

Index Achiever® Advisory

OVERVIEW

ISSUE AGES

0-80 (qualified); 0-80 (non-qualified); 0-75 (inherited IRA); 0-75 (inherited non-qualified)

Issue age is the owner's age at last birthday. For joint owners, the oldest age will be used as the issue age. If the owner is a non-natural person, the age of the eldest annuitant will be treated as the age of the owner for all purposes under this contract.

PURCHASE PAYMENTS

This product accepts a single purchase payment for the following 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)

Additional purchase payments allowed during the first two months of the contract only. Terms begin only on the 6th and 20th of each month. Purchase payments received prior to the beginning of a term will be held in the purchase payment account until the beginning of the next term. Additional purchase payments have their own crediting terms.

Minimum: Initial purchase payment: \$25,000; additional purchase payments: \$10,000

Maximum: \$2 million (ages 0-75); \$1.5 million (ages 76-80)

Maximum applies to the total purchase payments made to all annuities from MassMutual Ascend with the same owners or the same annuitants.

FEES

No upfront or recurring fees are paid to MassMutual Ascend. Clients may choose to have their advisory fee deducted from their annuity.

ACCOUNT VALUE

The account value equals the sum of the following values:

Purchase payment account value: The purchase payment account value equals the purchase payments received, less any applicable premium tax or other applicable tax, less withdrawals, and plus interest credited.

Declared rate strategy value: A declared rate strategy value equals the amount applied to the declared rate strategy, less withdrawals, and plus interest credited at the declared interest rate.

Indexed strategy value: At the end of a term, unless you have made a performance lock election, the value of an indexed strategy is equal to:

- the investment base at the end of the term; plus
- any increase for a rise in the index for the term, or for a dual performance trigger strategy, any fall in the index that does not exceed the buffer, adjusted for the applicable trigger rate; or minus
- any decrease for a fall in the index for the term.

In this formula, the investment base at the end of the term is equal to the amount applied to the strategy at the start of that term, reduced proportionally for each withdrawal and adjusted by any related market value adjustment that you took during that term. After we calculate the investment base at the end of the term, we calculate any increase or decrease for a change in the index over that term. Any increase for the term is subject to the cap, upside participation rate or trigger rate for that term. Any decrease for the term is subject to the floor, buffer or downside participation rate.

CREDITING STRATEGIES

Upon issue, the owner selects from two types of crediting strategies: a **declared rate strategy** and **indexed strategies**. At the end of each term, the owner has the opportunity to reallocate funds among the available strategies. To reallocate funds, the owner must submit a strategy selection form prior to the end of that term. Unless the owner reallocates funds at the end of a term, funds are automatically applied to the same strategy (if available) for the next term. See product prospectus for more information on default strategy reallocations. Available strategies are subject to change at any time for new sales.

DECLARED RATE STRATEGY

Interest is credited daily on amounts held under a declared rate strategy based on the applicable declared rate. The declared rate for a term will not change during that term and is guaranteed to never be below the guaranteed minimum interest rate set out in the strategy endorsement. A maximum of 12% can be allocated to the declared rate strategy for initial allocations and reallocations at the end of a term.

INDEXED STRATEGIES

Indexed strategies include:

S&P 500®

- 1-Year 50% Downside Participation Rate with Upside Participation Rate*
- 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
- 1-Year -10% Floor with Cap*
- 3-Year 10% Buffer with Upside Participation Rate*
- 3-Year 20% Buffer with Upside Participation Rate*
- 6-Year 10% Buffer with Upside Participation Rate*
- 6-Year 20% Buffer with Upside Participation Rate*

Russell 2000

- 6-Year 10% Buffer with Upside Participation Rate
- 6-Year 20% Buffer with Upside Participation Rate

iShares MSCI EAFE ETF

- 1-Year 50% Downside Participation Rate with Upside Participation Rate
- 1-Year 10% Buffer with Cap

iShares U.S. Real Estate ETF

- 1-Year 50% Downside Participation Rate with Upside Participation Rate
- 1-Year 10% Buffer with Cap

SPDR Gold Shares ETF

- 1-Year 50% Downside Participation Rate with Upside Participation Rate
- 1-Year 10% Buffer with Cap

First Trust Barclays Edge Index

- 1-Year 50% Downside Participation Rate with Upside Participation Rate*
- 1-Year 10% Buffer with Upside Participation Rate*

*Performance lock available. See performance lock section below for more information.

