

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%.

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 have been licensed for use by MassMutual Ascend. Standard & Poor's®, S&P®, S&P 500® and S&P 500 Average Daily Risk Control 10™ are trademarks of Standard & Poor's Financial Services LLC, ("S&P"); Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones"); and these trademarks have been licensed for use by SPDJI and sublicensed for certain purposes by MassMutual Ascend. MassMutual Ascend's products are not sponsored, endorsed, sold or promoted by SPDJI, Dow Jones, S&P, or their respective affiliates, and none of such parties makes 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 or 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. 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.

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 11/07/23	Interest rate for initial 5-year term
Purchase payments \$250,000 and over	6.00%
Purchase payments under \$250,000	5.65%

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.

American Landmark

Fixed-indexed annuity rates for

MassMutual Ascend

American Landmark 3 Rates effective 8/21/2023	MVA Rates		No-MVA Rates Available in: AK, PA and UT	
	Purchase payments \$150,000 and over	Purchase payments less than \$150,000	Purchase payments \$150,000 and over	Purchase payments less than \$150,000
Declared rate	3.80%	3.70%	3.65%	3.55%
S&P 500 1-year point-to-point with cap	10.00%	9.75%	9.25%	9.00%
iShares U.S. Real Estate 1-year point-to-point with cap	9.25%	9.00%	9.00%	8.50%
iShares MSCI EAFE ETF 1-year point-to-point with cap	8.75%	8.50%	8.50%	8.25%

American Landmark 5 Rates effective 11/07/2023	MVA Rates		No-MVA Rates Available in: AK, PA and UT	
	Purchase payments \$100,000 and over	Purchase payments less than \$100,000	Purchase payments \$100,000 and over	Purchase payments less than \$100,000
Declared rate	4.65%	4.50%	4.50%	4.40%
S&P 500 1-year point-to-point with cap	11.50%	11.00%	10.50%	10.25%
S&P 500 5-year cap lock annual point-to-point with cap	11.00%	10.75%	10.25%	10.00%
iShares U.S. Real Estate 1-year point-to-point with cap	10.50%	10.25%	10.25%	9.75%
S&P 500 Risk Control 1-year point-to-point with par. rate	75%	70%	70%	65%
S&P U.S. Retiree Spending 1-year point-to-point with par. rate	80%	75%	75%	70%

CA: Contracts receive MVA rates but remain non-MVA.

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, iShares U.S. Real Estate ETF: IYR, and S&P U.S. Retiree Spending Index: SPRETIRE, MSCI EAFE ETF: EFA.

Minimum Guarantees: The guaranteed minimum declared rate is 2.85%. 1-year point-to-point strategies with cap have a minimum cap guarantee of 2.85% for contract duration. 1-year point-to-point strategies with 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%.

Additional Purchase Payments: American Landmark 3 accepts additional premium during the first two months of the contract. The American Landmark 5 accepts additional premium during the first year of the contract. Purchase payments will be credited interest while in the holding account (purchase payment account) until terms begin on the 6th or the 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 to additional purchase payments received after the rate lock period at issue.

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 have been licensed for use by MassMutual Ascend. Standard & Poor's®, S&P®, S&P 500®, S&P 500 Average Daily Risk Control 10%™, SPDR® and STANDARD & POOR'S DEPOSITORY RECEIPTS® are trademarks of Standard & Poor's Financial Services LLC, ("S&P"); Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones"); and these trademarks have been licensed for use by SPDJI and sublicensed for certain purposes by MassMutual Ascend. MassMutual Ascend products are not sponsored, endorsed, sold or promoted by SPDJI, Dow Jones, S&P, or their respective affiliates, and none of such parties makes 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 or the S&P U.S. Retiree Spending Index.

The iShares MSCI EAFE ETF and the iShares U.S. Real Estate ETFs 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.

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 P1112916NW and P1134618NW. Contract form numbers and features may vary by state.

