)	779	755	(24)	1,861	1,829	(32)
Foreign govt./govt. agencies	60	59	(1)	35	34	(1)	95	93	(2)
Municipal	9	9	—	10	9	(1)	19	18	(1)
RMBS	288	287	(1)	28	27	(1)	316	314	(2)
U.S. Treasuries	382	380	(2)	38	37	(1)	420	417	(3)
Total fixed maturities, AFS	**2,745**	**2,725**	**(20)**	**1,492**	**1,439**	**(53)**	**4,237**	**4,164**	**(73)**
Equity securities, AFS	6	6	—	3	3	—	9	9	—
Total securities in an unrealized loss position	**$ 2,751**	**$ 2,731**	**$ (20)**	**$ 1,495**	**$ 1,442**	**$ (53)**	**$ 4,246**	**$ 4,173**	**$ (73)**

3. Investments (continued)

Unrealized Loss Aging for AFS Securities by Type and Length of Time as of December 31, 2016

	Less Than 12 Months			12 Months or More			Total		
	Amortized Cost	Fair Value	Unrealized Losses	Amortized Cost	Fair Value	Unrealized Losses	Amortized Cost	Fair Value	Unrealized Losses
ABS	$ 249	$ 248	$ (1)	$ 265	$ 239	$ (26)	$ 514	$ 487	$ (27)
CDOs	325	325	—	210	208	(2)	535	533	(2)
CMBS	1,058	1,030	(28)	139	133	(6)	1,197	1,163	(34)
Corporate	2,535	2,464	(71)	402	378	(24)	2,937	2,842	(95)
Foreign govt./govt. agencies	164	155	(9)	6	5	(1)	170	160	(10)
Municipal	166	160	(6)	—	—	—	166	160	(6)
RMBS	548	535	(13)	198	195	(3)	746	730	(16)
U.S. Treasuries	385	371	(14)	—	—	—	385	371	(14)
Total fixed maturities, AFS	**5,430**	**5,288**	**(142)**	**1,220**	**1,158**	**(62)**	**6,650**	**6,446**	**(204)**
Equity securities, AFS	59	57	(2)	5	5	—	64	62	(2)
Total securities in an unrealized loss position	**$ 5,489**	**$ 5,345**	**$ (144)**	**$ 1,225**	**$ 1,163**	**$ (62)**	**$ 6,714**	**$ 6,508**	**$ (206)**

As of December 31, 2017 , AFS securities in an unrealized loss position consisted of 1,254 securities, primarily in the corporate and CMBS sector, which were depressed primarily due to an increase in interest rates and/or widening of credit spreads since the securities were purchased. As of December 31, 2017 , 93% of these securities were depressed less than 20% of cost or amortized cost. The improvement in unrealized losses during 2017 was primarily attributable to tighter credit spreads .

Most of the securities depressed for twelve months or more primarily relate to student loan ABS, structured securities with exposure to commercial real estate, and corporate securities. Student loan ABS were primarily depressed because the securities have floating-rate coupons and have long-dated maturities, and current credit spreads are wider than when these securities were purchased. Corporate securities and commercial real estate securities were primarily depressed because current market spreads are wider than spreads at the securities' respective purchase dates. The Company neither has an intention to sell nor does it expect to be required to sell the securities outlined in the preceding discussion.

Mortgage Loans

Mortgage Loan Valuation Allowances

Commercial mortgage loans are considered to be impaired when management estimates that, based upon current information and events, it is probable that the Company will be unable to collect amounts due according to the contractual terms of the loan agreement. The Company reviews mortgage loans on a quarterly basis to identify potential credit losses. Among other factors, management reviews current and projected macroeconomic trends, such as unemployment rates, and property-specific factors such as rental rates, occupancy levels, LTV ratios and debt service coverage ratios (“DSCR”). In addition, the Company considers historical, current and projected delinquency rates and property values. Estimates of collectibility require the use of significant management judgment and include the probability and timing of borrower default and loss severity estimates. In addition, cash flow projections may change based upon new information about the borrower's ability to pay and/or the value of underlying collateral such as changes in projected property value estimates.

For mortgage loans that are deemed impaired, a valuation allowance is established for the difference between the carrying amount and estimated value. The mortgage loan's estimated value is most frequently the Company's share of the fair value of the collateral but may also be the Company’s share of either (a) the present value of the expected future cash flows discounted at the loan’s effective interest rate or (b) the loan’s observable market price. A valuation allowance may be recorded for an individual loan or for a group of loans that have an LTV ratio of 90% or greater, a low DSCR or have other lower credit quality characteristics. Changes in valuation allowances are recorded in net realized capital gains and losses. Interest income on impaired loans is accrued to the extent it is deemed collectible and the borrowers continue to make payments under the original or restructured loan terms. The Company stops accruing interest income on loans when it is probable that the Company will not receive interest and principal payments according to the contractual terms of the loan agreement. The company resumes accruing interest income when it determines that sufficient collateral exists to satisfy the full amount of the loan principal and interest payments and when it is probable cash will be received in the foreseeable future. Interest income on defaulted loans is recognized when received.

3. Investments (continued)

As of December 31, 2017 , commercial mortgage loans had an amortized cost and carrying value of $2.9 billion , with no valuation allowance. As of December 31, 2016 , commercial mortgage loans had an amortized cost of $2.8 billion , with a valuation allowance of $19 and a carrying value of $2.8 billion . Amortized cost represents carrying value prior to valuation allowances, if any.

As of December 31, 2017 and 2016 , the carrying value of mortgage loans that had a valuation allowance was $0 and $31 , respectively. There were no mortgage loans held-for-sale as of December 31, 2017 or December 31, 2016 . As of December 31, 2017 , the Company had an immaterial amount of mortgage loans that have had extensions or restructurings other than what is allowable under the original terms of the contract.

Valuation Allowance Activity

	For the years ended December 31,		
	2017	2016	2015
Balance as of January 1	**$ (19)**	**$ (19)**	**$ (15)**
(Additions)/Reversals	(1)	—	(4)
Deductions	20	—	—
Balance as of December 31	**$ —**	**$ (19)**	**$ (19)**

The weighted-average LTV ratio of the Company’s commercial mortgage loan portfolio was 49% as of December 31, 2017 , while the weighted-average LTV ratio at origination of these loans was 63% . LTV ratios compare the loan amount to the value of the underlying property collateralizing the loan. The loan collateral values are updated no less than annually through reviews of the underlying properties. Factors considered in estimating property values include, among other things, actual and expected property cash flows, geographic market data and the ratio of the property's net operating income to its value. DSCR compares a property’s net operating income to the borrower’s principal and interest payments. The weighted average DSCR of the Company’s commercial mortgage loan portfolio was 2.65x as of December 31, 2017 . As of December 31, 2017 the Company held no delinquent commercial mortgages loan past due by 90 days or more. As of December 31, 2016 , the Company held one delinquent commercial mortgage loan past due by 90 days or more. The loan had a total carrying value and valuation allowance of $15 and $16 , respectively, and was not accruing income. Following the conclusion of the loan's foreclosure process, the property transferred at its carrying value, net of the valuation allowance, to a real-estate owned investment during 2017. As of December 31, 2017 , the real-estate owned investment had a total carrying value of $15 .

Commercial Mortgage Loans Credit Quality

	December 31, 2017		December 31, 2016	
Loan-to-value	Carrying Value	Avg. Debt-Service Coverage Ratio	Carrying Value	Avg. Debt-Service Coverage Ratio
Greater than 80%	$ 5	1.26x	$ 20	0.59x
65% - 80%	125	1.88x	182	2.17x
Less than 65%	2,742	2.69x	2,609	2.61x
Total commercial mortgage loans	**$ 2,872**	**2.65x**	**$ 2,811**	**2.55x**

Mortgage Loans by Region

	December 31, 2017		December 31, 2016	
	Carrying Value	Percent of Total	Carrying Value	Percent of Total
East North Central	$ 62	2.1%	$ 54	1.9%
East South Central	14	0.5%	14	0.5%
Middle Atlantic	291	10.1%	237	8.4%
New England	92	3.2%	93	3.3%
Pacific	838	29.2%	814	29.0%
South Atlantic	608	21.2%	613	21.8%
West South Central	195	6.8%	128	4.6%
Other [1]	772	26.9%	858	30.5%
Total mortgage loans	**$ 2,872**	**100%**	**$ 2,811**	**100%**

[1] Primarily represents loans collateralized by multiple properties in various regions.

3. Investments (continued)

Mortgage Loans by Property Type

	December 31, 2017		December 31, 2016	
	Carrying Value	Percent of Total	Carrying Value	Percent of Total
Commercial				
Industrial	$ 743	25.9%	$ 793	28.2%
Lodging	24	0.8%	25	0.9%
Multifamily	662	23.0%	535	19.0%
Office	685	23.9%	605	21.5%
Retail	557	19.4%	611	21.8%
Other	201	7.0%	242	8.6%
Total mortgage loans	**$ 2,872**	**100%**	**$ 2,811**	**100%**

Variable Interest Entities

The Company is engaged with various special purpose entities and other entities that are deemed to be VIEs primarily as an investor through normal investment activities.

A VIE is an entity that either has investors that lack certain essential characteristics of a controlling financial interest, such as simple majority kick-out rights, or lacks sufficient funds to finance its own activities without financial support provided by other entities. The Company performs ongoing qualitative assessments of its VIEs to determine whether the Company has a controlling financial interest in the VIE and therefore is the primary beneficiary. The Company is deemed to have a controlling financial interest when it has both the ability to direct the activities that most significantly impact the economic performance of the VIE and the obligation to absorb losses or right to receive benefits from the VIE that could potentially be significant to the VIE. Based on the Company’s assessment, if it determines it is the primary beneficiary, the Company consolidates the VIE in the Company’s Condensed Consolidated Financial Statements. As of December 31, 2017 and December 31, 2016 the Company did not hold any VIEs for which it was the primary beneficiary.

Non-Consolidated VIEs

The Company, through normal investment activities, makes passive investments in limited partnerships and other alternative investments. Upon the adoption of the new consolidation guidance discussed above, these investments are now considered VIEs. For these non-consolidated VIEs, the Company has determined it is not the primary beneficiary as it has no ability to direct activities that could significantly affect the economic performance of the investments. The Company’s maximum exposure to loss as of December 31, 2017 and December 31, 2016 is limited to the total carrying value of $900 and $859 , respectively, which are included in limited partnerships and other alternative investments in the Company's Consolidated Balance Sheets. As of December 31, 2017 and December 31, 2016 , the Company has outstanding commitments totaling $673 and $497 , respectively, whereby the Company is committed to fund these investments and may be called by the partnership during the commitment period to fund the purchase of new investments and partnership expenses. These investments are generally of a passive nature in that the Company does not take an active role in management.

In addition, the Company also makes passive investments in structured securities issued by VIEs for which the Company is not the manager. These investments are included in ABS, CDOs, CMBS and RMBS in the Available-for-Sale Securities table and fixed maturities, FVO, in the Company’s Consolidated Balance Sheets. The Company has not provided financial or other support with respect to these investments other than its original investment. For these investments, the Company determined it is not the primary beneficiary due to the relative size of the Company’s investment in comparison to the principal amount of the structured securities issued by the VIEs, the level of credit subordination which reduces the Company’s obligation to absorb losses or right to receive benefits and the Company’s inability to direct the activities that most significantly impact the economic performance of the VIEs. The Company’s maximum exposure to loss on these investments is limited to the amount of the Company’s investment.

Securities Lending, Repurchase Agreements and Other Collateral Transactions

The Company enters into securities financing transactions as a way to earn additional income or manage liquidity, primarily through securities lending and repurchase agreements.

3. Investments (continued)

Securities Lending

Under a securities lending program, the Company lends certain fixed maturities within the corporate, foreign government/government agencies, and municipal sectors as well as equity securities to qualifying third-party borrowers in return for collateral in the form of cash or securities. For domestic and non-domestic loaned securities, respectively, borrowers provide collateral of 102% and 105% of the fair value of the securities lent at the time of the loan. Borrowers will return the securities to the Company for cash or securities collateral at maturity dates generally of 90 days or less. Security collateral on deposit from counterparties in connection with securities lending transactions may not be sold or re-pledged, except in the event of default by the counterparty, and is not reflected on the Company’s Condensed Consolidated Balance Sheets. Additional collateral is obtained if the fair value of the collateral falls below 100% of the fair value of the loaned securities. The agreements provide the counterparty the right to sell or re-pledge the securities loaned. If cash, rather than securities, is received as collateral, the cash is typically invested in short-term investments or fixed maturities and is reported as an asset on the Company's Condensed Consolidated Balance Sheets. Income associated with securities lending transactions is reported as a component of net investment income in the Company’s Condensed Consolidated Statements of Operations.

Repurchase Agreements

From time to time, the Company enters into repurchase agreements to manage liquidity or to earn incremental income. A repurchase agreement is a transaction in which one party (transferor) agrees to sell securities to another party (transferee) in return for cash (or securities), with a simultaneous agreement to repurchase the same securities at a specified price at a later date. These transactions generally have a contractual maturity of ninety days or less. Repurchase agreements include master netting provisions that provide both counterparties the right to offset claims and apply securities held by them with respect to their obligations in the event of a default. Although the Company has the contractual right to offset claims, the Company's current positions do not meet the specific conditions for net presentation.

Under repurchase agreements, the Company transfers collateral of U.S. government and government agency securities and receives cash. For repurchase agreements, the Company obtains cash in an amount equal to at least 95% of the fair value of the securities transferred. The agreements require additional collateral to be transferred when necessary and provide the counterparty the right to sell or re-pledge the securities transferred. The cash received from the repurchase program is typically invested in short-term investments or fixed maturities and is reported as an asset on the Company's Condensed Consolidated Balance Sheets. The Company accounts for the repurchase agreements as collateralized borrowings. The securities transferred under repurchase agreements are included in fixed maturities, AFS with the obligation to repurchase those securities recorded in other liabilities on the Company's Condensed Consolidated Balance Sheets.

From time to time, the Company enters into reverse repurchase agreements where the Company purchases securities and simultaneously agrees to resell the same or substantially the same securities. The agreements require additional collateral to be transferred to the Company when necessary and the Company has the right to sell or re-pledge the securities received. The Company accounts for reverse repurchase agreements as collateralized financing.

Securities Lending and Repurchase Agreements

	December 31, 2017	December 31, 2016
	Fair Value	Fair Value
Securities Lending Transactions:		
Gross amount of securities on loan	$ 674	$ 435
Gross amount of associated liability for collateral received [1]	$ 689	$ 446
Repurchase agreements:		
Gross amount of recognized liabilities for repurchase agreements	$ 202	$ 118
Gross amount of collateral pledged related to repurchase agreements [2]	$ 206	$ 121

[1] Cash collateral received is reinvested in fixed maturities, AFS and short term investments which are included in the Condensed Consolidated Balance Sheets. Amount includes additional securities collateral received of $ 1 and $26 million which are excluded from the Company's Condensed Consolidated Balance Sheets as of December 31, 2017 and December 31, 2016 , respectively.

[2] Collateral pledged is included within fixed maturities, AFS and short term investments in the Company's Condensed Consolidated Balance Sheets.

3. Investments (continued)

Other Collateral Transactions

The Company is required by law to deposit securities with government agencies in certain states in which it conducts business. As of December 31, 2017 and December 31, 2016 , the fair value of securities on deposit was $22 and $21 , respectively.

For disclosure of collateral in support of derivative transactions, refer to the Derivative Collateral Arrangements section of Note 4 - Derivative Instruments.

Equity Method Investments

The majority of the Company's investments in limited partnerships and other alternative investments, including hedge funds, mortgage and real estate funds, and private equity and other funds (collectively, “limited partnerships”), are accounted for under the equity method of accounting. The Company’s maximum exposure to loss as of December 31, 2017 is limited to the total carrying value of $1.0 billion . In addition, the Company has outstanding commitments totaling approximately $683 , to fund limited partnership and other alternative investments as of December 31, 2017 . The Company’s investments in limited partnerships are generally of a passive nature in that the Company does not take an active role in the management of the limited partnerships. In 2017 , aggregate investment income (losses) from limited partnerships and other alternative investments exceeded 10% of the Company’s pre-tax consolidated net income. Accordingly, the Company is disclosing aggregated summarized financial data for the Company’s limited partnership investments. This aggregated summarized financial data does not represent the Company’s proportionate share of limited partnership assets or earnings. Aggregate total assets of the limited partnerships in which the Company invested totaled $161.1 billion and $100.6 billion as of December 31, 2017 and 2016 , respectively. Aggregate total liabilities of the limited partnerships in which the Company invested totaled $46.5 billion and $17.6 billion as of December 31, 2017 and 2016 , respectively. Aggregate net investment income (loss) of the limited partnerships in which the Company invested totaled $1.8 billion , $0.9 billion and $0.8 billion for the periods ended December 31, 2017 , 2016 and 2015 , respectively. Aggregate net income of the limited partnerships in which the Company invested totaled $8.1 billion , $7.4 billion , and $5.2 billion for the periods ended December 31, 2017 , 2016 and 2015 , respectively. As of, and for the period ended, December 31, 2017 , the aggregated summarized financial data reflects the latest available financial information.

