MassMutual Ascend

Index Protector 7

AT A GLANCE

Issue ages

Qualified: 0–85
Non-qualified: 0–85
Inherited IRA: 0–75
Inherited non-qualified: 0–75

Tax qualifications

Non-qualified & qualified: 403(b) (traditional and Roth), IRA (traditional, Roth, SEP, SIMPLE and Inherited), 401(a), 457(b) and inherited non-qualified

Purchase payments

- Issued with single premium
- Subsequent purchase payments accepted in first two contract months
- All purchase payments are paid into purchase payment account, then moved into interest strategies at the start of the next term
- **Minimum:** $100,000
- **Subsequent:** $25,000
- **Maximum:** $2 million issue ages 0-75
  $1.5 million issue ages 76-80
  $1 million issue ages 81+

Riders & waivers

Included

- **Extended Care Waiver**
  100% account value when criteria met
- **Terminal Illness Waiver**
  100% account value when criteria met

Optional

- **IncomeDefender** – Income rider

GMSV: guaranteed minimum surrender value

87.5% of purchase payments, plus interest credited daily at a guaranteed minimum rate less prior withdrawals, net of applicable early withdrawal charges and market value adjustments.

Return of premium

Return of premium value is sum of all purchase payments, minus withdrawals and applicable taxes and rider charges. Available after the third contract year. Included at no extra charge.

Early withdrawal charges

Seven-year declining early withdrawal charges starting at 7%.

Penalty-free withdrawals

- During first contract year, 10% of purchase payments
- After first contract anniversary, 10% of the account value as of the most recent contract anniversary

MVA

A market value adjustment will apply to withdrawals or surrenders during the seven-year term.

Annuitization for account value

Greatest of account value, GMSV or return of premium (after contract year three) used for all annuitizations. A fixed period of less than ten years is available only as a death benefit settlement option.

Easy systematic payment program (non-contractual)

Fixed dollar and RMDs

Loans

Not available

Interest strategies

- Declared rate
- S&P 500® 1-year point-to-point with cap
- S&P 500® 7-year cap lock annual point-to-point
- S&P 500 Risk Control 1-year point-to-point with participation rate
- S&P U.S. Retiree Spending 1-year point-to-point with participation rate
- iShares U.S. Real Estate 1-year point-to-point with cap
- iShares MSCI EAFE 1-year point-to-point with cap
- First Trust Barclays Edge Index 1-year point-to-point with cap
- First Trust Barclays Edge Index 1-year point-to-point with 7-year cap lock

Payout options

- Fixed period income
- Life income or life income with payments for at least a fixed period
- Joint and one-half survivor income

Death benefit

Greatest of the account value, GMSV or return of premium (after contract year three).

The S&P 500 Risk Control 10% Index refers to the S&P 500 Average Daily Risk Control 10% USD Price Return Index. For more information, visit US.SPIndices.com and search keyword SPXAV10P. For more information on the S&P U.S. Retiree Spending Index, visit US.SPIndices.com and search keyword SPRETIRE. For more information on the iShares U.S. Real Estate ETF, visit iShares.com and search ticker symbol IYR. For more information on the iShares MSCI EAFE ETF, visit iShares.com and search ticker symbol EFA. The launch date of the S&P 500 Risk Control 10% Index was April 4, 2013, and the launch date of the S&P U.S. Retiree Spending Index was September 26, 2016.

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%™, 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 and the S&P U.S. Retiree Spending Index.

The iShares MSCI EAFE ETF and the iShares U.S. Real Estate ETF are 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 Life Insurance Company. MassMutual Ascend Life Insurance Company annuity products are not sponsored, endorsed, sold or promoted by BlackRock, and purchasers of an annuity from MassMutual Ascend Life Insurance Company do not acquire any interest in the iShares MSCI EAFE ETF or 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 Life Insurance Company 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 MSCI EAFE ETF or the iShares U.S. Real Estate ETF or any data related thereto.

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.

MassMutual Ascend℠ is not an investment adviser and the information provided in this document is not investment advice. Your clients should consult an investment professional for advice based on their personal circumstances and financial situation.

Fee-based annuities are intended for distribution by Investment Advisor Representatives.

Product issued by MassMutual Ascend Life Insurance Company℠ (Cincinnati, Ohio), a wholly owned subsidiary of MassMutual, under contract form P1110416NW and rider forms R6032310NW, R6032410NW (not available in Massachusetts), R6036711NW and R1110616NW. Form numbers, features and availability may vary by state.

The product overview is intended only to provide a summary of this annuity product. In order to obtain a complete understanding, please read the contract provisions carefully as this is not intended to be a substitute for the contract.

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

For producer use only. Not for use in sales solicitation.

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