Strategies linked to the S&P 500® Index (SPX), the Russell 2000 Index (RTY), 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.

Not all strategies available with all indexes and ETFs.

The following strategies are only available for a term that starts in the first contract year: S&P 500 6-Year 10% Buffer with Upside Participation Rate, S&P 500 6-Year 20% Buffer with Upside Participation Rate, Russell 2000 6-Year 10% Buffer with Upside Participation Rate and Russell 2000 6-Year 20% Buffer with Upside Participation Rate.

The following strategies are only available for a term that starts in the first four contract years: S&P 500 3-Year 10% Buffer with Upside Participation Rate and S&P 500 3-Year 20% Buffer with Upside Participation Rate.

INDEXED STRATEGIES (CONT)

For information on indexed strategy values before the end of a term, please see the product prospectus at [MassMutualAscend.com/RILArates](https://www.massmutualascend.com/RILArates).

Strategy availability and strategy feature availability may vary by state and by distribution. For current state approvals of newly added strategies and strategy features, please visit [MMAscendConnect.com/RILApprovals](https://www.massmutualascend.com/RILApprovals).

UPSIDE POTENTIAL FACTORS: CAPS, UPSIDE PARTICIPATION RATES AND TRIGGER RATES

The value of an indexed strategy will increase if there is a positive change in the applicable index value during a term, and in some cases, when there is a negative change in the applicable index value during a term. Indexed strategy value increases are subject to the following upside potential factors: caps, upside participation rates, and trigger rates.

A cap is the largest positive index change at the end of a term that is taken into account to determine a gain.

An upside participation rate is the percentage of any positive index change at the end of a term that is taken into account to determine a gain.

A trigger rate is the rate of return used to determine a gain at the end of a term. There are two types of trigger rate strategies: performance trigger and dual performance trigger.

For strategies with a performance trigger, the trigger rate is credited when index performance is positive or level. For strategies with a dual performance trigger, the trigger rate is credited when index performance is positive, level or when the index loss does not exceed the buffer.

Before the end of a term, caps, upside participation rates, trigger rates and index changes are reflected in the option values used to calculate increases in strategy values. We can change the cap, upside participation rate or trigger rate for each new term of an indexed strategy.

DOWNSIDE PROTECTION FACTORS: FLOORS, BUFFERS AND DOWNSIDE PARTICIPATION RATES

Any loss for a term of an indexed strategy is subject to one of three limiting factors: a floor, buffer or a downside participation rate.

A floor is the largest negative index change used to determine a loss each term. -10% floor strategies are available. The -10% floor indexed strategies provide protection against index losses in excess of -10% at the end of each term, meaning any decrease during a term is limited to -10%.

A buffer is the portion of a negative index change at the end of a term that is disregarded to determine a loss. 10% buffer and 20% buffer strategies are available. The 10% buffer indexed strategies provide protection against the first 10% of index losses at the end of each term, and 20% buffer indexed strategies provide protection against the first 20% of index losses at the end of each term. Clients assume any losses in excess of the buffer.

A downside participation rate is the percentage of any negative index change at the end of a term that is taken into account to determine a loss. The 50% downside participation rate indexed strategies provide protection against 50% of index losses at the end of each term. Clients assume the other 50% of index losses.

Before the end of a term, floors, buffers and downside participation rates are reflected in the option values used to calculate decreases in strategy values. We cannot change the floors, buffers, or downside participation rates for any indexed strategy that we currently offer.

PERFORMANCE LOCK

Performance lock is a feature that 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 indexed strategy until the end of the term.

If a client makes a performance lock election for an S&P 500 3-year or 6-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.

EARLY WITHDRAWAL CHARGE

There are no early withdrawal charges. A market value adjustment (MVA) will apply during the first six contract years.

