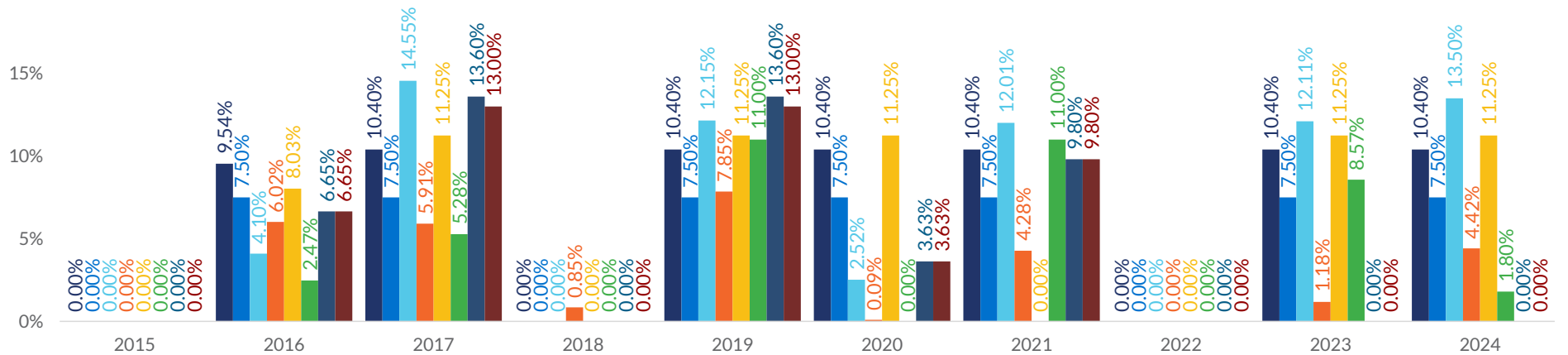


Choose Your Strategy

Fixed-indexed annuities offer indexed strategies that earn interest based, in part, on positive performance of an external index or ETF. The following chart uses historical market returns to illustrate the hypothetical performance of indexed strategies that are available with the AssuranceSelect® 5 Plus from MassMutual Ascend Life Insurance Company.

AssuranceSelect 5 Plus

Hypothetical Strategy Comparison 2015-2024



- S&P 500® 1-year point-to-point with 10.40% cap
- S&P 500® 5-year cap lock annual point-to-point with 7.50% cap
- S&P 500 Risk Control 1-year point-to-point with 75% par. rate
- S&P U.S. Retiree Spending 1-year point-to-point with 75% par. rate
- SPDR® Gold Shares 1-year point-to-point with 11.25% cap
- iShares U.S. Real Estate 1-year point-to-point with 11.00% cap
- First Trust Barclays Edge Index 1-year point-to-point with 13.60% cap*
- First Trust Barclays Edge Index 1-year point-to-point with 13.00% 5-year cap lock*

*See important disclosures on the next page.

Rates are as of 07/21/25 and are for purchase payments of \$100,000 and over.

About the indexes and ETFs

S&P 500® INDEX Ticker: SPX

Reflects the large-cap sector of the U.S. equity market. Includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

S&P 500 RISK CONTROL 10% INDEX Ticker: SPXAV10P

Seeks to limit the volatility of the S&P 500 to a target level of 10% by allocating to cash.

S&P U.S. RETIREE SPENDING INDEX Ticker: SPRETIRE

Measures the performance of equities in economic sectors that are expected to be impacted by retiree spending, while reducing equity risk and overall portfolio volatility through fixed income exposure.

SPDR® GOLD SHARES ETF Ticker: GLD

Reflects the performance of the price of gold bullion.

iSHARES U.S. REAL ESTATE ETF Ticker: IYR

Reflects the performance of the real estate sector in the U.S. equity market.

