

Index Protector

Fee-based fixed-indexed annuity rates for MassMutual Ascend

| Index Protector 4 Rates effective 11/07/23 | No MVA Rates | |
|--|--------------------------------------|---------------------------------------|
| | Purchase payments \$250,000 and over | Purchase payments less than \$250,000 |
| Declared rate | 5.50% | 5.40% |
| S&P 500 1-year point-to-point with cap | 11.50% | 11.25% |
| iShares U.S. Real Estate 1-year point-to-point with cap | 13.50% | 13.00% |
| S&P 500 Risk Control 1-year point-to-point with par. rate | 85% | 80% |
| S&P U.S. Retiree Spending 1-year point-to-point with par. rate | 90% | 85% |
| iShares MSCI EAFE ETF 1-year point-to-point with cap | 12.00% | 11.75% |

| Index Protector 5 MVA Rates effective 11/07/23 | MVA Rates | |
|--|--------------------------------------|---------------------------------------|
| | Purchase payments \$250,000 and over | Purchase payments less than \$250,000 |
| 1-year declared rate | 5.50% | 5.35% |
| 5-year declared rate | 5.50% | 5.35% |
| S&P 500 1-year point-to-point with cap | 13.50% | 13.25% |
| iShares U.S. Real Estate 1-year point-to-point with cap | 15.50% | 14.50% |
| S&P 500 Risk Control 1-year point-to-point with par. rate | 95% | 90% |
| S&P U.S. Retiree Spending 1-year point-to-point with par. rate | 95% | 90% |
| iShares MSCI EAFE ETF 1-year point-to-point with cap | 13.25% | 13.00% |

| Index Protector 7 Rates effective 11/07/2023 | MVA Rates | | No MVA Rates Available in: CA, IN, MN, MO, OH, PA, TX and UT | |
|--|--------------------------------------|---------------------------------------|---|---------------------------------------|
| | Purchase payments \$250,000 and over | Purchase payments less than \$250,000 | Purchase payments \$250,000 and over | Purchase payments less than \$250,000 |
| Declared rate | 6.00% | 5.90% | 5.75% | 5.65% |
| S&P 500 1-year point-to-point with cap | 13.50% | 12.75% | 12.50% | 12.25% |
| S&P 500 7-year cap lock annual point-to-point | 12.00% | 11.75% | 11.25% | 10.75% |
| iShares U.S. Real Estate 1-year point-to-point with cap | 15.50% | 14.50% | 14.50% | 14.00% |
| S&P 500 Risk Control 1-year point-to-point with par. rate | 95% | 90% | 90% | 85% |
| S&P U.S. Retiree Spending 1-year point-to-point with par. rate | 100% | 95% | 90% | 85% |
| iShares MSCI EAFE ETF 1-year point-to-point with cap | 14.00% | 13.50% | 13.50% | 13.25% |

Easily track the performance of our strategies' underlying indices using their ticker symbols: S&P 500: SPX, S&P 500 Risk Control 10% Index: SPXAV10P and iShares U.S. Real Estate ETF: IYR, S&P U.S. Retiree Spending Index: SPRETIRE, iShares U.S. MSCI EAFE ETF: EFA.

Additional purchase payments: Accepts additional purchase payments during the first two months of the contract. Purchase payments will be credited interest while in the holding account (purchase payment account) until terms begin on the 6th or 20th of the month. After that time, amounts will be credited interest according to the selected strategy(ies). Holding account rate is equal to the declared rate. Rate lock does not apply beyond the original rate window specified in the contract.

Minimum Guarantees: The guaranteed minimum declared rate is 2.85%. 1-year point-to-point strategies with a cap have a minimum cap guarantee of 2.85% for contract duration. 1-year point-to-point strategies with a participation rate have a guaranteed minimum participation rate of 5% for contract duration. Future indexed strategies could offer alternate options and rates. The guaranteed minimum surrender value is 87.5% at 2.85%, less withdrawals and applicable charges and adjustments. In WA, guaranteed minimum declared rates, caps and GMSV rates are 2.90%.

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Product issued by MassMutual Ascend Life Insurance Company (Cincinnati, Ohio), a wholly owned subsidiary of Massachusetts Mutual Life Insurance Company (MassMutual), under contract form number P1110916NW, P1140219NW and P1140119NW. Contract form numbers and features may vary by state.

All guarantees based on the claims-paying ability of MassMutual Ascend.

∴ MassMutual Ascend

Advantage 5 Advisory

Fixed annuity rates for

MassMutual Ascend

| Advantage 5 Advisory Rates effective 11/27/23 | Interest rate for initial 5-year term |
|---|--|
| Purchase payments \$250,000 and over | 5.80% |
| Purchase payments under \$250,000 | 5.55% |

Product issued by MassMutual Ascend Life Insurance Company (Cincinnati, Ohio), a wholly owned subsidiary of Massachusetts Mutual Life Insurance Company (MassMutual), under contract form number ICC21-P1151621NW. Contract form numbers and features may vary by state. All guarantees based on the claims-paying ability of MassMutual Ascend.