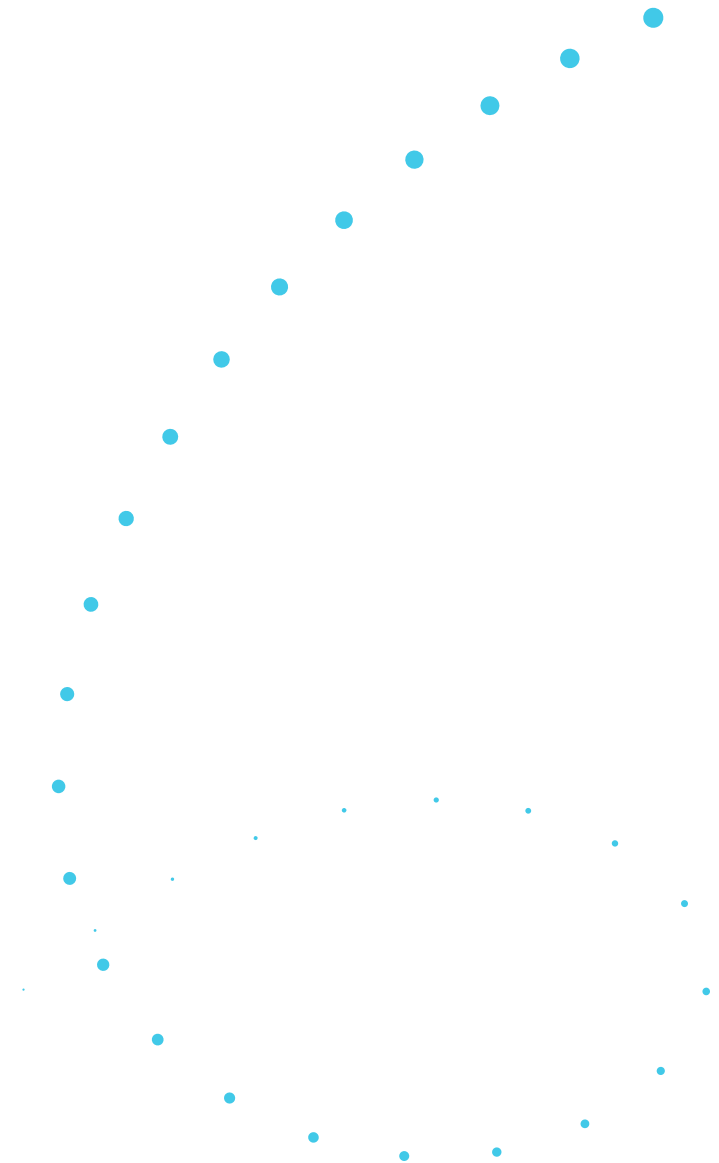


Index Protector 7 Renewal History

from MassMutual Ascend Life Insurance Company

A fixed-indexed annuity offers interest crediting strategies that help protect your savings from loss while providing the opportunity for growth. Strategy rates and caps are set at the start of each term and guaranteed for that term.

Here is a closer look at the renewal history for the Index Protector 7 for Fourth Quarter 2022-2025
(for purchase payments \$250,000 and over).