FIRST TRUST BARCLAYS EDGE INDEX Ticker: FTEDGE7

The First Trust Barclays Edge Index is a multi-asset index seeking to provide equity and fixed income exposure through a combination of indexes, while aiming to control risk by maintaining a volatility target at or below 7%. The Index is on an excess return basis, which means it returns the index performance in excess of risk-free rates.

***IMPORTANT DISCLOSURE RELATING TO BACK TESTED INDEX WEIGHTINGS.**

This material is provided for information purposes only and to provide general information about the historical exposures of the index's equity and fixed income components as a result of the application of the index methodology and has inherent limitations. It is not intended as a recommendation or an offer or solicitation for the purchase or sale of any security or financial instrument, or to enter into a transaction involving any financial instrument. Nothing in this material should be construed as investment, tax, legal, accounting, regulatory or other advice.

The back tested performance included has many inherent limitations, some of which are described below:

- Hypothetical exposures are achieved by implementing the index's methodology.
- The creation of historical index exposures involves assumptions and the benefit of hindsight and do not reflect the impact that material market or economic events might have had on the underlying indexes or volatility control weightings.
- No representation is being made that the Index will maintain to similar exposures in the future.

Actual results will materially vary from the hypothetical performance levels presented herein.

Strategies may vary. Please talk to your financial professional about availability.

At the end of the five-year term, the cap lock strategy will be reallocated or merge into the S&P 500 1-year point-to-point indexed strategy. The values on this piece are calculated using current caps for the 5-year cap lock strategy, even in years 6-10. The current caps for the 5-year cap lock strategy are lower than the current caps for the S&P 500 1-year point-to-point indexed strategy.

Indexed interest rates for the strategy are based on changes in the index over term years, which are not based on calendar years but begin on the 6th and 20th of a month. The information presented above reflects caps and participation rates that are current for the AssuranceSelect 5 Plus as of the date shown. The actual caps and participation rates that we might have applied during the time period shown would have been different and might have been significantly lower. Past performance does not guarantee future results. Hypothetical performance shown in the chart is not indicative of the interest that would have been credited to a fixed-indexed annuity during the time period shown.

The S&P 500® Index does not include dividends declared by any of the companies in the index. For more information, visit www.US.SPIndices.com and search keyword SPX. The S&P 500 Risk Control 10% Index refers to the S&P 500 Average Daily Risk Control 10% USD Price Return Index. The launch date of this index was April 4, 2013. For more information, visit www.US.SPIndices.com and search keyword SPXAV10P. The Gold Shares trade on the NYSE Arca under the symbol GLD. The launch date of the SPDR® Gold Shares ETF was November 2004. For more information, visit www.spdrgoldshares.com. The launch date of the S&P U.S. Retiree Index was September 26, 2016. For more information, visit US.SPindices.com and search keyword SPRETIRE. The launch date of the iShares U.S. Real Estate ETF was June 12, 2000. For more information, visit iShares.com and search ticker symbol IYR.

Returns for an index prior to its launch date are back-tested. Back-tested performance is not actual performance, but is hypothetical. Back-tested returns were calculated using the same methodology that was in effect when the index was officially launched. Back-tested performance is subject to inherent limitations because it reflects application of an index methodology and selection of index constituents in hindsight. No theoretical approach can take into account all of the factors in the markets in general and the impact of decisions that might have been made during the actual operation of an index.

The “S&P 500 Index”, the “S&P 500 Average Daily Risk Control 10% Price Return Index” and the “S&P U.S. Retiree Spending Index” are products of S&P Dow Jones Indices LLC or its affiliates (“SPDJI”) and has been licensed for use by MassMutual Ascend Life Insurance Company. S&P®, S&P 500®, S&P 500 Average Daily Risk Control 10%™, SPDR®, US 500, The 500, iBoxx®, iTraxx® and CDX® are trademarks of S&P Global, Inc. or its affiliates (“S&P”); Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC (“Dow Jones”); MassMutual Ascend Life Insurance Company’s products are not sponsored, endorsed, sold or promoted by SPDJI, Dow Jones, S&P, their respective affiliates, and none of such parties make any representation regarding the advisability of investing in such products nor do they have any liability for any errors, omissions, or interruptions of the S&P 500 Index, the S&P 500 Average Daily Risk Control 10% Price Return Index or the S&P U.S. Retiree Spending Index.