4. Derivatives

Derivative Instruments

The Company utilizes a variety of OTC, OTC-cleared and exchange traded derivative instruments as a part of its overall risk management strategy as well as to enter into replication transactions. Derivative instruments are used to manage risk associated with interest rate, equity market, commodity market, credit spread, issuer default, price, and currency exchange rate risk or volatility. Replication transactions are used as an economical means to synthetically replicate the characteristics and performance of assets that are permissible investments under the Company’s investment policies. The Company also may enter into and has previously issued financial instruments and products that either are accounted for as free-standing derivatives, such as certain reinsurance contracts, or as embedded derivative instruments, such as certain GMWB riders included with certain variable annuity products.

Strategies that Qualify for Hedge Accounting

Some of the Company's derivatives satisfy hedge accounting requirements as outlined in Note 1 of these financial statements. Typically, these hedging instruments include interest rate swaps and, to a lesser extent, foreign currency swaps where the terms or expected cash flows of the hedged item closely match the terms of the swap. The interest rate swaps are typically used to manage interest rate duration of certain fixed maturity securities or liability contracts. The hedge strategies by hedge accounting designation include:

Cash Flow Hedges

Interest rate swaps are predominantly used to manage portfolio duration and better match cash receipts from assets with cash disbursements required to fund liabilities. These derivatives primarily convert interest receipts on floating-rate fixed maturity securities to fixed rates. The Company has also entered into forward starting swap agreements to hedge the interest rate exposure related to the future purchase of fixed-rate securities, primarily to hedge interest rate risk inherent in the assumptions used to price certain product liabilities.

Foreign currency swaps are used to convert foreign currency-denominated cash flows related to certain investment receipts and liability payments to U.S. dollars in order to reduce cash flow fluctuations due to changes in currency rates.

Fair Value Hedges

The Company previously used interest rate swaps to hedge the changes in fair value of fixed maturity securities due to fluctuations in interest rates. These swaps were typically used to manage interest rate duration.

Non-qualifying Strategies

Derivative relationships that do not qualify for hedge accounting (“non-qualifying strategies”) primarily include the hedge program for the Company's variable annuity products as well as the hedging and replication strategies that utilize credit default swaps. In addition, hedges of interest rate, foreign currency and equity risk of certain fixed maturities, equities and liabilities do not qualify for hedge accounting.

The non-qualifying strategies include:

Credit Contracts

Credit default swaps are used to purchase credit protection on an individual entity or referenced index to economically hedge against default risk and credit-related changes in the value of fixed maturity securities. Credit default swaps are also used to assume credit risk related to an individual entity or referenced index as a part of replication transactions. These contracts require the Company to pay or receive a periodic fee in exchange for compensation from the counterparty should the referenced security issuers experience a credit event, as defined in the contract. In addition, the Company enters into credit default swaps to terminate existing credit default swaps, thereby offsetting the changes in value of the original swap going forward.

Interest Rate Swaps, Swaptions, and Futures

The Company uses interest rate swaps, swaptions, and futures to manage interest rate duration between assets and liabilities in certain investment portfolios. In addition, the Company enters into interest rate swaps to terminate existing swaps, thereby offsetting the changes in value of the original swap. As of both December 31, 2017 and 2016 , the notional amount of interest rate swaps in offsetting relationships was $2.7 billion .

Foreign Currency Swaps and Forwards

The Company enters into foreign currency swaps to convert the foreign currency exposures of certain foreign currency-denominated fixed maturity investments to U.S. dollars. The Company also enters into foreign currency forwards to hedge non-U.S. dollar denominated cash and, previously, to hedge equity securities.

4. Derivatives (continued)

Fixed Payout Annuity Hedge

The Company has obligations for certain yen denominated fixed payout annuities under an assumed reinsurance contract. The Company invests in U.S. dollar denominated assets to support the assumed reinsurance liability. The Company has in place pay U.S. dollar, receive yen swap contracts to hedge the currency and yen interest rate exposure between the U.S. dollar denominated assets and the yen denominated fixed liability reinsurance payments.

Equity Index Swaps and Options

The Company enters into equity index options to hedge the impact of a decline in the equity markets on the investment portfolio. The Company previously entered into total return swaps to hedge equity risk of specific common stock investments which were accounted for using fair value option in order to align the accounting treatment within net realized capital gains (losses). In addition, the Company formerly offered certain equity indexed products that remain in force, a portion of which contained embedded derivatives that require changes in value to be bifurcated from the host contract. The Company uses equity index swaps to economically hedge the equity volatility risk associated with the equity indexed products.

Commodity Contracts

The Company has used put option contracts on oil futures to partially offset potential losses related to certain fixed maturity securities that could be impacted by changes in oil prices. These options were terminated at the end of 2015.

GMWB Derivatives, net

The Company formerly offered certain variable annuity products with GMWB riders. The GMWB product is a bifurcated embedded derivative ("GMWB product derivatives") that has a notional value equal to the GRB. The Company uses reinsurance contracts to transfer a portion of its risk of loss due to GMWB. The reinsurance contracts covering GMWB ("GMWB reinsurance contracts") are accounted for as free-standing derivatives with a notional amount equal to the GRB reinsured.

The Company utilizes derivatives ("GMWB hedging instruments") as part of a dynamic hedging program designed to hedge a portion of the capital market risk exposures of the non-reinsured GMWB riders. The GMWB hedging instruments hedge changes in interest rates, equity market levels, and equity volatility. These derivatives include customized swaps, interest rate swaps and futures, and equity swaps, options and futures, on certain indices including the S&P 500 index, EAFE index and NASDAQ index. The Company retains the risk for differences between assumed and actual policyholder behavior and between the performance of the actively managed funds underlying the separate accounts and their respective indices.

GMWB Hedging Instruments

	Notional Amount		Fair Value	
	December 31, 2017	December 31, 2016	December 31, 2017	December 31, 2016
Customized swaps	$ 5,023	$ 5,191	$ 59	$ 100
Equity swaps, options, and futures	1,407	1,362	(31)	(27)
Interest rate swaps and futures	3,022	3,703	39	21
Total	**$ 9,452**	**$ 10,256**	**$ 67**	**$ 94**

Macro Hedge Program

The Company utilizes equity swaps, options, forwards and futures to provide partial protection against the statutory tail scenario risk arising from GMWB and the GMDB liabilities on the Company's statutory surplus. These derivatives cover some of the residual risks not otherwise covered by the dynamic hedging program.

Modified Coinsurance Reinsurance Contracts

As of December 31, 2017 and 2016 , the Company had approximately $861 and $875 , respectively, of invested assets supporting other policyholder funds and benefits payable reinsured under a modified coinsurance arrangement in connection with the sale of the Individual Life business, which was structured as a reinsurance transaction. The assets are primarily held in a trust established by the Company. The Company pays or receives cash quarterly to settle the operating results of the reinsured business, including the investment results. As a result of this modified coinsurance arrangement, the Company has an embedded derivative that transfers to the reinsurer certain unrealized changes in fair value of investments subject to interest rate and credit risk. The notional amount of the embedded derivative reinsurance contracts are the invested assets which are carried at fair value and support the reinsured reserves.

4. Derivatives (continued)

Derivative Balance Sheet Classification

For reporting purposes, the Company has elected to offset within assets or liabilities based upon the net of the fair value amounts, income accruals, and related cash collateral receivables and payables of OTC derivative instruments executed in a legal entity and with the same counterparty under a master netting agreement, which provides the Company with the legal right of offset. The following fair value amounts do not include income accruals or related cash collateral receivables and payables, which are netted with derivative fair value amounts to determine balance sheet presentation. Derivatives in the Company's separate accounts, where the associated gains and losses accrue directly to policyholders are not included in the table below. The Company's derivative instruments are held for risk management purposes, unless otherwise noted in the following table. The notional amount of derivative contracts represents the basis upon which pay or receive amounts are calculated and is presented in the table to quantify the volume of the Company's derivative activity. Notional amounts are not necessarily reflective of credit risk. The following tables exclude investments that contain an embedded credit derivative for which the Company has elected the fair value option. For further discussion, see the Fair Value Option section in Note 2 - Fair Value Measurements of Notes to the Consolidated Financial Statements.

	Net Derivatives				Asset Derivatives		Liability Derivatives	
	Notional Amount		Fair Value		Fair Value		Fair Value	
Hedge Designation/ Derivative Type	**Dec 31, 2017**	**Dec 31, 2016**	**Dec 31, 2017**	**Dec 31, 2016**	**Dec 31, 2017**	**Dec 31, 2016**	**Dec 31, 2017**	**Dec 31, 2016**
Cash flow hedges								
Interest rate swaps	$ 1,486	$ 1,794	$ —	$ 7	$ 6	$ 9	$ (6)	$ (2)
Foreign currency swaps	182	164	(12)	(16)	5	10	(17)	(26)
Total cash flow hedges	**1,668**	**1,958**	**(12)**	**(9)**	**11**	**19**	**(23)**	**(28)**
Non-qualifying strategies								
Interest rate contracts								
Interest rate swaps and futures	3,219	2,774	(356)	(411)	339	249	(695)	(660)
Foreign exchange contracts								
Foreign currency swaps and forwards	342	382	(6)	36	—	36	(6)	—
Fixed payout annuity hedge	540	804	(170)	(263)	—	—	(170)	(263)
Credit contracts								
Credit derivatives that purchase credit protection	80	131	(3)	(3)	—	—	(3)	(3)
Credit derivatives that assume credit risk [1]	380	458	3	4	9	5	(6)	(1)
Credit derivatives in offsetting positions	200	1,006	1	(1)	9	16	(8)	(17)
Equity contracts								
Equity index swaps and options	—	100	—	—	—	33	—	(33)
Variable annuity hedge program								
GMWB product derivatives [2]	11,390	13,114	(75)	(241)	—	—	(75)	(241)
GMWB reinsurance contracts	2,372	2,709	35	73	35	73	—	—
GMWB hedging instruments	9,452	10,256	67	94	120	190	(53)	(96)
Macro hedge program	7,252	6,532	23	178	45	201	(22)	(23)
Other								
Modified coinsurance reinsurance contracts	861	875	55	68	55	68	—	—
Total non-qualifying strategies	**36,088**	**39,141**	**(426)**	**(466)**	**612**	**871**	**(1,038)**	**(1,337)**
Total cash flow hedges, fair value hedges, and non-qualifying strategies	**$ 37,756**	**$ 41,099**	**$ (438)**	**$ (475)**	**$ 623**	**$ 890**	**$ (1,061)**	**$ (1,365)**
Balance Sheet Location								
Fixed maturities, available-for-sale	$ 39	$ 121	$ —	$ —	$ —	$ —	$ —	$ —
Other investments	10,340	12,732	135	235	302	325	(167)	(90)
Other liabilities	12,754	11,498	(588)	(577)	231	424	(819)	(1,001)
Reinsurance recoverables	3,233	3,584	90	141	90	141	—	—
Other policyholder funds and benefits payable	11,390	13,164	(75)	(274)	—	—	(75)	(274)
Total derivatives	**$ 37,756**	**$ 41,099**	**$ (438)**	**$ (475)**	**$ 623**	**$ 890**	**$ (1,061)**	**$ (1,365)**

[1] The derivative instruments related to this strategy are held for other investment purposes.
[2] These derivatives are embedded within liabilities and are not held for risk management purposes.

4. Derivatives (continued)

Offsetting of Derivative Assets/Liabilities

The following tables present the gross fair value amounts, the amounts offset, and net position of derivative instruments eligible for offset in the Company's Consolidated Balance Sheets. Amounts offset include fair value amounts, income accruals and related cash collateral receivables and payables associated with derivative instruments that are traded under a common master netting agreement, as described in the preceding discussion. Also included in the tables are financial collateral receivables and payables, which are contractually permitted to be offset upon an event of default, although are disallowed for offsetting under U.S. GAAP.

	(i)	(ii)	(iii) = (i) - (ii)			(v) = (iii) - (iv)
			Net Amounts Presented in the Statement of Financial Position		Collateral Disallowed for Offset in the Statement of Financial Position	
	Gross Amounts of Recognized Assets (Liabilities)	Gross Amounts Offset in the Statement of Financial Position	Derivative Assets [1] (Liabilities) [2]	Accrued Interest and Cash Collateral (Received) [3] Pledged [2]	Financial Collateral (Received) Pledged [4]	Net Amount
As of December 31, 2017						
Other investments	$ 533	$ 491	$ 135	$ (93)	$ —	$ 42
Other liabilities	(986)	(307)	(588)	(91)	(674)	(5)
As of December 31, 2016						
Other investments	$ 749	$ 588	$ 235	$ (74)	$ 101	$ 60
Other liabilities	(1,091)	(396)	(577)	(118)	(655)	(40)

[1] Included in other invested assets in the Company's Consolidated Balance Sheets.
[2] Included in other liabilities in the Company's Consolidated Balance Sheets and is limited to the net derivative receivable associated with each counterparty.
[3] Included in other investments in the Company's Consolidated Balance Sheets and is limited to the net derivative payable associated with each counterparty.
[4] Excludes collateral associated with exchange-traded derivative instruments.

Cash Flow Hedges

For derivative instruments that are designated and qualify as cash flow hedges, the effective portion of the gain or loss on the derivative is reported as a component of OCI and reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. Gains and losses on the derivative representing hedge ineffectiveness are recognized in current period earnings. All components of each derivative's gain or loss were included in the assessment of hedge effectiveness.

Derivatives in Cash Flow Hedging Relationships

	Gain (Loss) Recognized in OCI on Derivative (Effective Portion)		
	2017	2016	2015
Interest rate swaps	$ (13)	$ (16)	$ 3
Foreign currency swaps	4	2	—
Total	**$ (9)**	**$ (14)**	**$ 3**

Derivatives in Cash Flow Hedging Relationships

		Gain (Loss) Reclassified from AOCI into Income (Effective Portion)		
		2017	2016	2015
Interest rate swaps	Net realized capital (losses) gains	$ (1)	$ 1	$ (1)
Interest rate swaps	Net investment income	26	25	33
Foreign currency swaps	Net realized capital gains (losses)	11	(2)	(9)
Total		**$ 36**	**$ 24**	**$ 23**

During the years ended December 31, 2017 , 2016 , and 2015 , the Company had no ineffectiveness recognized in income within net realized gains (losses).

4. Derivatives (continued)

As of December 31, 2017 , the before-tax deferred net gains on derivative instruments recorded in AOCI that are expected to be reclassified to earnings during the next twelve months are $54 . This expectation is based on the anticipated interest payments on hedged investments in fixed maturity securities that will occur over the next twelve months, at which time the Company will recognize the deferred net gains (losses) as an adjustment to net investment income over the term of the investment cash flows.

During the years ended December 31, 2017 , 2016 , and 2015 , the Company had no net reclassifications from AOCI to earnings resulting from the discontinuance of cash-flow hedges due to forecasted transactions that were no longer probable of occurring.

Fair Value Hedges

For derivative instruments that are designated and qualify as fair value hedges, the gain or loss on the derivatives as well as the offsetting loss or gain on the hedged items attributable to the hedged risk are recognized in current earnings. The Company includes the gain or loss on the derivative in the same line item as the offsetting loss or gain on the hedged item. All components of each derivative's gain or loss were included in the assessment of hedge effectiveness.

For the years ended December 31, 2017 , 2016 , and 2015 , the Company recognized in income immaterial gains and (losses) for the ineffective portion of fair value hedges related to the derivative instrument and the hedged item.

Non-qualifying Strategies

For non-qualifying strategies, including embedded derivatives that are required to be bifurcated from their host contracts and accounted for as derivatives, the gain or loss on the derivative is recognized currently in earnings within net realized capital gains (losses).

Non-qualifying Strategies
Gain (Loss) Recognized within Net Realized Capital Gains (Losses)

	December 31,		
	2017	**2016**	**2015**
Variable annuity hedge program			
GMWB product derivatives	$ 231	$ 88	$ (59)
GMWB reinsurance contracts	(49)	(14)	17
GMWB hedging instruments	(134)	(112)	(45)
Macro hedge program	(260)	(163)	(46)
Total variable annuity hedge program	(212)	(201)	(133)
Foreign exchange contracts			
Foreign currency swaps and forwards	(9)	32	5
Fixed payout annuity hedge	4	25	(21)
Total foreign exchange contracts	(5)	57	(16)
Other non-qualifying derivatives			
Interest rate contracts			
Interest rate swaps, swaptions, and futures	4	(18)	(7)
Credit contracts			
Credit derivatives that purchase credit protection	(12)	(9)	3
Credit derivatives that assume credit risk	18	15	(4)
Equity contracts			
Equity index swaps and options	3	30	19
Commodity contracts			
Commodity options	—	—	(5)
Other			
Modified coinsurance reinsurance contracts	(13)	(12)	46
Total other non-qualifying derivatives	(13)	(12)	46
Total [1]	**$ (217)**	**$ (138)**	**$ (97)**

[1] Excludes investments that contain an embedded credit derivative for which the Company has elected the fair value option. For further discussion, see the Fair Value Option section in Note 2 - Fair Value Measurements .

