

Index Frontier[®] 5 Plus

AT A GLANCE

Issue ages

Qualified: 0–80

Non-qualified: 0–80

Inherited IRA: 0–75

Inherited non-qualified: 0–75

Tax qualifications

- Non-qualified and inherited non-qualified
- IRA (traditional, Roth, SEP, SIMPLE, and inherited)
- 401(a) (including 401(k) traditional and Roth)
- 403(b) (traditional and Roth)
- Governmental 457(b) (traditional and Roth)

Purchase payments

- Issued with single purchase payment
- 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:** \$25,000
- **Subsequent:** \$10,000
- **Maximum:** \$1 million (ages 0-80)

Waiver riders

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

Early withdrawal charges

Five-year declining early withdrawal charges starting at 8%.

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

Annuity payout value

The account value on the annuity payout initiation date (reduced by premium taxes, if applicable).

Crediting strategies

Declared Rate

S&P 500®

- 1-Year -10% Floor with Cap*
- 1-Year 10% Buffer with Cap*
- 1-Year 10% Buffer with Performance Trigger
- 1-Year 10% Buffer with Dual Performance Trigger
- 1-Year 20% Buffer with Cap*
- 1-Year 20% Buffer with Performance Trigger
- 5-Year 10% Buffer with Upside Participation Rate*
- 5-Year 20% Buffer with Cap*

iShares MSCI EAFE

- 1-Year -10% Floor with Cap

iShares U.S. Real Estate

- 1-Year -10% Floor with Cap

SPDR Gold Shares

- 1-Year -10% Floor with Cap

First Trust Barclays Edge Index

- 1-Year 10% Buffer with Cap*

*Performance lock available

Strategies linked to the S&P 500® Index (SPX), the iShares MSCI EAFE ETF (EFA), the iShares U.S. Real Estate ETF (IYR), and the SPDR Gold Shares ETF (GLD) provide returns based, in part, on the change in the price of the Index or ETF. The price change does not include dividends that might be paid on the underlying investments of the Index or ETF.

Strategies linked to the First Trust Barclays Edge Index (FTEDGE7) provide returns based, in part, on the change in net asset value of the underlying investments of the Index. The net asset value change includes dividends that might be paid on the underlying investments of the Index.

Performance lock

Performance lock allows clients to lock in indexed strategy gains and limit further losses for a term. Performance lock is an election to lock in the daily value percentage for the remainder of a term. A performance lock election for a term is effective on the second market close following our receipt of a request in good order. Once we receive a request in good order, a performance lock election for a term cannot be revoked or changed and clients will not be able to reallocate a performance locked one-year strategy until the end of the term. If a client makes a performance lock election for an S&P 500 5-year strategy, the term will always end on the next anniversary of the term start date even if it otherwise would have continued for one or more additional years. Performance lock is only available on select strategies.

Payout options

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

Death benefit value

Death benefit is the greater of the account value or the purchase payments, reduced proportionately for withdrawals.

This product can only be sold through a Broker/Dealer that is contracted with MassMutual Ascend Life Insurance CompanySM. Any sales solicitation must be accompanied or preceded by a prospectus. To obtain a copy of the prospectus, please visit MassMutualAscend.com/RILArates.

Annuities are intended to be long-term products and may not be suitable for all investors. Withdrawals from an annuity contract may have tax consequences.

The "S&P 500[®] Index" is a product 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[®], 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 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.

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. 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 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 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.

Principal Underwriter/Distributor: MM Ascend Life Investor Services, LLC, member FINRA and an affiliate of MassMutual AscendSM.

Product issued by MassMutual Ascend Life Insurance Company (Cincinnati, Ohio), a wholly owned subsidiary of Massachusetts Mutual Life Insurance Company (MassMutual), under contract form P1850822NW and rider forms R1462316NW and R1462416NW (not available in Massachusetts). Form numbers, features and availability may vary by state.

This marketing material 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.

All guarantees subject to the claims-paying ability of MassMutual Ascend.

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

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