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

∴ MassMutual Ascend

American Legend 7 and Safe Return

Fixed-indexed annuity rates for

MassMutual Ascend

American Legend 7 Rates effective 11/07/2023	MVA Rates		No-MVA Rates Available in: AK, PA and UT	
	Purchase payments \$100,000 and over	Purchase payments less than \$100,000	Purchase payments \$100,000 and over	Purchase payments less than \$100,000
Declared rate	4.75%	4.65%	4.65%	4.50%
S&P 500 1-year point-to-point with cap	11.75%	11.25%	10.75%	10.50%
S&P 500 7-year cap lock annual point-to-point with cap	11.25%	11.00%	10.50%	10.25%
iShares U.S. Real Estate 1-year point-to-point with cap	12.00%	11.50%	11.50%	11.00%
SPDR GLD 1-year point-to-point with cap	12.50%	11.75%	11.25%	11.00%
S&P 500 Risk Control 1-year point-to-point with par. rate	80%	75%	75%	70%
S&P U.S. Retiree Spending 1-year point-to-point with par. rate	85%	80%	80%	75%

CA: Contracts receive MVA rates but remain non-MVA.

Safe Return Rates effective 11/07/2023	Rates for all purchase payments	
Declared rate	4.00%	
S&P 500 1-year point-to-point with cap	8.00% cap	(3.00% bailout cap)
iShares U.S. Real Estate 1-year point-to-point with cap	8.50% cap	(3.00% bailout cap)
S&P 500 Risk Control 1-year point-to-point with par. rate	65%	(25% bailout rate)

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, iShares U.S. Real Estate ETF: IYR, S&P U.S. Retiree Spending Index: SPRETIRE, and SPDR Gold Shares ETF: GLD.

Minimum Guarantees: The guaranteed minimum declared rate is 2.85%. 1-year point-to-point strategies with cap have a minimum cap guarantee of 2.85% for contract duration. 1-year point-to-point strategies with participation rate have a guaranteed minimum participation rate of 5% for contract duration. Future indexed strategies could offer alternate options and rates. For Safe Return the guaranteed minimum surrender value is 100% at 2.85% less any withdrawals including early withdrawal charges and less an amount equal to the applicable early withdrawal charge rate multiplied by the account value. For American Legend 7 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%.

Additional Purchase Payments: American Legend 7 accepts additional purchase payments for the life of the contract. Safe Return 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 the 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.

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%™, 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 S&P 500 Average Daily Risk Control 10% Price Return Index or the S&P U.S. Retiree Spending Index.

The iShares U.S. Real Estate ETFs is 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 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 U.S. Real Estate ETF or any data related thereto.

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 P1470218NW and P1074514NW. Contract form numbers and features may vary by state.

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

∴ MassMutual Ascend

Premier Income Bonus

Fixed-indexed annuity rates for

MassMutual Ascend

Premier Income Bonus Rates effective 11/07/2023	MVA Rates		No-MVA Rates Available in: AK, CA, PA and UT	
	Purchase payments \$150,000 and over	Purchase payments less than \$150,000	Purchase payments \$150,000 and over	Purchase payments less than \$150,000
Declared rate	5.00%	4.90%	4.90%	4.75%
S&P 500 1-year point-to-point with cap	12.00%	11.75%	11.75%	11.50%
iShares U.S. Real Estate 1-year point-to-point with cap	12.00%	11.75%	11.75%	10.75%
S&P 500 Risk Control 1-year point-to-point with par. rate	85%	80%	80%	75%
S&P U.S. Retiree Spending 1-year point-to-point with par. rate	85%	80%	80%	75%

Bonus: Built-in income rider offers 6% rider bonus, 6% rollup credits and 10-year rollup period.

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, iShares U.S. Real Estate ETF: IYR, S&P U.S. Retiree Spending Index: SPRETIRE.