Credit Risk Assumed through Credit Derivatives

The Company enters into credit default swaps that assume credit risk of a single entity or referenced index in order to synthetically replicate investment transactions that are permissible under the Company's investment policies. The Company will receive periodic payments based on an agreed upon rate and notional amount and will only make a payment if there is a credit event. A credit event payment will typically be equal to the notional value of the swap contract less the value of the referenced security issuer's debt

4. Derivatives (continued)

obligation after the occurrence of the credit event. A credit event is generally defined as a default on contractually obligated interest or principal payments or bankruptcy of the referenced entity. The credit default swaps in which the Company assumes credit risk primarily reference investment grade single corporate issuers and baskets, which include standard diversified portfolios of corporate and CMBS issuers. The diversified portfolios of corporate issuers are established within sector concentration limits and may be divided into tranches that possess different credit ratings.

As of December 31, 2017

Credit Derivative type by derivative risk exposure	Notional Amount [2]	Fair Value	Weighted Average Years to Maturity	Underlying Referenced Credit Obligation(s) [1] Type	Underlying Referenced Credit Obligation(s) [1] Average Credit Rating	Offsetting Notional Amount [3]	Offsetting Fair Value [3]
Single name credit default swaps							
Investment grade risk exposure	$ 120	$ 3	5 years	Corporate Credit/ Foreign Gov.	A-	$ —	$ —
Below investment grade risk exposure	43	—	Less than 1 Year	Corporate Credit	B	43	—
Basket credit default swaps [4]							
Investment grade risk exposure	250	—	5 years	Corporate Credit	BBB+	—	—
Below investment grade risk exposure	22	2	3 years	Corporate Credit	B+	22	—
Investment grade risk exposure	15	(1)	4 years	CMBS Credit	A	5	—
Below investment grade risk exposure	30	(5)	Less than 1 Year	CMBS Credit	CCC	30	5
Total [5]	**$ 480**	**$ (1)**				**$ 100**	**$ 5**

As of December 31, 2016

Credit Derivative type by derivative risk exposure	Notional Amount [2]	Fair Value	Weighted Average Years to Maturity	Underlying Referenced Credit Obligation(s) [1] Type	Underlying Referenced Credit Obligation(s) [1] Average Credit Rating	Offsetting Notional Amount [3]	Offsetting Fair Value [3]
Single name credit default swaps							
Investment grade risk exposure	$ 88	$ —	3 years	Corporate Credit/ Foreign Gov.	A	$ 45	$ —
Below investment grade risk exposure	43	—	1 year	Corporate Credit	B-	43	—
Basket credit default swaps [4]							
Investment grade risk exposure	493	5	3 years	Corporate Credit	BBB+	225	(1)
Below investment grade risk exposure	22	2	4 years	Corporate Credit	B	22	(2)
Investment grade risk exposure	158	(2)	2 years	CMBS Credit	AA+	111	1
Below investment grade risk exposure	57	(13)	1 year	CMBS Credit	CCC	57	13
Embedded credit derivatives							
Investment grade risk exposure	100	100	Less than 1 year	Corporate Credit	A+	—	—
Total [5]	**$ 961**	**$ 92**				**$ 503**	**$ 11**

[1] The average credit ratings are based on availability and are generally the midpoint of the available ratings among Moody's, S&P, Fitch and Morningstar. If no rating is available from a rating agency, then an internally developed rating is used.

[2] Notional amount is equal to the maximum potential future loss amount. These derivatives are governed by agreements, clearing house rules and applicable law which include collateral posting requirements. There is no additional specific collateral related to these contracts or recourse provisions included in the contracts to offset losses.

[3] The Company has entered into offsetting credit default swaps to terminate certain existing credit default swaps, thereby offsetting the future changes in value of, or losses paid related to, the original swap.

[4] Comprised of swaps of standard market indices of diversified portfolios of corporate and CMBS issuers referenced through credit default swaps. These swaps are subsequently valued based upon the observable standard market index.

[5] Excludes investments that contain an embedded credit derivative for which the Company has elected the fair value option. For further discussion, see the Fair Value Option section in Note 2 - Fair Value Measurements .

4. Derivatives (continued)

Derivative Collateral Arrangements

The Company enters into various collateral arrangements in connection with its derivative instruments, which require both the pledging and accepting of collateral. As of December 31, 2017 and 2016 , the Company pledged cash collateral associated with derivative instruments with a fair value of $32 and $134 , respectively, for which the collateral receivable has been primarily included within other assets on the Company's Consolidated Balance Sheets. As of December 31, 2017 and 2016 , the Company also pledged securities collateral associated with derivative instruments with a fair value of $729 and $830 , respectively, which have been included in fixed maturities on the Consolidated Balance Sheets. The counterparties have the right to sell or re-pledge these securities.

As of December 31, 2017 and 2016 , the Company accepted cash collateral associated with derivative instruments of $310 and $333 , respectively, which was invested and recorded in the Consolidated Balance Sheets in fixed maturities and short-term investments with corresponding amounts recorded in other investments or other liabilities as determined by the Company's election to offset on the balance sheet. The Company also accepted securities collateral as of December 31, 2016 with a fair value of $107 , of which the Company has the ability to sell or repledge $81 . As of December 31, 2017 the Company did not hold any securties collateral. As of December 31, 2017 and 2016 , the Company had no repledged securities and did not sell any securities.

5. Reinsurance

The Company cedes insurance to affiliated and unaffiliated insurers to enable the Company to manage capital and risk exposure. Such arrangements do not relieve the Company of its primary liability to policyholders. Failure of reinsurers to honor their obligations could result in losses to the Company. The Company's procedures include careful initial selection of its reinsurers, structuring agreements to provide collateral funds where necessary, and regularly monitoring the financial condition and ratings of its reinsurers.

Reinsurance Recoverables

Reinsurance recoverables include balances due from reinsurance companies and are presented net of an allowance for uncollectible reinsurance. Reinsurance recoverables include an estimate of the amount of gross losses and loss adjustment expense reserves that may be ceded under the terms of the reinsurance agreements, including incurred but not reported unpaid losses. The Company's estimate of losses and loss adjustment expense reserves ceded to reinsurers is based on assumptions that are consistent with those used in establishing the gross reserves for business ceded to the reinsurance contracts. The Company calculates its ceded reinsurance projection based on the terms of any applicable reinsurance agreements, including an estimate of how incurred but not reported losses will ultimately be ceded under reinsurance agreements. Accordingly, the Company's estimate of reinsurance recoverables is subject to similar risks and uncertainties as the estimate of the gross reserve for future policy benefits.

The Company's reinsurance recoverables are summarized as follows:

	As of December 31,	
Reinsurance Recoverables	**2017**	**2016**
Reserve for future policy benefits and other policyholder funds and benefits payable		
Sold businesses (MassMutual and Prudential)	$ 19,448	$ 19,363
Other reinsurers	1,337	1,362
Gross reinsurance recoverables	**$ 20,785**	**$ 20,725**

As of December 31, 2017 , the Company has reinsurance recoverables from MassMutual and Prudential of $8.3 billion and $11.1 billion , respectively. As of December 31, 2016 , the Company has reinsurance recoverables from MassMutual and Prudential of $8.6 billion and $10.8 billion , respectively. The Company's obligations to its direct policyholders that have been reinsured to MassMutual and Prudential are secured by invested assets held in trust. As of December 31, 2017 , net of invested assets held in trust, the Company has no reinsurance-related concentrations of credit risk greater than 10% of the Company's Consolidated Stockholder's Equity.

No allowance for uncollectible reinsurance is required as of December 31, 2017 and December 31, 2016 . The allowance for uncollectible reinsurance reflects management's best estimate of reinsurance cessions that may be uncollectible in the future due to reinsurers' unwillingness or inability to pay. The Company analyzes recent developments in commutation activity between reinsurers and cedants, recent trends in arbitration and litigation outcomes in disputes between reinsurers and cedants and the overall credit quality of the Company's reinsurers. Based on this analysis, the Company may adjust the allowance for uncollectible reinsurance or charge off reinsurer balances that are determined to be uncollectible. Where its contracts permit, the Company secures future claim obligations with various forms of collateral, including irrevocable letters of credit, secured trusts, funds held accounts and group-wide offsets.

Due to the inherent uncertainties as to collection and the length of time before reinsurance recoverables become due, it is possible that future adjustments to the Company's reinsurance recoverables, net of the allowance, could be required, which could have a material adverse effect on the Company's consolidated results of operations or cash flows in a particular quarter or annual period.

Insurance Revenues

The effect of reinsurance on earned premiums, fee income and other is as follows:

	Year Ended December 31,		
	2017	**2016**	**2015**
Gross earned premiums, fee income and other	$ 2,434	$ 2,659	$ 2,877
Reinsurance assumed	116	129	113
Reinsurance ceded	(1,539)	(1,616)	(1,801)
Net earned premiums, fee income and other	**$ 1,011**	**$ 1,172**	**$ 1,189**

The cost of reinsurance related to long-duration contracts is accounted for over the life of the underlying reinsured policies using assumptions consistent with those used to account for the underlying policies. Insurance recoveries on ceded reinsurance agreements, which reduce death and other benefits, were $1,150 , $1,131 , and $1,094 for the years ended December 31, 2017 , 2016 , and 2015 , respectively. In addition, the Company has reinsured a portion of the risk associated with U.S. variable annuities and the associated GMDB and GMWB riders.

5. Reinsurance (continued)

The Company also maintains a reinsurance agreement with Hartford Life and Accident Insurance Company ("HLA"), whereby the Company has ceded all of its group life and group accident and health risk business to HLA. Under this treaty, the Company ceded group life premium of $27 , $40 , and $64 for the years ended December 31, 2017 , 2016 , and 2015 , respectively. The Company ceded accident and health premiums to HLA of $70 , $86 , and $129 for the years ended December 31, 2017 , 2016 , and 2015 , respectively.

6 . Deferred Policy Acquisition Costs

Changes in the DAC Balance

	For the years ended December 31,		
	2017	2016	2015
Balance, beginning of period	**$ 463**	**$ 542**	**$ 521**
Deferred costs	2	7	7
Amortization — DAC	(51)	(40)	(82)
Amortization — Unlock benefit (charge), pre-tax	3	(74)	13
Adjustments to unrealized gains and losses on securities AFS and other	(12)	28	83
Balance, end of period	**$ 405**	**$ 463**	**$ 542**

7. Reserves for Future Policy Benefits and Separate Account Liabilities

Changes in Reserves for Future Policy Benefits

	Universal Life-Type Contracts			
	GMDB/GMWB [1]	Life Secondary Guarantees	Traditional Annuity and Other Contracts [2] [4]	Total
Liability balance as of January 1, 2017	**$ 786**	**$ 2,627**	**$ 10,587**	**$ 14,000**
Incurred [3]	185	313	777	1,275
Paid	(98)	—	(787)	(885)
Change in unrealized investment gains and losses	—	—	92	92
Liability balance as of December 31, 2017	**$ 873**	**$ 2,940**	**$ 10,669**	**$ 14,482**
Reinsurance recoverable asset, as of January 1, 2017	**$ 432**	**$ 2,627**	**$ 1,697**	**$ 4,756**
Incurred [3]	113	313	108	534
Paid	(81)	—	(63)	(144)
Reinsurance recoverable asset, as of December 31, 2017	**$ 464**	**$ 2,940**	**$ 1,742**	**$ 5,146**

	Universal Life-Type Contracts			
	GMDB/GMWB [1]	Life Secondary Guarantees	Traditional Annuity and Other Contracts [2]	Total Future Policy Benefits
Liability balance as of January 1, 2016	**$ 863**	**$ 2,313**	**$ 10,674**	**$ 13,850**
Incurred [3]	37	314	671	1,022
Paid	(114)	—	(785)	(899)
Change in unrealized investment gains and losses	—	—	27	27
Liability balance as of December 31, 2016	**$ 786**	**$ 2,627**	**$ 10,587**	**$ 14,000**
Reinsurance recoverable asset, as of January 1, 2016	**$ 523**	**$ 2,313**	**$ 1,823**	**$ 4,659**
Incurred [3]	—	314	(56)	258
Paid	(91)	—	(70)	(161)
Reinsurance recoverable asset, as of December 31, 2016	**$ 432**	**$ 2,627**	**$ 1,697**	**$ 4,756**

[1] These liability balances include all GMDB benefits, plus the life-contingent portion of GMWB benefits in excess of the return of the GRB. GMWB benefits up to the GRB are embedded derivatives held at fair value and are excluded from these balances.
[2] Represents life-contingent reserves for which the company is subject to insurance and investment risk.
[3] Includes the portion of assessments established as additions to reserves as well as changes in estimates affecting the reserves.
[4] Includes $285 of gross reserves and $288 of reinsurance recoverables that relates to business HLIC cedes to HLA.

7. Reserves for Future Policy Benefits and Separate Account Liabilities (continued)

Account Value by GMDB/GMWB Type as of December 31, 2017

	Account Value (“AV”) [8]	Net amount at Risk (“NAR”) [9]	Retained Net Amount at Risk (“RNAR”) [9]	Weighted Average Attained Age of Annuitant
MAV [1]				
MAV only	$ 13,769	$ 1,995	$ 300	71
With 5% rollup [2]	1,152	131	41	72
With Earnings Protection Benefit Rider (“EPB”) [3]	3,498	541	82	71
With 5% rollup & EPB	477	108	23	73
Total MAV	18,896	2,775	446	
Asset Protection Benefit ("APB") [4]	10,107	92	62	70
Lifetime Income Benefit ("LIB") – Death Benefit [5]	452	4	4	71
Reset [6] (5-7 years)	2,469	6	5	70
Return of Premium ("ROP") [7] /Other	8,899	52	50	71
Subtotal Variable Annuity with GMDB/GMWB [10]	**$ 40,823**	**$ 2,929**	**$ 567**	**71**
Less: General Account Value with GMDB/GMWB	3,615			
Subtotal Separate Account Liabilities with GMDB	**37,208**			
Separate Account Liabilities without GMDB	78,626			
Total Separate Account Liabilities	**$ 115,834**			

[1] MAV GMDB is the greatest of current AV, net premiums paid and the highest AV on any anniversary before age 80 years (adjusted for withdrawals).
[2] Rollup GMDB is the greatest of the MAV, current AV, net premium paid and premiums (adjusted for withdrawals) accumulated at generally 5% simple interest up to the earlier of age 80 years or 100% of adjusted premiums.
[3] EPB GMDB is the greatest of the MAV, current AV, or contract value plus a percentage of the contract’s growth. The contract’s growth is AV less premiums net of withdrawals, subject to a cap of 200% of premiums net withdrawals.
[4] APB GMDB is the greater of current AV or MAV, not to exceed current AV plus 25% times the greater of net premiums and MAV (each adjusted for premiums in the past 12 months).
[5] LIB GMDB is the greatest of current AV; net premiums paid; or, for certain contracts, a benefit amount generally based on market performance that ratchets over time.
[6] Reset GMDB is the greatest of current AV, net premiums paid and the most recent five to seven year anniversary AV before age 80 years (adjusted for withdrawals).
[7] ROP GMDB is the greater of current AV and net premiums paid.
[8] AV includes the contract holder’s investment in the separate account and the general account.
[9] NAR is defined as the guaranteed minimum death benefit in excess of the current AV. RNAR represents NAR reduced for reinsurance. NAR and RNAR are highly sensitive to equity market movements and increase when equity markets decline.
[10] Some variable annuity contracts with GMDB also have a life-contingent GMWB that may provide for benefits in excess of the return of the GRB. Such contracts included in this amount have $6.2 billion of total account value and weighted average attained age of 73 years . There is no NAR or retained NAR related to these contracts. Includes $1.9 billion of account value for contracts that had a GMDB at issue but no longer have a GMDB due to certain elections made by policyholders or their beneficiaries.

Account Balance Breakdown of Variable Separate Account Investments for Contracts with Guarantees

Asset type	December 31, 2017	December 31, 2016
Equity securities (including mutual funds)	$ 34,496	$ 33,880
Cash and cash equivalents	2,712	3,045
Total	**$ 37,208**	**$ 36,925**

As of December 31, 2017 and December 31, 2016 , approximately 15% and 16% of the equity securities (including mutual funds), in the preceding table were funds invested in fixed income securities and approximately 85% and 84% were funds invested in equity securities.

For further information on guaranteed living benefits that are accounted for at fair value, such as GMWB, see Note 2 - Fair Value Measurements of Notes to Consolidated Financial Statements.

8. Debt

Collateralized Advances

The Company is a member of the Federal Home Loan Bank of Boston ("FHLBB"). Membership allows the Company access to collateralized advances, which may be used to support various spread-based business and enhance liquidity management. FHLBB membership requires the company to own member stock and advances require the purchase of activity stock. The amount of advances that can be taken are dependent on the asset types pledged to secure the advances. The CTDOI will permit the Company to pledge up to $0.9 billion in qualifying assets to secure FHLBB advances for 2018 . The pledge limit is recalculated annually based on statutory admitted assets and capital and surplus. The Company would need to seek the prior approval of the CTDOI in order to exceed these limits. As of December 31, 2017 , the Company had no advances outstanding under the FHLBB facility.