The iShares U.S. Real Estate ETF is distributed by BlackRock Investments, LLC. iShares®, BLACKROCK®, and the corresponding logos are registered and unregistered trademarks of BlackRock, Inc. and its affiliates (“BlackRock”), and these trademarks have been licensed for certain purposes by MassMutual Ascend. MassMutual Ascend annuity products are not sponsored, endorsed, sold or promoted by BlackRock, and purchasers of an annuity from MassMutual Ascend do not acquire any interest in the iShares U.S. Real Estate ETF nor enter into any relationship of any kind with BlackRock. BlackRock makes no representation or warranty, express or implied, to the owners of any MassMutual Ascend annuity product or any member of the public regarding the advisability of purchasing an annuity, nor does it have any liability for any errors, omissions, interruptions or use of the iShares U.S. Real Estate ETF or any data related thereto.

When you buy a fixed-index annuity, you own an insurance contract. You are not buying shares of any stock or index.

The First Trust Barclays Edge Index (“FTIS Index”) is a product of FT Indexing Solutions LLC (“FTIS”) and is administered and calculated by Bloomberg Index Service Limited and its affiliates (collectively, “BISL”). FIRST TRUST® and First Trust Barclays Edge Index are trademarks of First Trust Portfolios L.P. (collectively, with FTIS and their respective affiliates, “First Trust”). The foregoing index and trademarks have been licensed for use for certain purposes by Barclays, Bloomberg, and MassMutual Ascend Life Insurance Company (collectively, the “Licensees”) in connection with the FTIS Index and certain products utilizing the FTIS Index (collectively, the “Products”).

The Capital Strength Index (“Nasdaq Index”) is a product of Nasdaq, Inc. (collectively, with its affiliates, “Nasdaq”). NASDAQ®, CAPITAL STRENGTH INDEX™, NQCAPST™, and NQCAPSTT™ are trademarks of Nasdaq. The foregoing index and trademarks have been licensed for use for certain purposes by FTIS and Licensees in connection with the FTIS Index and the Products.

The Value Line Dividend Index (“Value Line Index”) is a product of Value Line, Inc. (“Value Line”). VALUE LINE® and VALUE LINE DIVIDEND INDEX™ are trademarks or registered trademarks of Value Line. The foregoing index and trademarks have been licensed for use for certain purposes by FTIS and Licensees in connection with the FTIS Index and the Products. The FTIS Index is not sponsored, endorsed, recommended, sold or promoted by Value Line and Value Line makes no representation regarding the advisability of investing in any product utilizing the FTIS Index.

BLOOMBERG® is a trademark and service mark of Bloomberg Finance L.P. Bloomberg Finance L.P., BISL, and their affiliates (“Bloomberg”) are not affiliated with First Trust or Barclays. Bloomberg’s relationship to First Trust and Barclays is only (1) in the licensing of the FIRST TRUST®, BARCLAYS®, and FIRST TRUST BARCLAYS EDGE INDEX™ trademarks and (2) to act as the administrator and calculation agent of the FTIS Index, which is the property of FTIS. Bloomberg does not guarantee the timeliness, accurateness, or completeness of the FTIS Index or any data or information relating thereto and shall have no liability in connection with the FTIS Index or any data or information relating thereto.

The Products are not issued, sponsored, endorsed, sold, recommended, or promoted by First Trust, Bloomberg, Nasdaq, Value Line, or their respective affiliates (collectively, the “Companies”). The Companies do not make any representation regarding the advisability of investing in the Products or products based on the FTIS Index, Barclays Indices, Nasdaq Index, or Value Line Index, do not make any warranties or bear any liability with respect to such products, and do not make any warranties or bear any liability with respect to the Products, the FTIS Index, or another party’s index.

