

Index Summit® 6

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: \$1 million for ages 0-80

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

FEES

There are no upfront or recurring fees.

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 applicable early withdrawal charges, 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 applicable early withdrawal charges 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 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 related Early Withdrawal Charge that you took during that Term. After we calculate the Investment Base at the end of the Term, we calculate any increase for a rise in the Index over that Term or any decrease for a fall in the Index over that Term. Any increase for the Term is subject to the Cap or Upside Participation Rate for that Term. Any decrease for the Term is subject to the Downside Participation Rate, Floor, or Buffer.

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 for the next term. 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.

INDEXED STRATEGIES

Indexed strategies include:

S&P 500®

- 1-Year 50% Downside Participation Rate with Cap*
- 1-Year 50% Downside Participation Rate with Upside Participation Rate*
- 1-Year 10% Buffer with Cap*
- 1-Year -10% Floor with Cap*
- 1-Year 0% Floor with Cap
- 2-Year 50% Downside Participation Rate with Cap*
- 2-Year 50% Downside Participation Rate with Upside Participation Rate*
- 6-Year 10% Buffer with Upside Participation Rate*

iShares MSCI EAFE ETF

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

iShares U.S. Real Estate ETF

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

SPDR® Gold Shares ETF

- 1-Year -10% Floor with Cap

First Trust Barclays Edge

- 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.

Each indexed strategy provides returns based, in part, on the change in the price of a specific Index or ETF: the S&P 500® Index (SPX), the iShares MSCI EAFE ETF (EFA), the iShares U.S. Real Estate ETF (IYR), or the SPDR Gold Shares ETF (GLD). 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 S&P 500 6-Year 10% Buffer with Upside Participation Rate Strategy is only available for a term that starts in the first contract year. If the owner does not reallocate at the end of the term, then we will apply the ending value of that strategy to a new term of the S&P 500 1-year 50% Downside Participation Rate with Upside Participation Rate Strategy.

The value of an indexed strategy will increase if there is a positive change in the applicable index value during a term. Any increase during a term is limited by either a cap or an upside participation rate. We can change the cap or upside participation rate for each new term of an indexed strategy.

The value of a 50% downside participation rate strategy will decrease if there is a negative change in the applicable index value during a term. At maximum, this strategy protects against 50% of index losses at the end of a term. Clients assume the other 50% of index losses.

The value of a 10% buffer strategy may decrease if there is a negative change in the applicable index value during a term. At maximum, this strategy protects against the first 10% of index losses at the end of a term. Clients assume any losses in excess of the buffer.

The value of a -10% floor strategy will decrease if there is a negative change in the applicable index value during a term. This strategy protects against losses in excess of 10%, meaning any decrease during a term is limited to -10%.

The value of a 0% floor strategy will not decrease, even if there is a negative change in the applicable index value during a term.

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

Strategy and performance lock availability may vary by state and by distribution. For current state approvals of newly added strategies and performance lock, please visit [MMAscendConnect.com/2023RILAapprovals](https://www.massmutual.com/ascend/2023RILAapprovals).

CAPS AND UPSIDE PARTICIPATION RATES

Any gain for a term of an indexed strategy is subject to one of two limiting factors: a cap or an upside participation rate.

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.

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

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 and 0% floor strategies are available. The -10% floor indexed strategies provide protection against index losses in excess of -10% at the end of each term. The 0% floor indexed strategies provide protection against all index losses at the end of each term.

A **buffer** is the portion of a negative index change at the end of a term that is disregarded to determine a loss. The 10% buffer indexed strategies provide protection against the first 10% of index losses at the end of each term.

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.

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.

For more information about strategy values before the end of a term, please see the product prospectus.

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 the S&P 500 6-year 10% Buffer with Upside Participation rate indexed strategy before the sixth year of the term, that term will end on the next anniversary of the term start date. Performance lock is only available on select strategies.

WITHDRAWALS

Withdrawals are allowed any time prior to the annuity payout initiation date. All withdrawals are subject to IRS regulations and early withdrawal charges. 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.

Minimum withdrawal: \$500;

Minimum account value following withdrawal: \$5,000

PENALTY-FREE WITHDRAWAL ALLOWANCE

During the first contract year, 10% of the purchase payments may be withdrawn without an early withdrawal charge. After the first contract year, 10% of the account value on the most recent contract anniversary may be withdrawn without an early withdrawal charge. The sum of all previous withdrawals during the same contract year will be subtracted to determine the amount available. This free withdrawal allowance is not cumulative, and unused amounts do not carry over to the next contract year. Withdrawals from an annuity contract may have tax consequences.

EARLY WITHDRAWAL CHARGE

An early withdrawal charge is applied to surrenders and withdrawals that exceed the penalty-free withdrawal allowance during the first six contract years.

CONTRACT YEAR	1	2	3	4	5	6	7+
EARLY WITHDRAWAL CHARGE	8%	7%	6%	5%	4%	3%	0%

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, early withdrawal charges 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 deduction of an early withdrawal charge 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 early withdrawal charges.

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 amounts applied to pay early withdrawal charges. 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.

Missouri and Nebraska: The following strategies are not available in Missouri or Nebraska: S&P 500 1-Year 10% Buffer with Cap, S&P 500 1-Year -10% Floor with Cap, S&P 500 1-Year 0% Floor with Cap, SPDR Gold Shares ETF 1-Year -10% Floor with Cap, iShares U.S. Real Estate ETF 1-Year -10% Floor with Cap, iShares U.S. Real Estate ETF 1-Year -10% Floor with Cap, iShares MSCI EAFE ETF 1-Year -10% Floor with Cap, iShares MSCI EAFE ETF 1-Year -10% Floor with Cap, First Trust Barclays Edge 1-Year Downside Par Rate with Upside Par Rate, First Trust Barclays Edge 1-Year 10% Buffer with Upside Par Rate.

In addition, a performance lock election is not available for contracts issued in Missouri or Nebraska.

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.

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.

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.

All other indexed strategies provide returns based, in part, on the change in the following Index or ETFs: the S&P 500[®] Index (SPX), the iShares MSCI EAFE ETF (EFA), the iShares U.S. Real Estate ETF (IYR), or the SPDR Gold Shares ETF (GLD). The price change does not include dividends that might be paid on the underlying investments of the Index or ETF.

Not all strategies available with all indexes and ETFs. See Product Overview for strategy availability. 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.

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