9. Income Taxes

The provision (benefit) for income taxes consists of the following:

	For the years ended December 31,		
	2017	2016	2015
Income Tax Expense (Benefit)			
Current - U.S. Federal	$ 4	$ 2	$ 36
Deferred - U.S. Federal	418	72	(6)
Total income tax expense	**$ 422**	**$ 74**	**$ 30**

Deferred tax assets and liabilities on the consolidated balance sheets represent the tax consequences of differences between the financial reporting and tax basis of assets and liabilities. Deferred tax assets (liabilities) include the following:

	As of December 31,	
Deferred Tax Assets	2017	2016
Tax basis deferred policy acquisition costs	$ 60	$ 101
Unearned premium reserve and other underwriting related reserves	4	6
Financial statement deferred policy acquisition costs and reserves	39	32
Investment-related items	155	135
Insurance product derivatives	12	79
Net operating loss carryover	681	1,155
Alternative minimum tax credit [1]	—	232
Foreign tax credit carryover	23	40
Other	29	191
Total Deferred Tax Assets	**1,003**	**1,971**
Deferred Tax Liabilities		
Net unrealized gain on investments	(398)	(480)
Employee benefits	(49)	(54)
Total Deferred Tax Liabilities	**(447)**	**(534)**
Net Deferred Tax Assets	**$ 556**	**$ 1,437**

[1] Amount was reclassified to current tax receivable within other assets of the consolidated balance sheets.

On December 22, 2017 , the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (“Tax Reform”). Tax Reform establishes new tax laws that will affect 2018 , including, but not limited to, (1) reduction of the U.S. federal corporate income tax rate from 35 % to 21 %; (2) elimination of the corporate alternative minimum tax (AMT) and changing how existing AMT credits can be realized, (3) limitations on the deductibility of certain executive compensation, (4) changes to the discounting of statutory reserves for tax purposes, (5) modifications to the dividends received deduction, and (6) limitations on net operating losses (NOLs) generated after December 31, 2017 though there is no impact to the Company’s current NOL carryforwards.

In connection with our initial analysis of the impact of Tax Reform, the Company recorded a provisional net income tax expense of $ 396 in the period ending December 31, 2017 . This net expense consists of a $ 379 reduction of The Company’s deferred tax assets primarily due to the reduction in the U.S. federal corporate income tax rate and a $ 17 sequestration fee payable associated with refundable AMT credits. Net of the sequestration fee payable, the Company's AMT credits of $ 234 have been reclassified to a current income tax receivable within other assets in the accompanying consolidated balance sheets. Tax reform allows for the refund of AMT credits over time but no later than 2022 .

For components where we have made provisional estimates of the impact of Tax Reform, particularly the estimated amount of sequestration fee payable, adjustments to income tax expense, if any, will be made in the period the adjustments become known in 2018 .

Under a separate entity approach, no current tax benefits would have been required to be recorded to equity in 2017 , 2016 , or 2015 .

The Company believes it is more likely than not that all deferred tax assets will be fully realized. In assessing the need for a valuation allowance, management considered future taxable temporary difference reversals, future taxable income exclusive of reversing temporary differences and carryovers, taxable income in open carry back years and other tax planning strategies. From time to time, tax planning strategies could include holding a portion of debt securities with market value losses until recovery, making investments which have specific tax characteristics and business considerations such as asset-liability matching.

9. Income Taxes (continued)

Net deferred income taxes include the future tax benefits associated with the net operating loss carryover and foreign tax credit carryover as follows:

Net Operating Loss Carryover

As of December 31, 2017 and 2016 , the net deferred tax asset included the expected tax benefit attributable to net operating losses of $3,243 and $3,301 , respectively. If unutilized, $3,240 of the losses expire from 2023 - 2036 . Utilization of these loss carryovers is dependent upon the generation of sufficient future taxable income.

Most of the net operating loss carryover originated from the Company's U.S. annuity business, including from the hedging program. Given the continued runoff of the U.S. fixed and variable annuity business, the exposure to taxable losses is significantly lessened. Accordingly, given the expected future ultimate parent's consolidated group earnings, the Company believes sufficient taxable income will be generated in the future to utilize its net operating loss carryover. Although the Company believes there will be sufficient future taxable income to fully recover the remainder of the loss carryover, the Company's estimate of the likely realization may change over time. As a condition of the close, in connection with the pending sale of HLI and subsidiaries, the Company will forego approximately $460 of deferred tax assets associated with net operating loss carryovers and foreign tax credits that will be retained by The Hartford. These deferred tax assets continue to be reflected as an asset in the accompanying financial statements as non-recoverability is contingent on the closing of the sale of the business.

Foreign Tax Credit Carryover

As of December 31, 2017 and 2016 , the net deferred tax asset included the expected tax benefit attributable to foreign tax credit carryover of $ 23 and $ 40 respectively. The foreign tax credit carryovers expire from 2023 to 2024 . These credits are available to offset regular federal income taxes from future taxable income and although the Company believes there will be sufficient future regular federal taxable income, there can be no certainty that future events will not affect the ability to utilize the credits. Additionally, the use of the foreign tax credits generally depends on the generation of sufficient taxable income to first utilize all of the U.S. net operating loss carryover. However, the Company has identified and purchased certain investments which allow for utilization of the foreign tax credits without first using the net operating loss carryover. Consequently, the Company believes it is more likely than not the foreign tax credit carryover will be fully realized. Accordingly, no valuation allowance has been provided.

Alternative Minimum Tax Credit and Foreign Tax Credit Carryover

As noted above, because AMT credits are refundable the Company reflected AMT credits, net of a sequestration fee payable, as a current tax receivable at its undiscounted amount and they are no longer included as deferred tax assets.

Including AMT credits, the Company has a current income tax receivable of $ 341 and $ 64 as of December 31, 2017 and 2016, respectively.

The Company or one or more of its subsidiaries files income tax returns in the U.S. federal jurisdiction, and various states and foreign jurisdictions. The federal audit of the years 2012 and 2013 was completed as of March 31, 2017 with no additional adjustments. Management believes that adequate provision has been made in the financial statements for any potential assessments that may result from tax examinations and other tax-related matters for all open tax years.

The Company’s unrecognized tax benefits are settled with the parent consistent with the terms of a tax sharing agreement. The Company’s effective tax rate for the year ended December 31, 2017 reflects a $ 3 net increase in the provision for income taxes from intercompany tax settlements.

9. Income Taxes (continued)

A reconciliation of the tax provision at the U.S. Federal statutory rate to the provision (benefit) for income taxes is as follows:

	For the years ended December 31,		
	2017	2016	2015
Tax provision at the U.S. federal statutory rate	$ 132	$ 125	$ 186
Dividends received deduction ("DRD")	(102)	(76)	(152)
Foreign related investments	(7)	(7)	(3)
IRS audit adjustments	—	31	—
Tax Reform	396	—	—
Other	3	1	(1)
Provision for income taxes	**$ 422**	**$ 74**	**$ 30**

The separate account DRD is estimated for the current year using information from the most recent return, adjusted for current year equity market performance and other appropriate factors, including estimated levels of corporate dividend payments and level of policy owner equity account balances. The actual current year DRD can vary from estimates based on, but not limited to, changes in eligible dividends received in the mutual funds, amounts of distributions from these mutual funds, amounts of short-term capital gains at the mutual fund level and the Company's taxable income before the DRD. The Company evaluates its DRD computations on a quarterly basis.

10. Commitments and Contingencies

Contingencies Relating to Corporate Litigation and Regulatory Matters

Management evaluates each contingent matter separately. A loss is recorded if probable and reasonably estimable. Management establishes reserves for these contingencies at its “best estimate,” or, if no one number within the range of possible losses is more probable than any other, the Company records an estimated liability at the low end of the range of losses.

Litigation

The Company is involved in claims litigation arising in the ordinary course of business with respect to life, disability and accidental death and dismemberment insurance policies and with respect to annuity contracts. The Company accounts for such activity through the establishment of reserves for future policy benefits. Management expects that the ultimate liability, if any, with respect to such ordinary-course claims litigation, after consideration of provisions made for potential losses and costs of defense, will not be material to the consolidated financial condition, results of operations or cash flows of the Company.

The Company is also involved in other kinds of legal actions, some of which assert claims for substantial amounts. Such actions have alleged, for example, bad faith in the handling of insurance claims and improper sales practices in connection with the sale of insurance and investment products. Some of these actions also seek punitive damages. Management expects that the ultimate liability, if any, with respect to such lawsuits, after consideration of provisions made for estimated losses, will not be material to the consolidated financial condition of the Company. Nonetheless, given the large or indeterminate amounts sought in certain of these actions, and the inherent unpredictability of litigation, it is possible that an adverse outcome in certain matters could, from time to time, have a material adverse effect on the Company’s consolidated financial condition, results of operations or cash flows in particular quarterly or annual periods.

Lease Commitments

The rent paid to Hartford Fire Insurance Company ("Hartford Fire") for operating leases was $2 , $2 and $9 for the years ended December 31, 2017 , 2016 and 2015 , respectively.

	Operating Leases	
2018	$	6
2019		5
2020		4
2021		3
2022		2
Thereafter		8
Total minimum lease payments	**$**	**28**

Unfunded Commitments

As of December 31, 2017 , the Company has outstanding commitments totaling $787 , of which $683 is committed to fund limited partnership and other alternative investments, which may be called by the partnership during the commitment period to fund the purchase of new investments and partnership expenses. Additionally, $23 of the outstanding commitments relate to various funding obligations associated with private placement securities. The remaining outstanding commitments of $81 relate to mortgage loans the Company is expecting to fund in the first half of 2018.

Guaranty Fund and Other Insurance-related Assessments

In all states, insurers licensed to transact certain classes of insurance are required to become members of a guaranty fund. In most states, in the event of the insolvency of an insurer writing any such class of insurance in the state, members of the funds are assessed to pay certain claims of the insolvent insurer. A particular state’s fund assesses its members based on their respective written premiums in the state for the classes of insurance in which the insolvent insurer was engaged. Assessments are generally limited for any year to one or two percent of premiums written per year depending on the state.

Liabilities for guaranty funds and other insurance-related assessments are accrued when an assessment is probable, when it can be reasonably estimated, and when the event obligating the Company to pay an imposed or probable assessment has occurred. Liabilities for guaranty funds and other insurance-related assessments are not discounted and are included as part of other liabilities in the Consolidated Balance Sheets. As of December 31, 2017 and 2016 the liability balance was $8 . As of December 31, 2017 and 2016 amounts related to premium tax offsets of $11 and $15 , respectively, were included in other assets.

10. Commitments and Contingencies (continued)

Derivative Commitments

Certain of the Company's derivative agreements contain provisions that are tied to the financial strength ratings, as set by nationally recognized statistical agencies, of the individual legal entity that entered into the derivative agreement. If the legal entity's financial strength were to fall below certain ratings, the counterparties to the derivative agreements could demand immediate and ongoing full collateralization and in certain instances enable the counterparties to terminate the agreements and demand immediate settlement of all outstanding derivative positions traded under each impacted bilateral agreement. The settlement amount is determined by netting the derivative positions transacted under each agreement. If the termination rights were to be exercised by the counterparties, it could impact the legal entity's ability to conduct hedging activities by increasing the associated costs and decreasing the willingness of counterparties to transact with the legal entity. The aggregate fair value of all derivative instruments with credit-risk-related contingent features that are in a net liability position as of December 31, 2017 , was $692 . Of this $692 the legal entities have posted collateral of $847 , which is inclusive of initial margin requirements, in the normal course of business. In addition, the Company has posted collateral of $31 associated with a customized GMWB derivative. Based on derivative market values as of December 31, 2017 , a downgrade of one or two levels below the current financial strength ratings by either Moody's or S&P would not require additional assets to be posted as collateral. These collateral amounts could change as derivative market values change, as a result of changes in our hedging activities or to the extent changes in contractual terms are negotiated. The nature of the collateral that we post, when required, would be primarily in the form of U.S. Treasury bills, U.S. Treasury notes and government agency securities.

On October 23, 2017, Moody's lowered its counterparty credit and insurer financial strength ratings on Hartford Life and Annuity Insurance Company and Hartford Life Insurance Company to Baa3. Given this downgrade action, termination rating triggers in two derivative counterparty relationships in which the Company has open derivative contracts were impacted. The Company has successfully re-negotiated the rating triggers with these counterparties. Accordingly, the Company does not expect the current hedging programs to be adversely impacted by the announcement of the downgrade of Hartford Life and Annuity Insurance Company and Hartford Life Insurance Company. In addition, as a result of the downgrade of Hartford Life and Annuity Insurance Company, the Company is required to post an additional $9 of collateral related to a single counterparty relationship.

11. Transactions with Affiliates

Parent Company Transactions

Transactions of the Company with Hartford Fire Insurance Company ("Hartford Fire"), Hartford Holdings Inc. ("HHI") and its affiliates relate principally to tax settlements, reinsurance, insurance coverage, rental and service fees, payment of dividends and capital contributions, and employee costs. In addition, the Company has issued structured settlement contracts to fund claims settlements of property casualty insurance companies and self -insured entities. In many cases, the structured settlement contracts are to fund claim settlements of the Company's affiliated property and casualty companies whereby these property and casualty companies transferred funds to another affiliate of the Company to purchase the contracts. The Company had $0 and $53 , respectively, of reserves for claim annuities purchased by affiliated entities as of December 31, 2017 and December 31, 2016 , respectively. Reserves for annuities issued by the Company to The Hartford's property and casualty subsidiaries to fund structured settlement payments where the claimant has not released The Hartford's property and casualty subsidiaries of their primary obligation totaled $682 and $711 as of December 31, 2017 and 2016 , respectively.

Substantially all general insurance expenses related to the Company are initially paid by The Hartford. Expenses are allocated to the Company using specific identification if available, or other applicable methods, that would include a blend of revenue, expense and capital.

The Company issued a guarantee to retirees and vested terminated employees of The Hartford Retirement Plan for U.S. Employees (the "Plan") who retired or terminated prior to January 1, 2004 (the Retirees"). The Plan is sponsored by The Hartford. The guarantee is a commitment to pay all accrued benefits which the Retiree or the Retiree's designated beneficiary is entitled to receive under the Plan in the event the Plan assets are insufficient to fund those benefits and The Hartford is unable to provide sufficient assets to fund those benefits. In June 2017, The Hartford purchased a group annuity contract with The Prudential Insurance Company of America and settled a portion of The Hartford's benefit obligation, which included, among others, the Retirees. With the purchase of this group annuity contract, The Hartford has transferred its responsibility for the Retirees' pension benefits to The Prudential Insurance Company of America, thereby causing the Plan to have no further liability with respect to any and all of the benefits of the Retirees. Accordingly, the discharge of the underlying pension obligation has extinguished the Company's guarantee.

In 1990 , Hartford Fire guaranteed the obligations of the Company with respect to life, accident and health insurance and annuity contracts issued after January 1, 1990 . The guarantee was issued to provide an increased level of security to potential purchasers of the Company's products. Although the guarantee was terminated in 1997 , it still covers policies that were issued from 1990 to 1997 . As of December 31, 2017 and December 31, 2016 , no recoverables have been recorded for this guarantee, as the Company was able to meet these policyholder obligations.

Reinsurance Ceded to Affiliates

The Company maintains a reinsurance agreement with Hartford Life and Accident Insurance Company ("HLA") whereby the Company cedes both group life and group accident and health risk. Under this agreement, the Company ceded group life premium of $27 , $40 , and $64 for the years ended December 31, 2017 , 2016 , and 2015 , respectively. The Company ceded accident and health premiums to HLA of $70 , $86 , and $129 for the years ended December 31, 2017 , 2016 , and 2015 , respectively.

Effective August 1, 2016, the Company recaptured a reinsurance agreement with HLA, a wholly owned subsidiary of Hartford Life, Inc. whereby the Company had ceded a single group annuity contract to HLA under a 100% quota share agreement. As a result of this recapture, the Company received a return of premium of $90 and increased reserves by $63 resulting in a recognized pre-tax gain of approximately $27 .

12. Statutory Results

The domestic insurance subsidiaries of the Company prepare their statutory financial statements in conformity with statutory accounting practices prescribed or permitted by the applicable state insurance department which vary materially from U.S. GAAP. Prescribed statutory accounting practices include publications of the National Association of Insurance Commissioners (“NAIC”), as well as state laws, regulations and general administrative rules. The differences between statutory financial statements and financial statements prepared in accordance with U.S. GAAP vary between domestic and foreign jurisdictions. The principal differences are that statutory financial statements do not reflect deferred policy acquisition costs and limit deferred income taxes, predominately use interest rate and mortality assumptions prescribed by the NAIC for life benefit reserves, generally carry bonds at amortized cost and present reinsurance assets and liabilities net of reinsurance. For reporting purposes, statutory capital and surplus is referred to collectively as "statutory capital".