THE COMPANIES DO NOT GUARANTEE THE ADEQUACY, ACCURACY, TIMELINESS, COMPLETENESS, AND/OR UNINTERRUPTED CALCULATION OF THE PRODUCTS, FTIS INDEX, BARCLAYS INDICES, NASDAQ INDEX, VALUE LINE INDEX, OR ANY DATA INCLUDED THEREIN OR ANY COMMUNICATION WITH RESPECT THERETO, INCLUDING, ORAL, WRITTEN, OR ELECTRONIC COMMUNICATIONS. THE COMPANIES SHALL HAVE NO LIABILITY FOR ANY ERRORS, OMISSIONS, OR INTERRUPTIONS IN THE PRODUCTS, FTIS INDEX, BARCLAYS INDICES, NASDAQ INDEX, OR VALUE LINE INDEX. THE COMPANIES MAKE NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE RESULTS TO BE OBTAINED BY LICENSEES, OWNERS OF THE PRODUCTS OR OF PRODUCTS BASED ON THE FTIS INDEX, BARCLAYS INDICES, NASDAQ INDEX, OR VALUE LINE INDEX, OR BY ANY OTHER PERSON OR ENTITY FROM THE USE OF THE FTIS INDEX, BARCLAYS INDICES, NASDAQ INDEX, OR VALUE LINE INDEX, OR ANY DATA INCLUDED THEREIN.

Neither Barclays Bank PLC (“BB PLC”) nor any of its affiliates (collectively “Barclays”) is the issuer or producer of MassMutual Ascend’s products and Barclays has no responsibilities, obligations or duties to investors in MassMutual Ascend’s products. The Barclays US 2Y Treasury Futures Index, Barclays US 5Y Treasury Futures Index, Barclays US 10Y Treasury Note Index, and Barclays Switch USD Signal Index (collectively, the “Indices”), together with any Barclays indices that are components of the Indices, are trademarks owned by Barclays and, together with any component indices and index data, are licensed for use by FTIS in connection with the First Trust Barclays Edge Index.

Barclays’ only relationship with the MassMutual Ascend in respect of the Indices is the licensing of the Indices to FTIS, which are administered, compiled and published by BB PLC in its role as the index sponsor (the “Index Sponsor”) without regard to MassMutual Ascend’s products or investors in MassMutual Ascend’s products. Additionally, MassMutual Ascend as issuer or producer of MassMutual Ascend’s products may for itself execute transaction(s) with Barclays in or relating to the Indices in connection with MassMutual Ascend’s products. Investors acquire MassMutual Ascend’s products from MassMutual Ascend and investors neither acquire any interest in the Indices nor enter into any relationship of any kind whatsoever with Barclays upon making an investment in MassMutual Ascend’s products. MassMutual Ascend’s products are not sponsored, endorsed, sold or promoted by Barclays and Barclays makes no representation regarding the advisability of MassMutual Ascend’s products or use of the Indices or any data included therein. Barclays shall not be liable in any way to MassMutual Ascend, investors or to other third parties in respect of the use or accuracy of the Indices or any data included therein.

Product issued by MassMutual Ascend Life Insurance CompanySM (Cincinnati, Ohio), a wholly owned subsidiary of Massachusetts Mutual Life Insurance Company (MassMutual), under contract form numbers ICC21-P1152121NW. Product not available in all states. Form numbers and features may vary by state.

This content does not apply in the state of New York.

**NOT A BANK OR CREDIT UNION DEPOSIT OR OBLIGATION • NOT FDIC OR NCUA-INSURED • NOT INSURED BY ANY
FEDERAL GOVERNMENT AGENCY • MAY LOSE VALUE • NOT GUARANTEED BY ANY BANK OR CREDIT UNION**

...MassMutual Ascend