Minimum Guarantees: The guaranteed minimum declared rate is 2.85%. 1-year point-to-point strategies with cap have a minimum cap guarantee of 2.85% for contract duration. 1-year point-to-point strategies with participation rate have a guaranteed minimum participation rate of 5% for contract duration. Future indexed strategies could offer alternate options and rates. For Premier Bonus and Premier Income Bonus, 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%.

Additional Purchase Payments: Premier Bonus and Premier Income Bonus accept additional premium 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 the 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.

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, a division of S&P Global, or its affiliates ("SPDJI"), and have been licensed for use by MassMutual Ascend. Standard & Poor's®, S&P®, S&P 500®, S&P 500 Average Daily Risk Control 10%™, SPDR® and STANDARD & POOR'S DEPOSITORY RECEIPTS® are trademarks of Standard & Poor's Financial Services LLC, a division of S&P Global ("S&P"); Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones"); and these trademarks have been licensed for use by SPDJI and sublicensed for certain purposes by MassMutual Ascend. MassMutual Ascend products are not sponsored, endorsed, sold or promoted by SPDJI, Dow Jones, S&P, or their respective affiliates, and none of such parties makes 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 or the S&P U.S. Retiree Spending Index.

The iShares U.S. Real Estate ETFs is 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 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 U.S. Real Estate ETF or any data related thereto.

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 P1129918NW and endorsement form E1130018NW. Contract form numbers and features may vary by state.

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

∴ MassMutual Ascend

SecureGain

Fixed annuity rates for

MassMutual Ascend

SecureGain 3 Rates effective 11/07/23	Interest rate for initial 3-year term	Guar. min.
Purchase payments \$100,000 and over	5.00%	2.85%
Purchase payments under \$100,000	4.70%	2.85%
No MVA available in: AK and UT		
Purchase payments \$100,000 and over	4.60%	2.85%
Purchase payments under \$100,000	4.45%	2.85%

SecureGain 5 Rates effective 11/07/23	Base rate	FY bonus	FY rate	Eff. yield	Guaranteed escalating rates				Guar. min.
					Yr. 2	Yr. 3	Yr. 4	Yr. 5	
Purchase payments \$100,000 and over	5.20%	0.25%	5.45%	5.45%	5.30%	5.40%	5.50%	5.60%	2.85%
Purchase payments under \$100,000	5.00%	0.25%	5.25%	5.25%	5.10%	5.20%	5.30%	5.40%	2.85%
No MVA available in: CT, IN, MN, MO and OH									
Purchase payments \$100,000 and over	4.90%	0.25%	5.15%	5.15%	5.00%	5.10%	5.20%	5.30%	2.85%
Purchase payments under \$100,000	4.80%	0.25%	5.05%	5.05%	4.90%	5.00%	5.10%	5.20%	2.85%

SecureGain 7 Rates effective 11/07/23	Base rate	FY bonus	FY rate	Eff. yield	Guaranteed escalating rates						Guar. min.
					Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6	Yr. 7	
Purchase payments \$100,000 and over	4.60%	1.00%	5.60%	5.49%	4.85%	5.10%	5.35%	5.60%	5.85%	6.10%	2.85%
Purchase payments under \$100,000	4.40%	1.00%	5.40%	5.29%	4.65%	4.90%	5.15%	5.40%	5.65%	5.90%	2.85%
No MVA available in: CT, IN, MN, MO and OH											
Purchase payments \$100,000 and over	4.30%	1.00%	5.30%	5.19%	4.55%	4.80%	5.05%	5.30%	5.55%	5.80%	2.85%
Purchase payments under \$100,000	4.20%	1.00%	5.20%	5.09%	4.45%	4.70%	4.95%	5.20%	5.45%	5.70%	2.85%

Yield based on current interest rate with a first-year bonus and increasing base rate for the initial term. Escalating interest rates guaranteed for initial term. In WA, guaranteed minimum interest rates are 2.90%.

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 P1138919NW, P1088011NW, P1088111NW and P1020203NW. Contract form numbers and features may vary by state. All guarantees based on the claims-paying ability of MassMutual Ascend.