Statutory net income and statutory capital are as follows:

	For the years ended December 31,		
	2017	2016	2015
Combined statutory net income	$ 369	$ 349	$ 371
Statutory capital	$ 3,552	$ 4,398	$ 4,939

Statutory accounting practices do not consolidate the net income (loss) of subsidiaries that report under U.S. GAAP. The combined statutory net income above represents the total statutory net income of the Company, and its other insurance subsidiaries.

Regulatory Capital Requirements

The Company's U.S. insurance companies' states of domicile impose risk-based capital (“RBC”) requirements. The requirements provide a means of measuring the minimum amount of statutory capital appropriate for an insurance company to support its overall business operations based on its size and risk profile. Regulatory compliance is determined by a ratio of a company's total adjusted capital (“TAC”) to its authorized control level RBC (“ACL RBC”). Companies below specific trigger points or ratios are classified within certain levels, each of which requires specified corrective action. The minimum level of TAC before corrective action commences (“Company Action Level”) is two times the ACL RBC. The adequacy of a company's capital is determined by the ratio of a company's TAC to its Company Action Level, known as the "RBC ratio". The Company and all of its operating insurance subsidiaries had RBC ratios in excess of the minimum levels required by the applicable insurance regulations. The RBC ratios for the Company and its principal life insurance operating subsidiaries were all in excess of 300% of their Company Action Levels as of December 31, 2017 and 2016. The reporting of RBC ratios is not intended for the purpose of ranking any insurance company, or for use in connection with any marketing, advertising or promotional activities.

Dividends

Dividends to the Company from its insurance subsidiaries are restricted by insurance regulation. The payment of dividends by Connecticut-domiciled insurers is limited under the insurance holding company laws of Connecticut. These laws require notice to and approval by the state insurance commissioner for the declaration or payment of any dividend, which, together with other dividends or distributions made within the preceding twelve months, exceeds the greater of (i) 10% of the insurer’s policyholder surplus as of December 31 of the preceding year or (ii) net income (or net gain from operations, if such company is a life insurance company) for the twelve-month period ending on the thirty-first day of December last preceding, in each case determined under statutory insurance accounting principles. In addition, if any dividend of a domiciled insurer exceeds the insurer’s earned surplus or certain other thresholds as calculated under applicable state insurance law, the dividend requires the prior approval of the domestic regulator. In addition to statutory limitations on paying dividends, the Company also takes other items into consideration when determining dividends from subsidiaries. These considerations include, but are not limited to, expected earnings and capitalization of the subsidiary, regulatory capital requirements and liquidity requirements of the individual operating company.

In 2017, HLIC paid dividends of $1.4 billion of which $800 was a return of capital used by The Hartford to help fund the HLA acquisition of the Aetna's U.S. group life and disability business. $550 of the $800 return of capital was funded through an extraordinary dividend from HLAI to the Company and approved by the CTDOI.

On December 4, 2017, The Hartford announced it had entered into a definitive agreement to sell the company's parent, Hartford Life Inc., to a group of investors led by Cornell capital LLC, Atlas Merchant Capital LLC, TRB Advisors LP, Global Atlantic Financial Group, Pine Brook and J. Safara Group. Prior to the expected close in 2018, the Company anticipates paying an additional $300 in dividends to its parent, subject to approval by the CTDOI. The sale is anticipated to close by June 30, 2018, subject to regulatory approval and other closing conditions.

13. Changes in and Reclassifications From Accumulated Other Comprehensive Income

Changes in AOCI, Net of Tax for the Year Ended December 31, 2017

	Changes in			
	Net Unrealized Gain on Securities	Net Gain on Cash Flow Hedging Instruments	Foreign Currency Translation Adjustments	AOCI, net of tax
Beginning balance	**$ 693**	**$ 32**	**$ (3)**	**$ 722**
OCI before reclassifications	428	(5)	—	423
Amounts reclassified from AOCI	(99)	(23)	—	(122)
OCI, net of tax	329	(28)	—	301
Ending balance	**$ 1,022**	**$ 4**	**$ (3)**	**$ 1,023**

Changes in AOCI, Net of Tax for the Year Ended December 31, 2016

	Changes in			
	Net Unrealized Gain on Securities	Net Gain on Cash Flow Hedging Instruments	Foreign Currency Translation Adjustments	AOCI, net of tax
Beginning balance	**$ 539**	**$ 57**	**$ (3)**	**$ 593**
OCI before reclassifications	212	(9)	—	203
Amounts reclassified from AOCI	(58)	(16)	—	(74)
OCI, net of tax	154	(25)	—	129
Ending balance	**$ 693**	**$ 32**	**$ (3)**	**$ 722**

Changes in AOCI, Net of Tax for the Year Ended December 31, 2015

	Changes in			
	Net Unrealized Gain on Securities	Net Gain on Cash Flow Hedging Instruments	Foreign Currency Translation Adjustments	AOCI, net of tax
Beginning balance	**$ 1,154**	**$ 70**	**$ (3)**	**$ 1,221**
OCI before reclassifications	(633)	2	—	(631)
Amounts reclassified from AOCI	18	(15)	—	3
OCI, net of tax	(615)	(13)	—	(628)
Ending balance	**$ 539**	**$ 57**	**$ (3)**	**$ 593**

Table of Contents

13. Changes In and Reclassifications From Accumulated Other Comprehensive Income (continued)

	Reclassification from AOCI			
	For the Year Ended December 31, 2017	For the Year Ended December 31, 2016	For the Year Ended December 31, 2015	Affected Line Item in the Consolidated Statement of Operations
Net Unrealized Gain on Securities				
Available-for-sale securities	$ 153	$ 89	$ (27)	Net realized capital losses
	153	**89**	**(27)**	**Income before income taxes**
	54	31	(9)	Income tax expense
	$ 99	**$ 58**	**$ (18)**	**Net (loss) income**
Net Gains on Cash-Flow Hedging Instruments				
Interest rate swaps	$ (1)	$ 1	$ (1)	Net realized capital losses
Interest rate swaps	26	25	33	Net investment income
Foreign currency swaps	11	(2)	(9)	Net realized capital losses
	36	**24**	**23**	**Income before income taxes**
	13	8	8	Income tax expense
	$ 23	**$ 16**	**$ 15**	**Net (loss) income**
Total amounts reclassified from AOCI	**$ 122**	**$ 74**	**$ (3)**	**Net (loss) income**

14 . Quarterly Results (Unaudited)

	Three months ended							
	March 31,		June 30,		September 30,		December 31,	
	2017	2016	2017	2016	2017	2016	2017	2016
Total revenues	$ 527	$ 487	$ 595	$ 622	$ 533	$ 702	$ 577	$ 571
Total benefits, losses and expenses	$ 441	$ 478	$ 450	$ 474	$ 462	$ 610	$ 503	$ 464
Net income	$ 75	$ 28	$ 112	$ 118	$ 83	$ 79	$ (316)	$ 57

HARTFORD LIFE INSURANCE COMPANY AND SUBSIDIARIES
SCHEDULE I
SUMMARY OF INVESTMENTS—OTHER THAN INVESTMENTS IN AFFILIATES
($ in millions)

	As of December 31, 2017		
Type of Investment	**Cost**	**Fair Value**	**Amount at which shown on Balance Sheet**
Fixed Maturities			
Bonds and notes			
U.S. government and government agencies and authorities (guaranteed and sponsored)	$ 2,845	$ 3,058	$ 3,058
States, municipalities and political subdivisions	1,125	1,266	1,266
Foreign governments	379	407	407
Public utilities	2,443	2,739	2,739
All other corporate bonds	10,144	11,299	11,299
All other mortgage-backed and asset-backed securities	3,978	4,030	4,030
Total fixed maturities, available-for-sale	**20,914**	**22,799**	**22,799**
Fixed maturities, at fair value using fair value option	32	32	32
Total fixed maturities	**20,946**	**22,831**	**22,831**
Equity Securities			
Common stocks			
Industrial, miscellaneous and all other	88	95	95
Non-redeemable preferred stocks	52	59	59
Total equity securities, available-for-sale	**140**	**154**	**154**
Equity securities, trading [1]	10	12	12
Total equity securities	**150**	**166**	**166**
Mortgage loans	2,872	2,941	2,872
Policy loans	1,432	1,432	1,432
Futures, options and miscellaneous	478	201	201
Short-term investments	1,094	1,094	1,094
Investments in partnerships and trusts	1,001		1,001
Total investments	**$ 27,973**		**$ 29,597**

[1] Included in other investments on the Consolidated Balance Sheets.

HARTFORD LIFE INSURANCE COMPANY AND SUBSIDIARIES
SCHEDULE IV
REINSURANCE
(In millions)

	Gross Amount	Ceded to Other Companies	Assumed From Other Companies	Net Amount	Percentage of Amount Assumed to Net
For the year ended December 31, 2017					
Life insurance in force	$ 271,213	$ 202,003	$ 526	$ 69,736	1%
Insurance revenues					
Life insurance and annuities	$ 2,361	$ 1,466	$ 116	$ 1,011	11%
Accident and health insurance	73	73	—	—	—%
Total insurance revenues	**$ 2,434**	**$ 1,539**	**$ 116**	**$ 1,011**	**11%**
For the year ended December 31, 2016					
Life insurance in force	$ 284,779	$ 213,221	$ 558	$ 72,116	1%
Insurance revenues					
Life insurance and annuities	$ 2,524	$ 1,527	$ 129	$ 1,126	11%
Accident and health insurance	135	89	—	46	—%
Total insurance revenues	**$ 2,659**	**$ 1,616**	**$ 129**	**$ 1,172**	**11%**
For the year ended December 31, 2015					
Life insurance in force	$ 306,472	$ 234,306	$ 713	$ 72,879	1%
Insurance revenues					
Life insurance and annuities	$ 2,687	$ 1,673	$ 113	$ 1,127	10%
Accident and health insurance	190	128	—	62	—%
Total insurance revenues	**$ 2,877**	**$ 1,801**	**$ 113**	**$ 1,189**	**10%**

HARTFORD LIFE INSURANCE COMPANY AND SUBSIDIARIES
SCHEDULE V
VALUATION AND QUALIFYING ACCOUNTS
(In millions)

	Balance January 1,	Charged to Costs and Expenses	Write-offs/Payments/Other	Balance December 31,
2017				
Valuation allowance on mortgage loans	$ 19	$ 1	$ (20)	$ —
2016				
Valuation allowance on mortgage loans	$ 19	$ —	$ —	$ 19
2015				
Valuation allowance on mortgage loans	$ 15	$ 4	$ —	$ 19

HARTFORD LIFE INSURANCE COMPANY AND SUBSIDIARIES

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2017

FORM 10-K

EXHIBITS INDEX

The exhibits attached to this Form 10-K are those that are required by Item 601 of Regulation S-K.

Exhibit No.	Description
2.01	Reinsurance Binder Agreement between Hartford Life Insurance Company and Hartford Life and Annuity Insurance Company, as cedants, and Hartford Holdings, Inc. and Hopmeadow Acquisition, Inc. and Commonwealth Annuity and Life Insurance Company dated December 3, 2017. *
3.01	Restated Certificate of Incorporation of Hartford Life Insurance Company (the "Company"), effective April 2, 1982, as amended by Amendment No. 1, effective August 3, 1984, as amended by Amendment No. 2 effective December 31, 1996, as amended by Amendment No. 3, effective July 25, 2000 (incorporated herein by reference to Exhibit 3.01 to the Company's Form 10-K for the fiscal year ended December 31, 2004).
3.02	Amended and Restated By-Laws of Hartford Life Insurance Company, effective March 15, 2013, (incorporated herein by reference to Exhibit 3.01 to the Company's Form 10-Q for the quarterly period ended March 31, 2013).
10.01	Intercompany Liquidity Agreement between The Hartford Financial Services Group, Inc., Hartford Life and Accident Insurance Company and certain affiliates, including Hartford Life Insurance Company, effective December 31, 2010 (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed on January 5, 2011).
12.01	Computation of Ratio of Earnings to Fixed Charges *
23.01	Consent of Deloitte & Touche LLP *
31.01	Certification of Brion S. Johnson, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 *
31.02	Certification of Peter F. Sannizzaro, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 *
32.01	Certification of Brion S. Johnson, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 *
32.02	Certification of Peter F. Sannizzaro, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 *
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Linkbase
101.LAB	XBRL Taxonomy Extension Label Linkbase
101.PRE	XBRL Taxonomy Extension Presentation Linkbase

* Filed with the Securities and Exchange Commission as an exhibit to this report. The Company agrees to furnish supplementally a copy of any omitted exhibit to the Securities and Exchange Commission upon request.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, hereunto duly authorized.

HARTFORD LIFE INSURANCE COMPANY

/s/ Peter F. Sannizzaro

Peter F. Sannizzaro

Senior Vice President, Chief Financial Officer and Principal Accounting Officer

Date: March 1, 2018

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Brion S. Johnson Brion S. Johnson	President and Director	March 1, 2018
/s/ Peter F. Sannizzaro Peter F. Sannizzaro	Senior Vice President, Chief Financial Officer and Principal Accounting Officer	March 1, 2018
/s/ Robert Paiano Robert Paiano	Executive Vice President and Director	March 1, 2018

EXECUTION COPY

COMMONWEALTH ANNUITY AND LIFE INSURANCE COMPANY (the " Reinsurer ")
20 Guest Street
Brighton, MA 02135

December 3, 2017

Hopmeadow Acquisition, Inc.
c/o Cornell Capital LLC
499 Park Avenue, 21st Floor
New York, NY 10022
Facsimile No.: 212-320-0567
Attention: Emily Pollack

Hartford Life Insurance Company
One Hartford Plaza
Hartford, Connecticut 06155
Facsimile No.: 855-388-6397
Attention: Chief Financial Officer, General Counsel
beth.bombara@thehartford.com
david.robinson@thehartford.com

Hartford Life and Annuity Insurance Company
One Hartford Plaza
Hartford, Connecticut 06155
Facsimile No.: 855-388-6397
Attention: Chief Financial Officer, General Counsel
beth.bombara@thehartford.com
david.robinson@thehartford.com

Hartford Holdings, Inc.
c/o The Hartford Financial Services Group Inc.
One Hartford Plaza
Hartford, Connecticut 06155
Facsimile No.: 860-547-4721
Attention: General Counsel, Director of Enterprise Transactions Law
mergers@thehartford.com

RE: Reinsurance Agreements

Ladies and Gentlemen:

WHEREAS, pursuant to that certain Stock and Asset Purchase Agreement, to be entered into on the date hereof by and between Hartford Holdings, Inc. (" Seller "), Hopmeadow Acquisition, Inc. (" Buyer "), Hopmeadow Holdings, LP, Hopmeadow Holdings GP LLC and, solely for purposes of

Section 7.19, Section 8.06(b), Section 8.08, Section 8.09 and Article XIV and to the extent applicable to such sections, Article I thereof, The Hartford Financial Services Group, Inc. substantially in the form attached hereto as Exhibit A , (the " Stock and Asset Purchase Agreement "), Buyer has agreed to acquire from Seller, and Seller has agreed to convey, all of the issued and outstanding shares of capital stock of Hartford Life, Inc., a Delaware corporation (" HLI ");

ACTIVE 226736065v.2

WHEREAS, on the first Business Day following the closing under the Stock and Asset Purchase Agreement, (i) Hartford Life Insurance Company, an insurance company organized under the laws of the State of Connecticut and direct subsidiary of HLI (" HLIC ") and Commonwealth Annuity and Life Insurance Company (the " Reinsurer ") will enter into a reinsurance agreement, in the form attached hereto as Exhibit B-1 (as may be modified in accordance with Section 2 and/or 9 hereof) (the " HLIC Reinsurance Agreement "), pursuant to which HLIC will cede certain books of business to the Reinsurer and (ii) Hartford Life and Annuity Insurance Company, an insurance company organized under the laws of the State of Connecticut and indirect wholly owned subsidiary of HLI (" HLAIC ") and the Reinsurer will enter into a reinsurance agreement, in the form attached hereto as Exhibit B-2 (as may be modified in accordance with Section 2 and/or 9 hereof) (the " HLAIC Reinsurance Agreement " and, together with the HLIC Reinsurance Agreement, the " Reinsurance Agreements " and each a " Reinsurance Agreement "), pursuant to which HLAIC will cede certain books of business to the Reinsurer;

WHEREAS, simultaneously with the execution of the Reinsurance Documents, the Reinsurer and Hartford Investment Management Company the will enter into an investment management agreement substantially in the form attached hereto as Exhibit C (the " Investment Management Agreement ");

WHEREAS, the ancillary contracts required under and in the form attached to (i) the HLIC Reinsurance Agreement include a Trust Agreement, to be dated as of the date of the HLIC Reinsurance Agreement, which will be entered into by and among the Reinsurer, HLIC and The Bank of New York Mellon, a New York banking corporation (the " Trustee ") as the trustee thereunder, in the form attached hereto as Exhibit D-1 (as may be modified in accordance with Section 2 hereof) (the " HLIC Trust Agreement ") and (ii) the HLAIC Reinsurance Agreement include a Trust Agreement, to be dated as of the date of the HLAIC Reinsurance Agreement, which will be entered into by and among the Reinsurer, HLAIC and the Trustee, as the trustee thereunder, in the form attached hereto as Exhibit D-2 (as may be modified in accordance with Section 2 hereof) (the " HLAIC Trust Agreement and, together with the HLIC Trust Agreement, the " Trust Agreements " and each a " Trust Agreement ", and together with the Reinsurance Agreements, the " Reinsurance Documents "); and

WHEREAS, Seller (solely for the limited purposes set forth herein), Buyer, HLIC, HLAIC and the Reinsurer are entering into this binding commitment agreement (this " Binder "), pursuant to which (a) each of HLIC, HLAIC and the Reinsurer, subject to the terms and conditions hereof, agrees that it shall execute the Reinsurance Documents in the forms attached hereto (as may be modified in accordance with Section 2 and/or 9 hereof), on the first Business Day following the closing under the Stock and Asset Purchase Agreement, and shall cause the Trustee to execute the Trust Agreements on such date, and (b) each of the parties to this Binder, subject to the terms and conditions hereof, agrees to take all other actions contemplated hereunder.