MARKET VALUE ADJUSTMENT (MVA)

During the first six contract years, an MVA will apply if the contract is surrendered or a withdrawal is taken from indexed strategies.

An MVA is an adjustment to the withdrawal based on how market interest rates have changed since the contract was purchased. Interest rate changes are determined based on the BofA Merrill Lynch 5-10 Year US Corporate Bond Index from the Contract Effective Date and the amount of time remaining until the sixth Contract Anniversary. Depending on how interest rates have moved, the MVA may increase or decrease contract values. Withdrawals taken from indexed strategies are subject to a market value adjustment. The amount withdrawn from an indexed strategy is then multiplied by the MVA factor. A performance lock does not lock the MVA. After a performance lock election, the strategy value continues to be subject to the MVA that may apply on a withdrawal or surrender.

For more information on how the MVA works, refer to the contract and prospectus.

MVA EXCEPTIONS

The MVA does not apply to withdrawals taken from the declared rate strategy or the purchase payment account. A maximum of 12% can be allocated to the declared rate strategy for initial allocations and reallocations at the end of a term. The MVA does not apply to amounts taken from an indexed strategy to pay advisory fees.

WITHDRAWALS

Withdrawals are allowed any time prior to the annuity payout initiation date. All withdrawals are subject to IRS regulations. Withdrawals will be taken first from the purchase payment account, then from the declared rate strategy, and then proportionally from indexed strategies having the shortest term. If clients would like the ability to take withdrawals from their annuity without incurring a market value adjustment, they should consider allocating a portion of their account value to the declared rate strategy.

Minimum withdrawal: \$500;

Minimum account value following withdrawal: \$5,000

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Minimum withdrawal: \$500;

Minimum account value following withdrawal: \$5,000

EXTENDED CARE WAIVER RIDER

To help ease the strain of certain unforeseen events, an extended care waiver is available for no additional charge. If the owner is confined to a nursing home or other long-term care facility after the completion of the first contract year for at least 90 consecutive days, any negative MVAs may be waived on withdrawals up to a full surrender.

Not available in Massachusetts. In California, the Extended Care Waiver Rider has been replaced with the Waiver of Early Withdrawal Charges for Facility Care or Home Care or Community-Based Services Rider, which provides for a waiver of early withdrawal charges under an expanded variety of circumstances.

TERMINAL ILLNESS WAIVER RIDER

Provided that the diagnosis is rendered more than one year after the contract effective date, up to 100% of the account value can be withdrawn without incurring a negative MVA if the owner or joint owner is diagnosed by a physician as having a terminal illness with a prognosis of 12 months or less.

This waiver may be used only once. Not available in Massachusetts.

SURRENDER VALUE

The surrender value equals the account value, less any applicable market value adjustments.

PAYOUT OPTIONS

The following options are available following the first contract year: fixed period payout, life payout, life payout with payments for at least a fixed period, and joint and one-half survivor payout.

DEATH BENEFIT VALUE

The death benefit amount is the greater of the account value or the purchase payments, reduced proportionally for all withdrawals, but not including market value adjustments. In either case, it is reduced by premium tax or other taxes not previously deducted.

PREMIUM TAX

If the owner elects to take an annuity payout benefit, premium tax will be deducted if the owner lives in a state that has a premium tax on annuitizations.

If a death benefit is paid under a payout option, premium tax will be deducted if the beneficiary lives in a state that has a premium tax on annuitizations.

STATE VARIATIONS

Missouri: The Declared Rate Strategy is not available for Missouri contracts. Instead of the Declared Rate Strategy, Missouri contracts have a Temporary Holding Account that pays interest at the guaranteed minimum interest rate that would apply to the Declared Rate Strategy. Like the Declared Rate Strategy, amounts withdrawn from the Temporary Holding Account are not subject to a Market Value Adjustment, and allocations to the Temporary Holding Account are subject to a 12% maximum.

Strategy availability and strategy feature availability may vary by state and by distribution. For current state approvals of newly added strategies and strategy features, please visit MMAAscendConnect.com/RILAapprovals.

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.

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