NOW, THEREFORE, in consideration of the mutual and several promises and undertakings herein contained, and for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

REINSURANCE

1. This Binder is intended to set forth the obligations of HLIC, HLAIC and the Reinsurer with respect to the Reinsurance Documents prior to execution thereof. Capitalized terms used in this Binder and not otherwise defined herein shall have the meanings ascribed thereto in the applicable Reinsurance Agreement.

2. Upon receipt by the Reinsurer of (a) evidence reasonably satisfactory to the Reinsurer of the written approval by the Connecticut Insurance Department of Buyer's "Form A" filing relating to the transactions contemplated under the Stock and Asset Purchase Agreement (the " CT Approval "), without any conditions, modifications or limitations with respect to the Reinsurance Documents, in the forms attached hereto, except for any such conditions, modifications or limitations that (i) individually and in the aggregate, would have an impact on the Reinsurer that is either insignificant or not adverse (in each case as determined by the Reinsurer in good faith and reasonably taking into account the economic and accounting impact of such condition, modification or limitation on the Reinsurer), (ii) would result in a change in the Reinsurer's Quota Share to an amount not less than 65% with respect to the standard life contingent structured settlements and 75% with respect to all other business or (iii) would result in a change to any provision of the Reinsurance Documents relating to any retrocession arrangement (any changes to the Reinsurance Documents other than those described in (i), (ii) and (iii) above, " Reinsurer Adverse Changes "), and (b)(i) a certificate duly executed by a senior executive of Buyer, substantially in the form attached hereto as Exhibit E , (ii) a certificate duly executed by a senior executive of HLIC, substantially in the form attached hereto as Exhibit F-1 , (iii) a certificate duly executed by a senior executive of HLAIC, substantially in the form attached hereto as Exhibit F-2 , and (c) written confirmation from Seller that the closing under the Stock and Asset Purchase Agreement has occurred, each of HLIC, HLAIC and the Reinsurer shall, prior to 9:00 a.m. New York time on the first Business Day following the closing under the Stock and Asset Purchase Agreement, (A) execute and deliver each of the Reinsurance Agreements in the form attached hereto, subject only to (1) any revisions to the lists attached as Annex A-1 and Annex B-1 of each of the Reinsurance Agreements (collectively, the " Asset Lists ") required in accordance with Section 9 hereof, (2) any changes required by the Connecticut Insurance Department that would not result in an Reinsurer Adverse Change and any changes required by the Massachusetts Division of Insurance, (3) any changes to which the Reinsurer, HLIC and Buyer agree and (4) the addition of the applicable date of execution, and (B) execute and deliver each of the Trust Agreements, and cause the Trustee to execute and deliver each of the Trust Agreement, in the forms attached hereto, subject only to any changes as described in (1) through (4) above or any corresponding changes related to changes in the Reinsurance

Agreements described in (1) through (4) above. Notwithstanding the foregoing or the last sentence of this Section 2 , from and following the closing under the Stock and Asset Purchase Agreement, other than the change contemplated by clause (4) of the preceding sentence, none of the Reinsurer, HLIC, HLAIC or Buyer shall agree to make any revision or modification to the Reinsurance Documents which would impact the Ceding Commission payable under each of the Reinsurance Agreements without the prior written consent of Seller. The execution and delivery of the Reinsurance Agreements, the Trust Agreements and the Investment Management Agreement, and the consummation of any actions contemplated by the Reinsurance Agreements, the Trust Agreements and the Investment Management Agreement upon their execution and delivery, shall be referred to hereunder as the " Closing ." In the event that any action, restriction, condition, limitation or requirement is imposed by the Connecticut Department of Insurance that constitutes or would result in a Reinsurer Adverse Change, prior to the Reinsurer being entitled to invoke the actual or potential existence of a Reinsurer Adverse Change, Buyer, HLIC, HLAIC and the Reinsurer shall cooperate in good faith to develop a reasonably designed process under which each such party shall promptly (A) provide information (subject to the other terms and conditions of this Binder relating to cooperation and sharing of information) reasonably requested by the others to enable the requesting party to analyze the causes and potential implications of such action, restriction, condition, limitation or requirement and (B) meet in order to (x) exchange and review their respective views as to such action, restriction, condition, limitation or requirement, (y) discuss potential approaches that would avoid such action, restriction, condition, limitation or requirement or mitigate its impact, and (z) negotiate in good faith to attempt to agree to modify the terms of this Binder or the Reinsurance Documents, on mutually acceptable terms and on an equitable basis, in a way that would eliminate any such action, restriction, condition, limitation or requirement or sufficiently mitigate its adverse impact so that it would no longer constitute a Reinsurer Adverse Change hereunder; it being understood and agreed that if reasonable steps can be identified to avoid such action, restriction, condition, limitation or requirement or sufficiently mitigate the negative impact thereof, each party shall take, and shall cause its Affiliates to take, as applicable, all such reasonable steps.

3. If the Closing will occur and on the day of the Closing (a) all conditions precedent to the closing of the Retrocession Trust Agreement, the form of which is attached as Exhibit G (the " Retrocession Trust Agreement ") and the Retrocession Agreement referenced therein are satisfied (as certified in writing by the Reinsurer), and (b) the Reinsurer and the Retrocessionaire are ready, willing and able to execute and deliver the Retrocession Agreement and Retrocession Trust Agreement and to perform their respective obligations thereunder to be performed at the closing thereof, then HLIC and HLAIC shall, upon the written request of the Reinsurer (provided that written request is delivered to HLIC and HLAIC not later than three (3) Business Days prior to the intended date of the Closing), execute and deliver the Retrocession Trust Agreement in the form attached as Exhibit G , together with any conditions, modifications or limitations with respect to such form that, individually and in the aggregate, would have an impact on HLIC or HLAIC that is either insignificant or not adverse (in each case as determined by HLIC or HLAIC, as applicable, in good faith and reasonably taking into account the economic and accounting impact of

such condition, modification or limitation on HLIC or HLAIC, as applicable), and shall reasonably cooperate with the Reinsurer and the Retrocessionaire to appropriately allocate the Initial Net Settlement Amount as between the Trust Account (as defined in the applicable Reinsurance Agreement) and the Retrocession Trust Account; provided , however , that in no event shall this Section 3 be deemed to require (i) any delay in the Closing or (ii) Buyer, HLIC or HLAIC or their respective Affiliates to seek or cause any Person to seek any Governmental Order, including any non-disapproval, or to take any other action that has or could result in the imposition of any action, restriction, condition, limitation, review or requirement by any Governmental Authority.

GENERAL COOPERATION

4. Each of the parties shall (a) execute and deliver, or cause to be executed and delivered, any documents necessary, proper or advisable to consummate and make effective the transactions contemplated under this Binder, (b) (i) refrain from taking any actions that would reasonably be expected to impair, delay or impede the Closing and (ii) not in limitation of any other provision of this Binder, use reasonable best efforts to cause all the conditions to the obligations of the parties to consummate the transactions contemplated by this Binder to be met as soon as reasonably practicable, and (iii) cooperate in good faith to facilitate an orderly Closing; provided , however , that the Reinsurer acknowledges and agrees that nothing set forth in this Section 4 shall (A) obligate the parties hereto to effect the Closing, or obligate the parties to the Stock and Asset Purchase Agreement to close the transactions contemplated thereby, prior to January 3, 2018, (B) prevent Buyer from amending, modifying, terminating, waiving or otherwise supplementing, without the Reinsurer's prior written consent, any obligation, breach or condition set forth in the Stock and Asset Purchase Agreement other than any Reinsured Business Fundamental Representation or any Reinsured Business Pre-Closing Covenant (each as defined below) to the extent that they would reasonably be expected, individually or in the aggregate, to adversely affect in any material respect the Reinsured Contracts or the Covered Liabilities, or (C) require the Reinsurer to accept any condition, modification or limitation with respect to the Reinsurance Documents other than any such condition, modification or limitation that the Reinsurer is expressly required to accept hereunder. For the avoidance of doubt, nothing in this Section 4 shall require a party to waive, or restrict the exercise of, any of such party's rights under the Stock and Asset Purchase Agreement or this Binder, including receipt of the deliverables contemplated by Section 2 .

5. Subject to the Stock and Asset Purchase Agreement, Buyer, HLIC, HLAIC and the Reinsurer shall cooperate in good faith, and cause their Affiliates to cooperate in good faith, as appropriate to carry out the provisions of this Binder.

6. Buyer shall use reasonable best efforts to promptly notify the Reinsurer of any material communication and provide the Reinsurer with copies thereof if such communication is in writing, delivered by it or its Affiliates or Representatives, received from Seller or any of its Affiliates or Representatives, or received from the Connecticut Insurance Department, in each case to the extent (a) affecting the status or the terms of the transactions contemplated

by the Reinsurance Documents, (b) relating to the CT Approval (to the extent relating to the Reinsurance Documents) or that has resulted in, or would reasonably be expected to result in, a Reinsurer Adverse Change, or (c) relating in any material respect to the Reinsured Contracts, the Covered Liabilities or the matters that are the subject of the Reinsurance Documents.

7. Buyer shall keep the Reinsurer reasonably apprised of the status of the matters relating to the completion of the transactions contemplated by the Stock and Asset Purchase Agreement. On the date of the closing under the Stock and Asset Purchase Agreement (such date, the " SAPA Closing Date ") but before the Closing (as defined in the Stock and Asset Purchase Agreement), and following the receipt by the Reinsurer of the deliverables required to be provided to the Reinsurer under Sections 2(a) and 2(b) , the Reinsurer shall deliver to Buyer and Seller the Specified Third-Party Reinsurer Certificate (as defined in the Stock and Asset Purchase Agreement), dated as of the Closing Date (as defined in the Stock and Asset Purchase Agreement) in the form attached hereto as Exhibit H .

8. Buyer shall not amend, modify, terminate, waive or otherwise supplement any of the Reinsured Business Fundamental Representations or Reinsured Business Pre-Closing Covenants, or consent to any of the foregoing, without first obtaining the Reinsurer's prior written consent, which consent shall not be unreasonably withheld, conditioned or delayed. Buyer shall request any such consent in writing, and such consent of the Reinsurer shall be deemed to have been given if the Reinsurer shall not have delivered to Buyer written notice of its rejection of the request for consent within five (5) Business Days of receiving such written request. As used herein, " Reinsured Business Fundamental Representations " means the representations and warranties set forth in Sections 5.03 , 5.04 , 5.05 , 5.06 , 5.07 , 5.08 , 5.15 , 5.16 , 5.18 and 5.25 of the Stock and Asset Purchase Agreement, each to the extent relating to the Reinsured Contracts and the Covered Liabilities (each as defined in the Reinsurance Agreements). As used herein, " Reinsured Business Pre-Closing Covenants " means the covenants in the Stock and Asset Purchase Agreement set forth on Annex B , to the extent such covenants affect in any material respect the Reinsured Contracts or the Covered Liabilities. From and following the closing under the Stock and Asset Purchase Agreement until the Closing under this Binder, HLIC and HLAIC shall not, and Buyer shall not and shall cause HLIC and HLAIC not to, take any action that would have constituted a breach of any of the Reinsured Business Pre-Closing Covenants had such action been taken prior to the closing under the Stock and Asset Purchase Agreement and such provisions applied, *mutatis mutandis* , to HLIC, HLAIC and Buyer.

ASSETS

9. The Transferred Assets for each of the Reinsurance Agreements shall be those listed on the Asset Lists for such Reinsurance Agreements, as such lists shall be modified by the parties hereto in accordance with the Asset Protocol attached as Annex A hereto. The Asset Lists, as so modified, will provide the content for the final Annex A-1 and Annex B-1 to such Reinsurance Agreement upon the execution and delivery thereof at the Closing. Twenty (20) Business Days prior to the anticipated date of the Closing, Buyer, after conferring with

HLIC or HLAIC, as applicable, shall provide updated estimated inputs for the Estimated Initial Reinsurance Premium Part B, with respect to each Reinsurance Agreement, to the Reinsurer, HLIC and HLAIC, as applicable, and the parties will make corresponding modifications to the applicable Asset Lists in accordance with the Asset Protocol (with the cooperation and assistance of Buyer, HLIC and HLAIC). Ten (10) Business Days prior to the anticipated date of the Closing, the parties will cooperate in good faith to update the Asset Lists in accordance with the Asset Protocol. Such modified Asset Lists will replace the content of Annex A-1 and Annex B-1 attached to the applicable Reinsurance Agreement attached hereto. Prior to the Closing, HLIC and HLAIC shall in good faith take into account any recommendations made by the Reinsurer regarding investment decisions or consent rights with respect to the Transferred Assets.

TERMINATION

10. This Binder shall terminate immediately following the execution in full of the last executed Reinsurance Document.

11. Any party may terminate this Binder if the consummation of the transactions contemplated hereby has not occurred by the first Business Day following the Outside Date, as defined in the Stock and Asset Purchase Agreement, including any extension thereof, unless the failure of such consummation to occur by such date arises out of, or results from, the failure of such party (or any of its Affiliates) seeking to terminate this Binder to perform each of its obligations under this Binder required to be performed by it at, on or prior to such date.

12. Any party hereto may terminate this Binder in the event of the issuance of a final, nonappealable order restraining or prohibiting the consummation of the transactions contemplated hereby. In such event, this Binder will become null and void, there shall be no liability on the part of any party to any other hereunder, and the parties hereby waive and release any and all claims arising out of or relating to such termination of this Binder.

13. Buyer may terminate this Binder by providing written notice to the Reinsurer (with a copy to Seller) at any time prior to the Closing if (a) there has been a material breach of any of the covenants or agreements of the Reinsurer contained in this Binder, or (b) the representations and warranties of the Reinsurer contained in Section 16 of this Binder shall not have been true and correct as of the date hereof, or such representations and warranties shall cease to be so true and correct prior to the Closing, as if made on such date on or prior to the Closing; provided, that such material breach of such covenants and agreements, or such failure of such representations and warranties to be true and correct, cannot be cured prior to the Closing or has not been cured within sixty (60) days following the receipt of written notice thereof by the Reinsurer. Any such termination shall be without prejudice to the rights of Buyer, HLIC or HLAIC against the Reinsurer for any breach of any of the terms or conditions of this Binder by the Reinsurer, provided, however, that, in connection with any such termination of this Binder, the non-breaching parties shall not be liable for any Losses in connection with a termination pursuant to this Section 13 and in no event shall Buyer, HLIC or HLAIC be entitled to recover for any of its Losses arising out of or relating to any such breach in an amount in excess of the reasonably documented out-of-pocket costs

and expenses (including reasonably documented fees, charges and disbursements of its legal and actuarial advisors), incurred by such party in connection with the preparation, documenting and negotiation of this Binder, the Reinsurance Documents, the Retrocession Agreement, the Retrocession Trust Agreement and the transactions contemplated hereby and thereby, together with the Losses incurred by such party in the successful enforcement of this indemnity; provided , further , that if the Reinsurer successfully defends such claim for indemnification, then the party or parties that brought such claim shall reimburse the Reinsurer for its reasonably documented out-of-pocket costs and expenses (including reasonably documented fees, charges and disbursements of its legal and actuarial advisors) incurred in such defense.

14. The Reinsurer may terminate this Binder by providing written notice to Buyer, Seller, HLIC and HLAIC at any time prior to the Closing if (a) there has been a material breach of the covenants and agreements of Buyer, HLIC and HLAIC contained in this Binder, or (b) the representations and warranties of Buyer, HLIC or HLAIC contained in Section 16 of this Binder shall not have been true and correct as of the date hereof, or such representations and warranties shall cease to be so true and correct prior to the Closing, as if made on such date on or prior to the Closing; provided , that such material breach of such covenants and agreements, or such failure of such representations and warranties to be true and correct, cannot be cured prior to the Closing or has not been cured within sixty (60) days following the receipt of written notice thereof by Buyer, HLIC or HLAIC, as the case may be. In the event such termination is due to a breach of any of the terms or conditions of this Binder (i) by HLIC, such termination shall be without prejudice to the rights of the Reinsurer to recover from HLIC any Losses arising out of or relating to such breach by HLIC, (ii) by HLAIC, such termination shall be without prejudice to the right of the Reinsurer to recover from HLAIC any Losses arising out of or relating to any such breach by HLAIC or (iii) by Buyer, such termination shall be without prejudice to the rights of the Reinsurer to recover from Buyer any Losses arising out of or relating to such breach by Buyer, provided , however , that, in any case, the non-breaching party shall not be liable for any Losses in connection with a termination pursuant to this Section 14 and in no event shall the aggregate amount so recoverable from HLIC, HLAIC and Buyer (determined severally and not jointly) exceed the reasonably documented out-of-pocket costs and expenses (including reasonably documented fees, charges and disbursements of its legal and actuarial advisors), incurred by the Reinsurer in connection with the preparation, documenting and negotiation of this Binder, the Reinsurance Documents, the Retrocession Agreement, the Retrocession Trust Agreement and the transactions contemplated hereby and thereby, together with the Losses incurred by the Reinsurer in the successful enforcement of this indemnity; provided , further , that if HLIC, HLAIC and/or Buyer, as the case may be, successfully defends such claim for indemnification, then the Reinsurer shall reimburse such party or parties for its or their reasonably documented out-of-pocket costs and expenses (including reasonably documented fees, charges and disbursements of its legal and actuarial advisors) incurred in such defense.

15. Any party may terminate this Binder upon the termination of the Stock and Asset Purchase Agreement. In such event, this Binder will become null and void, there shall be no liability

on the part of any party to any other hereunder, and the parties hereby waive and release any and all claims arising out of or relating to such termination of this Binder.

REPRESENTATIONS AND WARRANTIES

16. Each party hereto represents and warrants to the other parties hereto that (a) such party is duly organized and validly existing under the laws of its jurisdiction of its incorporation or formation, and has full corporate or other organizational power and authority to enter into this Binder and to perform its obligations hereunder; (b) such party is duly authorized to execute and deliver this Binder and to perform its obligations hereunder, and the person or persons executing this Binder on its behalf have been duly authorized to do so by all requisite corporate or other organizational action; and (c) assuming the due execution and delivery of this Binder by the other parties hereto, this Binder is valid and legally binding upon such party and enforceable against it in accordance with the terms hereof, and does not conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, nor, assuming receipt of all regulatory approvals contemplated by the Stock and Asset Purchase Agreement and the Reinsurance Documents, violate any material law or regulation of any court, governmental body or administrative or other agency having jurisdiction over it.

ACCESS TO BOOKS AND RECORDS

17. The Reinsurer (and the Retrocessionaire) shall be deemed to be a "Representative" of Buyer for purposes of access and examination of books, records and other information relating to the Reinsured Contracts or the Covered Liabilities available to or accessible by Buyer pursuant to the Stock and Asset Purchase Agreement, and Buyer shall use its reasonable best efforts to enforce such access and examination rights afforded to it and its Representatives (including the Reinsurer) pursuant thereto.

REPORTS

18. From and after the date hereof until the earlier of the Closing date and the termination of this Binder, (a) HLIC and HLAIC shall continue to provide the Reinsurer with access to the Project Cotton/Harvest virtual data room to the extent relating to the Reinsured Contracts or the Covered Liabilities, including as such virtual data room is updated with new documents or other information posted to it from time to time, if such data room continues to be maintained, (b) Buyer shall deliver to the Reinsurer a copy of all material reports, statements, notices and other information received from Seller, HLIC or HLAIC whether pursuant to the Stock and Asset Purchase Agreement or otherwise, to the extent affecting the Reinsured Contracts or the Covered Liabilities, (c) Buyer shall deliver to the Reinsurer a copy of all material reports, statements, notices and other information as Buyer or its Affiliates shall have furnished to Seller, HLIC or HLAIC whether pursuant to the Stock and Asset Purchase Agreement or otherwise, to the extent affecting the Reinsured Contracts or the Covered Liabilities and (d) HLIC, HLAIC and Buyer shall deliver or cause to be delivered to the Reinsurer such information as is otherwise reasonably requested by the Reinsurer from time to time to the extent relating to or affecting the Reinsured Contracts or the Covered Liabilities.

In the case of each of (b), (c) and (d), such report, statement, notice or other information shall be delivered to the Reinsurer within five (5) Business Days of being furnished by such party or requested by the Reinsurer, respectively.

EXCLUSIVITY

19. (a) Each of the parties hereto agrees, on behalf of itself and its Affiliates, that during the period beginning on the date hereof and ending on the earlier of (i) the Closing and (ii) the date of termination of this Binder, if the Closing has not occurred (" Exclusivity Period ") it shall not, and shall cause its Affiliates and Representatives to not, directly or indirectly:

(x) initiate, entertain, solicit, negotiate, or take any action to knowingly facilitate or encourage, any inquiry, proposal or offer that constitutes, or could reasonably be expected to lead to, a transaction or a series of transactions involving the direct or indirect reinsurance, retrocession, novation, assignment or acquisition (in each case, whether by operation of law or otherwise) by or with a Person, who is not the Reinsurer or Buyer, of any portion of the Reinsured Contracts (an " Alternative Transaction ");

(y) accept any proposal or offer for, or enter into any reinsurance, retrocession, or novation agreement (or any binder, term sheet, cover slip, letter of intent, agreement in principle, memorandum of understanding, confidentiality agreement or other document in contemplation of the foregoing) or similar agreement for, or relating to, an Alternative Transaction with any Person, who is not the Reinsurer; and

(z) provide, or afford access (including through any electronic data room) to, any non-public information relating to Buyer, HLAIC or HLIC (as appropriate) or any of their respective Affiliates in connection with an Alternative Transaction, or participate or engage in any discussions concerning or relating to an Alternative Transaction with any Person who is not the Reinsurer, other than to the extent required by Applicable Law (so long as the Reinsurer is given, solely to the extent permitted (or not prohibited) by Applicable Law, prior notice of such provision or access).

(b) Each of the parties hereto shall, and shall cause its Affiliates and Representatives to, immediately cease and cause to be terminated all existing discussions or negotiations with any Person who is not the Reinsurer or Buyer, conducted heretofore with respect to any Alternative Transaction, or any inquiry or proposal that may reasonably be expected to lead to an Alternative Transaction, request the prompt return or destruction of all confidential information previously furnished and immediately terminate all physical and electronic data room access previously granted to any such Person or its Representatives.

(c) Buyer shall notify the Reinsurer promptly of any oral or written indication of interest, request for information, inquiry or offer with respect to an Alternative Transaction, and shall, in any such notice, indicate in reasonable detail the material terms and conditions of such Alternative Transaction; provided , however , that Buyer shall not be obligated to disclose the identity of the Person making such oral or written indication of interest, request for information, inquiry or offer.

(d) In the event that the CT Approval contains any condition that constitutes a Reinsurer Adverse Change, and the parties cannot eliminate or mitigate such condition within twenty (20) Business Days after the parties have first met to discuss such condition in accordance with Section 2 of this Binder, this Section 19 shall terminate and be of no further force and effect.

PUBLIC ANNOUNCEMENT; CONFIDENTIALITY

20. At all times at or before the Closing, HLIC, HLAIC, Buyer and the Reinsurer will each consult with the other before issuing or making any reports, statements or releases to the public with respect to this Binder or the transactions contemplated hereby, or any other Confidential Information obtained from the other parties in connection with the transactions contemplated by this Binder, and will use good faith efforts to obtain the other parties' approval of the form, content and timing of any public report, statement or release to be made solely on behalf of a party. If HLIC, HLAIC, Buyer and the Reinsurer are unable to agree upon or approve the form, content and timing of any such public report, statement or release and such report, statement or release is, in the opinion of outside legal counsel to the party, required by Applicable Law, then such party may, subject to this Section 20 , make or issue the legally required report, statement or release. At all times at or before the Closing, each of HLIC, HLAIC, Buyer and the Reinsurer shall not, and shall cause their Affiliates and their respective representatives not to, use for its or their own benefit or divulge or convey to any third party, any Confidential Information; provided , however , that none of HLIC, HLAIC, Buyer or the Reinsurer will be prohibited from disclosing such Confidential Information described in this Section 20 (a) to its intended retrocessionaires or hedge or other risk mitigation counterparties in connection with its retrocession or hedging of all or a portion of the risks to be ceded pursuant to the Reinsurance Agreements, so long as any such retrocessionaires or hedge counterparties are bound to confidentiality obligations in respect thereof that are at least as restrictive as those contained herein, (b) to its and its Affiliates' directors, officers and employees who have a need for such information in the conduct of its business (it being understood that the Persons to whom such disclosure is made will be informed of the confidential nature of such information and instructed to keep such information confidential), (c) as might be necessary, during the course of external audits, (d) to the extent it is required to disclose any such information in its statutory filings, (e) other than with respect to nonpublic personal information, to the extent it is required to provide such information to any rating agency, (f) as required by Applicable Law or any order, request, requirement, inquiry or subpoena by any Governmental Authority, (g) with respect to litigation or potential litigation, claims for indemnification, performance under this Binder, and tax compliance. For purposes of this Section 20 , " Confidential Information " consists of all non-public information and data relating to the other parties to this Binder (other than data or information that is or becomes available to the public other than as a result of a breach of this Section 20) and nonpublic personal contract holder information which includes, but is not limited to, health information, financial information and other information provided by either Buyer, HLIC or HLAIC to the Reinsurer prior to the Closing or termination of this Binder. If the disclosing party is required by Applicable Law to make a filing with a regulator, the disclosing party will (i) use its reasonable best efforts to notify

the other parties (except in connection with the disclosure of such Confidential Information to a Governmental Authority in connection with a regulatory exam or inquiry), and (ii) request confidentiality with respect to the specific terms of this Binder and the transactions contemplated hereby if it has the option to do so and the filing is not already confidential.

Nothing herein shall require a party hereto to disclose any information to the other party or its representatives if such disclosure would jeopardize any attorney-client privilege, the work product immunity or any other legal privilege or similar doctrine or contravene any Applicable Law or any contract (including any applicable confidentiality agreement to which HLIC, HLAIC, Buyer or the Reinsurer or any of their respective Affiliates is a party) (it being understood that each party hereto shall use commercially reasonable efforts to enable such information to be furnished or made available to the other party or its representatives without so jeopardizing privilege or contravening such Applicable Law or contract, including by entering into a customary joint defense agreement or common interest agreement), or require a party hereto to disclose its tax records or any personnel or related records. This Section 20 shall survive any termination of this Binder.

CUSTODY AGREEMENT

21. The parties acknowledge that, on the date hereof, (a) HLIC and the Trustee have executed and delivered a custody agreement, a copy of which is attached hereto as Exhibit I-1 (the " HLIC Custody Agreement ") and (b) HLAIC and the Trustee have executed and delivered a custody agreement, a copy of which is attached hereto as Exhibit I-2 (the " HLAIC Custody Agreement " and, together with the HLIC Custody Agreement, the " Custody Agreements " and each a " Custody Agreement "). The parties acknowledge that such Custody Agreements are being executed in order to allow HLIC and HLAIC, as applicable, to deliver certain documents to the Trustee for its review and to hold in escrow until the Closing (as defined below) under this Binder; *provided* , *however* that HLIC and HLAIC, as applicable, shall deliver such documents no later than six (6) Business Days prior to intended date of Closing. The parties agree that should this Binder be terminated between the date hereof and the date of the Closing, HLIC and HLAIC may require such documents to be returned to it from the Trustee in accordance with the terms of the applicable Custody Agreement.

MISCELLANEOUS

22. Each of the parties hereto acknowledges and agrees that Seller is an express third-party beneficiary of this Binder, with all of the same rights as Buyer, HLIC and HLAIC. Except for Seller, there shall be no third-party beneficiaries of this Binder.

23. This Binder may be executed in any number of counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one agreement.

24. In consideration of the mutual covenants and agreements contained herein, each party does hereby agree that this Binder, and each and every provision hereof, is and shall be enforceable by and between them according to its terms, and each party does hereby agree that it shall not contest in any respect the validity or enforceability of this Binder.

25. Each of the parties hereto acknowledges and agrees that the other parties would be irreparably damaged in the event that any of the covenants, obligations or other provisions contained in this Binder are not performed or complied with in accordance with their specific terms or were otherwise breached, violated or unfulfilled. Accordingly, each of the parties agrees that the other parties shall be entitled to seek an injunction or injunctions to prevent or cure noncompliance with, or breaches or violations of, the provisions of this Binder by the other parties hereto and to seek to enforce specifically this Binder and the terms and provisions hereof, in each case in addition to any other remedy to which such parties may be entitled, at law or in equity. In the event that any party hereto seeks such an injunction, such party will not be required to provide any bond or furnish other security in connection any such injunction. In the event that any action is brought in equity to enforce the provisions of this Binder, no party will allege, and each party hereby waives the defense or counterclaim, that there is an adequate remedy at law.

26. This Binder shall be governed by and construed in accordance with the laws of the State of New York, without giving effect to provisions thereof regarding conflict of laws.

27. (a) Each of the parties hereto irrevocably and unconditionally submits for itself and its property in any Action arising out of or relating to this Binder, the transactions contemplated by this Binder, the formation, breach, termination or validity of this Binder or the recognition and enforcement of any judgment in respect of this Binder, to the exclusive jurisdiction of the courts of the State of New York sitting in the County of New York, the federal courts for the Southern District of New York, and appellate courts having jurisdiction of appeals from any of the foregoing, and all claims in respect of any such Action shall be heard and determined in such New York courts or, to the extent permitted by Law, in such federal court.

(b) Any such Action may and shall be brought in such courts and each of the parties irrevocably and unconditionally waives any objection that it may now or hereafter have to the venue or jurisdiction of any such Action in any such court or that such Action was brought in an inconvenient court and shall not plead or claim the same.

(c) Service of process in any Action may be effected by mailing a copy of such process by registered or certified mail (or any substantially similar form of mail), postage prepaid, to such party at its address as provided on this first page of this Binder.

(d) Nothing in this Binder shall affect the right to effect service of process in any other manner permitted by the Laws of the State of New York.

28. EACH OF THE PARTIES HEREBY WAIVES TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY WITH RESPECT TO ANY LITIGATION DIRECTLY OR INDIRECTLY ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS BINDER OR THE TRANSACTIONS CONTEMPLATED BY THIS BINDER. EACH OF THE PARTIES HEREBY (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF THE OTHER PARTIES HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER

PARTIES WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER, AND (B) ACKNOWLEDGES THAT IT HAS BEEN INDUCED TO ENTER INTO THIS BINDER AND THE TRANSACTIONS CONTEMPLATED BY THIS BINDER, AS APPLICABLE, BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 28.

29. No provision of this Binder may be amended, supplemented or modified except by a written instrument signed by all the parties hereto.

30. The headings contained in this Binder are inserted for convenience of reference only and shall not affect the meaning or interpretation of this Binder. For the purposes of this Binder: (a) words (including capitalized terms defined herein) in the singular shall be held to include the plural and vice versa and words (including capitalized terms defined herein) of one gender shall be held to include the other gender as the context requires; (b) the terms "hereof," "herein" and "herewith" and words of similar import shall, unless otherwise stated, be construed to refer to this Binder as a whole (including all of the exhibits) and not to any particular provision of this Binder, and Section references are to the Sections of this Binder, unless otherwise specified; and (c) the word "including" and words of similar import when used in this Binder shall mean "including, without limitation".

[*Remainder of Page Intentionally Left Blank*]

By signing below the parties unconditionally agree to the terms set forth above.

ACCEPTED AND AGREED:

HOPMEADOW ACQUISITION, INC.

By: /s/ Henry Cornell_____________
Name: Henry Cornell
Title: Authorized Signatory

COMMONWEALTH ANNUITY AND LIFE INSURANCE COMPANY

By: /s/ Gilles Dellaert_____________
Name: Gilles Dellaert
Title: Chief Investment Officer

[*Signature Page to Binder*]

HARTFORD LIFE INSURANCE COMPANY

By: /s/ Brion S. Johnson ______________
Name: Brion S. Johnson
Title: President

HARTFORD LIFE AND ANNUITY INSURANCE COMPANY

By: /s/ Brion S. Johnson ______________
Name: Brion S. Johnson
Title: President

HARTFORD HOLDINGS, INC.

By: /s/ Brion S. Johnson ______________
Name: Brion S. Johnson
Title: President

[*Signature Page to Reinsurance Binder*]

Annex A

ASSET PROTOCOL

The Asset Lists agreed to by the parties and attached to the Reinsurance Agreements may be modified using the following process.

Asset Lists Removals

In the event that any asset on Annex A-1 of each Reinsurance Agreement is not available for the following reasons, it will remain on Annex A-1 of the applicable Reinsurance Agreement and be placed as a negative asset on Annex B-1 of the applicable Reinsurance Agreement:

- Assets sold under the normal business operations and portfolio management of HLIC or HLAIC.
- Bonds called by their issuer.
- Assets that are encumbered and unable to be transferred to the Reinsurer. For the avoidance of doubt, assets that are encumbered will not include assets that are posted as collateral for derivatives.

In the event that any asset on the Asset Lists is treated as impaired under SAP and the impairment policies and procedures of HLIC or HLAIC, consistently applied, it will be removed from Annex A-1.

In the event that the Reinsurer and Buyer dispute the valuation of any assets included on Annex B-1 to each of the Reinsurance Agreements that were not included on Annex A-1, and fail to reach agreement within two (2) Business Days of the Reinsurer being required to provide updated Asset Lists, those assets will be removed from Annex B-1 to each of the Reinsurance Agreements, as applicable.

Carve-out Assets

As provided by Section 9 of this Binder, the Reinsurer will have the ability to consult with HLIC and HLAIC regarding its portfolio management with respect to the assets on the Asset Lists. The Reinsurer may replace assets from Annex A-1 to the HLIC Reinsurance Agreement (" HLIC Carve-out Bucket Assets ") or AnnexA-1 to the HLAIC Reinsurance Agreement (" HLAIC Carve-out Bucket Assets " and, together with HLIC Carve-out Bucket Assets, the " Carve-out Bucket Assets ") with cash in accordance with this paragraph. Upon HLIC's receipt of written notice from the Reinsurer requesting that any HLIC Carve-out Bucket Asset be replaced with cash (" HLIC Replacement Notice "), or HLAIC's receipt of written notice from the Reinsurer requesting that any HLAIC Carve-out Bucket Asset be replaced with cash (" HLAIC Replacement Notice " and, together with HLIC Replacement Notice, the " Replacement Notices " and each a " Replacement Notice "), HLIC or HLAIC, as applicable, shall replace, for purposes of the Asset Lists, such Carve-out Bucket Assets with cash equal to the fair market value of such Carve-out Bucket Assets, determined by Hartford Investment Management Company in accordance with its normal asset valuation methodologies for similarly managed assets, consistently applied, as of the close of business on the date that is the earlier of three (3) Business Days following HLIC's or HLAIC's, as applicable, receipt of the applicable Replacement Notice and the date on which such Carve-out Bucket Assets are sold by HLIC or HLAIC, as applicable, provided , however that no commercial mortgage loans (" CMLs ") may be replaced unless such assets have been downgraded. HLIC or HLAIC, as applicable, shall consult with Buyer to determine whether to retain or sell such Carve-out Bucket Assets. If HLIC or HLAIC, as applicable, after consultation with Buyer, determines that it will not retain a Carve-out Bucket Asset, then Seller shall have the right to purchase, or cause one of its subsidiaries other than HLI or one of the Acquired Subsidiaries (as defined in the Stock and Asset Purchase Agreement) to purchase, such Carve-out Bucket Asset. If Seller elects not to purchase such Carve-out Bucket Asset, then HLIC or HLAIC, as applicable shall attempt to sell such Carve-out Bucket Asset to a third party. If HLIC or HLAIC, as applicable, is unable to sell such Carve-out Bucket Asset to a third party within three (3) Business Days following HLIC's or HLAIC's, as applicable, receipt of the applicable Replacement Notice, then Seller shall, or shall cause one of its subsidiaries (other than HLI or any Acquired Subsidiaries) to, purchase such Carve-out Bucket Asset for cash equal to the fair market value of such Carve-out Bucket Asset, determined by Hartford Investment Management Company in accordance with its normal asset valuation methodologies for similarly managed assets, consistently applied, as of the close of business on the date that is three (3) Business Days following HLIC's or HLAIC's, as applicable, receipt of the applicable Replacement Notice. Under no circumstances will the Reinsurer be permitted to (i) designate assets with an aggregate statutory carrying value on the books of HLIC or HLAIC, as applicable, as of December 31, 2016 of more than $200 million book value, in the aggregate, as Carve-out Bucket Assets, or (ii) deliver any Replacement Notice prior to January 1, 2018. The parties acknowledge that should the Reinsurer exercise its rights hereunder to replace any such assets with cash, that such cash will earn interest in the amount of 0.75% from the date on which the assets are replaced with cash through the date of Closing.

Asset Lists Additions and Re-sizing

The parties acknowledge that the assets originally selected on Annex A-1 attached to this agreement were mutually agreed upon and the value of such assets total an amount approximately equal to the anticipated Estimated Initial Reinsurance Premium Part A in each of the Reinsurance Agreements, and that Annex B-1 originally attached to this agreement is empty. The purpose of this section is to establish the procedures that the parties will follow in good faith to make adjustments to the Asset Lists prior to Closing if needed (for example, to replace assets that are sold in the ordinary course of business and removed from the Asset Lists). The parties shall add assets from the most recent listing of Talcott invested general account assets and CRC non-insulated separate account assets or remove additional assets such that the Asset Lists have values equal to the updated estimated values for the Estimated Initial Reinsurance Premium Part A and the Estimated Initial Reinsurance Premium Part B (as provided pursuant to Section 9 of this Binder) as measured pursuant to Article IV of each of the Reinsurance Agreements. The parties acknowledge that assets with negative par/share amounts on Annex B-1 of each of the Reinsurance Agreements are transfers from the Reinsurer to HLIC or HLAIC, as applicable. In addition, the parties acknowledge that assets originally selected on Annex A-1 of each of the Reinsurance Agreements and remaining on Annex A-1 of each of the Reinsurance Agreements may be placed on Annex B-1 of the applicable Reinsurance Agreement in equal and negative offsetting par/share amounts to be net settled in the event such assets are sold, mature, called or become encumbered during the period between the date hereof and the Closing. As such, assets placed as negative assets on Annex B-1 of each of the Reinsurance Agreements in “Asset Lists Removals” above may remain on Annex A-1 of the applicable Reinsurance Agreement but be unavailable for transfer. The parties also acknowledge that Estimated Reinsurance Premium Part B may be negative (a negative amount indicating premium payable from the Reinsurer to HLIC or HLAIC, as applicable). If Estimated Reinsurance Premium Part B is negative, additional assets included on Annex A-1 of the applicable Reinsurance Agreement (to be transferred to the Reinsurer) may be added as negative assets to Annex B-1 of the applicable Reinsurance Agreement to be net settled as selected mutually by the parties.

Prior to adding any CMLs not included on the original Asset Lists attached to this Binder, the parties shall be provided reasonable time to perform due diligence on any new CMLs. Buyer shall provide any transaction documents, third party appraisals, or other documents that the Reinsurer would typically require to evaluate similar loans.

In adding or removing assets to Annex A-1 to the Reinsurance Agreements, the Reinsurer will maintain the following characteristics and metrics substantially similar to the original Annex A-1 to the applicable Reinsurance Agreement attached to this Binder:

- Market value to book value ratio as of December 31, 2016;
- Weighted Average Life;
- Ratings and sector distribution; and
- Tax attributes.

Excluded Assets

The parties shall not be required to add any of the following to the original Asset Lists attached to this Binder:

- Limited partnerships including investments in hedge funds, private equity or other similar limited partnerships;
- Other equity investments; or
- Derivatives.

Annex B

REINSURED BUSINESS PRE-CLOSING COVENANTS

All capitalized terms used in this Annex B shall have the meanings set forth in the Stock and Asset Purchase Agreement. These covenants shall apply to the extent that they would reasonably be expected, individually or in the aggregate, to adversely affect in any material respect the Reinsured Contracts or the Covered Liabilities.

Stock and Asset Purchase Agreement Section 7.01: Conduct of Business Prior to the Closing.

(a) Except as required by applicable Law or as expressly required or permitted by the terms of this Agreement or the Transaction Agreements, and except as set forth in Schedule 7.01(a) , from the date of the Stock and Asset Purchase Agreement through the Closing Date, unless Buyer otherwise consents in advance in writing (which consent shall not be unreasonably withheld, delayed or conditioned), Seller shall, and shall cause its Affiliates to, refrain from taking any of the following actions:

(ix) cease providing any material services to the Acquired Companies that are provided to the Acquired Companies as of the date of this Agreement or change in any material respect the terms upon or manner in which such services are provided;

(b) Except as required by applicable Law or as expressly required or permitted by the terms of this Agreement or the Transaction Agreements, and except as set forth in Schedule 7.01(b) , from the date of this Agreement through the Closing Date, unless Buyer otherwise consents in advance in writing (which consent shall not be unreasonably withheld, delayed or conditioned), Seller shall cause (x) the Business and the Acquired Companies to be operated in the ordinary course of business, (y) the Acquired Companies to use reasonable best efforts to preserve intact the Business, Permits and relationships with policyholders, distributors and Governmental Authorities and (z) the Acquired Companies to refrain from taking any of the following actions:

(ii) adopt a plan of complete or partial liquidation or rehabilitation or authorize or undertake a merger, dissolution, rehabilitation, consolidation, restructuring, recapitalization or other reorganization;

(iii) effect any recapitalization, reclassification, stock split or combination or similar change in the capitalization of any of the Acquired Companies, or reincorporate or redomesticate any Acquired Company;

(iv) amend the certificate of incorporation or by-laws (or other comparable organizational documents) of any of the Acquired Companies, or change any Insurance Company's state of domicile;

(v) make any material change in the underwriting, claims administration, investment, reserving, hedging, risk management or financial accounting guidelines, policies, practices or principles of the Acquired Companies, as applicable, in effect on the date hereof, other than any change required by GAAP or SAP, or in respect of underwriting, claims, administration, investment, hedging or risk management, in the ordinary course of business, or fail in any material respect to comply with such guidelines, policies, practices or principles;

(vi) make any material change in policies, practices or principles applicable to the setting of non-guaranteed elements with respect to the Insurance Contracts;

(xiii) enter into any new line of business, or issue any Insurance Contracts in connection with the Business other than renewals of existing Insurance Contracts in accordance with the terms thereof, introduce any new products or services, or change in any material respect existing products or services;

(xiv) abandon, modify, waive, surrender, withdraw or terminate any material Permit;

(xvii) cause any of the Insurance Companies to seek approval from the applicable Department of Insurance for the use of any accounting practices in connection with the Statutory Statements that depart from the accounting practices prescribed or permitted by applicable insurance Laws of such respective domiciliary jurisdiction;

(xviii) conduct any material revaluation of any asset, including any write-off of reinsurance recoverables, other than in the ordinary course of business, or except to the extent required by applicable Laws or applicable accounting principles;

(xix) increase or accelerate or permit any material adverse change with respect to any Liabilities to the extent arising under or relating to all of Seller's and its Affiliates' (other than the Acquired Companies') right, title and interest in and to the assets, properties, contracts and rights used exclusively in connection with the Business, including the (a) assets, properties and rights that are set forth on Schedule 1.01(a) to the Stock and Asset Purchase Agreement, (b) Transferred Owned Intellectual Property and (c) Transferred Contracts, in each case, excluding the Excluded Assets, whether arising prior to, at or following the Closing Date;

(xx) make any filing with any Governmental Authority relating to (A) the withdrawal or surrender of any Permit held by any of the Acquired Companies or (B) the withdrawal by any of the Acquired Companies from any lines or kinds of business relating to the Business;

(xxi) except to the extent permitted under this Agreement, pay, discharge, compromise or satisfy any material Liabilities, other than the payment, discharge, compromise or satisfaction of Liabilities in the ordinary course of business;

Below is a list of omitted exhibits (or other similar attachments) from the Reinsurance Binder Agreement by and among Hartford Life Insurance Company and Hartford Life and Annuity Insurance Company, as cedants, and Hartford Holdings, Inc. and Hopmeadow Acquisition, Inc. and Commonwealth Annuity and Life Insurance Company, as Reinsurer, dated December 3, 2017. The registrant agrees to furnish supplementally a copy of any omitted exhibit to the SEC upon request.

Exhibit A Stock and Asset Purchase Agreement

Exhibit B-1 HLIC Reinsurance Agreement

Exhibit B-2 HLAIC Reinsurance Agreement

Exhibit C Investment Management Agreement

Exhibit D-1 HLIC Trust Agreement

Exhibit D-2 HLAIC Trust Agreement

Exhibit E Officer’s Certificate of Hopmeadow Acquisition, Inc.

Exhibit F-1 Officer’s Certificate of Hartford Life Insurance Company

Exhibit F-2 Officer’s Certificate of Hartford Life and Annuity Insurance Company

Exhibit G Retrocession Trust Agreement

Exhibit H Officer’s Certificate of Commonwealth Annuity and Life Insurance Company

Exhibit I-1 HLIC Custody Agreement

Exhibit I-2 HLAIC Custody Agreement

Exhibit 12.01

HARTFORD LIFE INSURANCE COMPANY

COMPUTATION OF RATIO OF EARNINGS TO FIXED CHARGES AND EARNINGS TO COMBINED FIXED CHARGES AND PREFERRED STOCK DIVIDENDS

(In millions)

	For the years Ended December 31,				
	2017	2016	2015	2014	2013
EARNINGS:					
Income from continuing operations, before income taxes	$ 376	$ 356	$ 530	$ 861	$ 561
Add: Total fixed charges, before interest credited to contractholders	—	—	—	—	—
Total earnings before interest credited to contractholders	**376**	**356**	**530**	**861**	**561**
Interest credited to contractholders [1]	628	631	682	725	952
Total earnings	**$ 1,004**	**$ 987**	**$ 1,212**	**$ 1,586**	**$ 1,513**
FIXED CHARGES:					
Interest expense	$ —	$ —	$ —	$ —	$ —
Interest factor attributable to rentals and other	—	—	—	—	—
Total fixed charges, before interest credited to contractholders	**—**	**—**	**—**	**—**	**—**
Interest credited to contractholders [1]	628	631	682	725	952
Total fixed charges	**$ 628**	**$ 631**	**$ 682**	**$ 725**	**$ 952**
RATIOS:					
Total earnings to total fixed charges [2]	1.6	1.6	1.8	2.2	1.6
Deficiency of total earnings to total fixed charges [3]	$ —	$ —	$ —	$ —	$ —
Ratio before interest credited to contractholders					
Total earnings to total fixed charges [2] [4]	NM	NM	NM	NM	NM

[1] Interest credited to contractholders includes interest credited on general account assets and interest credited on consumer notes.
[2] Ratios of less than one-to-one are presented as "NM" or not meaningful.
[3] Represents additional earnings that would be necessary to result in a one-to-one ratio.
[4] This secondary ratio is disclosed for the convenience of policyholders invested in the Company's general account and Consumer Note holders.

Exhibit 23.01

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the registration statements on Form S-3 of our report dated March 1, 2018 , relating to the consolidated financial statements and financial statement schedules of Hartford Life Insurance Company (the "Company") appearing in the Annual Report on Form 10-K of Hartford Life Insurance Company for the year ended December 31, 2017 , and to the reference to us under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

Form S-3 Registration Nos.

333-214334
333-214335
333-214336
333-214337
333-214338
333-214339

/s/ DELOITTE & TOUCHE LLP
Hartford, Connecticut
March 1, 2018

Exhibit 31.01

HARTFORD LIFE INSURANCE COMPANY

CERTIFICATION PURSUANT TO

18 U.S.C. SECTION 1350

AS ENACTED BY SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Brion S. Johnson, certify that:

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

Date: March 1, 2018

By: /s/ Brion S. Johnson

Brion S. Johnson

President

Exhibit 31.02

HARTFORD LIFE INSURANCE COMPANY

CERTIFICATION PURSUANT TO

18 U.S.C. SECTION 1350

AS ENACTED BY SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Peter F. Sannizzaro, certify that:

1. I have reviewed this Annual Report on Form 10-K of Hartford Life Insurance Company;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal controls over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: March 1, 2018

By: /s/ Peter F. Sannizzaro

Peter F. Sannizzaro

Senior Vice President and Principal Accounting Officer

Exhibit 32.01

CERTIFICATION PURSUANT TO

18 U.S.C. SECTION 1350

AS ENACTED BY SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K for the period ended December 31, 2017 of Hartford Life Insurance Company (the "Company"), filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned hereby certifies, pursuant to 18 U.S.C. section 1350 as enacted by section 906 of the Sarbanes-Oxley Act of 2002, that:

1) The Report fully complies with the requirements of section 13(a) or section 15(d) of the Securities Exchange Act of 1934; and

2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Brion S. Johnson

Brion S. Johnson
President
March 1, 2018

Exhibit 32.02

CERTIFICATION PURSUANT TO

18 U.S.C. SECTION 1350

AS ENACTED BY SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K for the period ended December 31, 2017 of Hartford Life Insurance Company (the "Company"), filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned hereby certifies, pursuant to 18 U.S.C. section 1350 as enacted by section 906 of the Sarbanes-Oxley Act of 2002, that:

1) The Report fully complies with the requirements of section 13(a) or section 15(d) of the Securities Exchange Act of 1934; and

2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Peter F. Sannizzaro

Peter F. Sannizzaro
Senior Vice President and Principal Accounting Officer

March 1, 2018