Index Protector 7 renewal history

Start of First Term	Fixed Account (Declared Rate Strategy)					S&P 500® 1-year Point-to-Point (Indexed Strategy)					S&P 500® Risk Control 1-year Point-to-Point (Indexed Strategy)				
	Initial Rate	2022	2023	2024	2025	Initial Rate	2022	2023	2024	2025	Initial Rate	2022	2023	2024	2025
10/6/21	2.35%	2.35%	2.35%	2.35%	2.35%	5.50%	5.50%	5.50%	5.50%	5.50%	65%	65%	65%	65%	65%
10/20/21	2.35%	2.35%	2.35%	2.35%	2.35%	5.50%	5.50%	5.50%	5.50%	5.50%	65%	65%	65%	65%	65%
11/6/21	2.35%	2.35%	2.35%	2.35%	2.35%	5.50%	5.50%	5.50%	5.50%	5.50%	65%	65%	65%	65%	65%
11/20/21	2.35%	2.35%	2.35%	2.35%	2.35%	5.50%	5.50%	5.50%	5.50%	5.50%	65%	65%	65%	65%	65%
12/6/21	2.35%	2.35%	2.35%	2.35%	2.35%	5.50%	5.50%	5.50%	5.50%	5.50%	65%	65%	65%	65%	65%
12/20/21	2.35%	2.35%	2.35%	2.35%	2.35%	5.50%	5.50%	5.50%	5.50%	5.50%	65%	65%	65%	65%	65%
10/6/22	5.25%	N/A	5.25%	5.25%	5.25%	12.00%	N/A	12.00%	12.00%	12.00%	90%	N/A	90%	90%	90%
10/20/22	5.25%	N/A	5.25%	5.25%	5.25%	12.00%	N/A	12.00%	12.00%	12.00%	90%	N/A	90%	90%	90%
11/6/22	5.25%	N/A	5.25%	5.25%	5.25%	12.00%	N/A	12.00%	12.00%	12.00%	90%	N/A	90%	90%	90%
11/20/22	5.25%	N/A	5.25%	5.25%	5.25%	12.00%	N/A	12.00%	12.00%	12.00%	90%	N/A	90%	90%	90%
12/6/22	5.25%	N/A	5.25%	5.25%	5.25%	12.00%	N/A	12.00%	12.00%	12.00%	90%	N/A	90%	90%	90%
12/20/22	5.25%	N/A	5.25%	5.25%	5.25%	12.00%	N/A	12.00%	12.00%	12.00%	90%	N/A	90%	90%	90%
10/6/23	5.50%	N/A	N/A	5.50%	5.50%	12.00%	N/A	N/A	12.00%	12.00%	85%	N/A	N/A	85%	85%
10/20/23	6.00%	N/A	N/A	6.00%	6.00%	13.00%	N/A	N/A	13.00%	13.00%	90%	N/A	N/A	90%	90%
11/6/23	6.00%	N/A	N/A	6.00%	6.00%	13.00%	N/A	N/A	13.00%	13.00%	90%	N/A	N/A	90%	90%
11/20/23	6.00%	N/A	N/A	6.00%	6.00%	13.50%	N/A	N/A	13.50%	13.50%	95%	N/A	N/A	95%	95%
12/6/23	6.00%	N/A	N/A	6.00%	6.00%	13.50%	N/A	N/A	13.50%	13.50%	95%	N/A	N/A	95%	95%
12/20/23	5.80%	N/A	N/A	5.80%	5.80%	12.00%	N/A	N/A	12.00%	12.00%	90%	N/A	N/A	90%	90%
10/6/24	5.00%	N/A	N/A	N/A	5.00%	9.75%	N/A	N/A	N/A	9.75%	75%	N/A	N/A	N/A	75%
10/20/24	5.00%	N/A	N/A	N/A	5.00%	9.75%	N/A	N/A	N/A	9.75%	75%	N/A	N/A	N/A	75%
11/6/24	5.00%	N/A	N/A	N/A	5.00%	9.75%	N/A	N/A	N/A	9.75%	75%	N/A	N/A	N/A	75%
11/20/24	5.00%	N/A	N/A	N/A	5.00%	9.75%	N/A	N/A	N/A	9.75%	75%	N/A	N/A	N/A	75%
12/6/24	5.00%	N/A	N/A	N/A	5.00%	9.75%	N/A	N/A	N/A	9.75%	75%	N/A	N/A	N/A	75%
12/20/24	5.00%	N/A	N/A	N/A	5.00%	9.75%	N/A	N/A	N/A	9.75%	75%	N/A	N/A	N/A	75%

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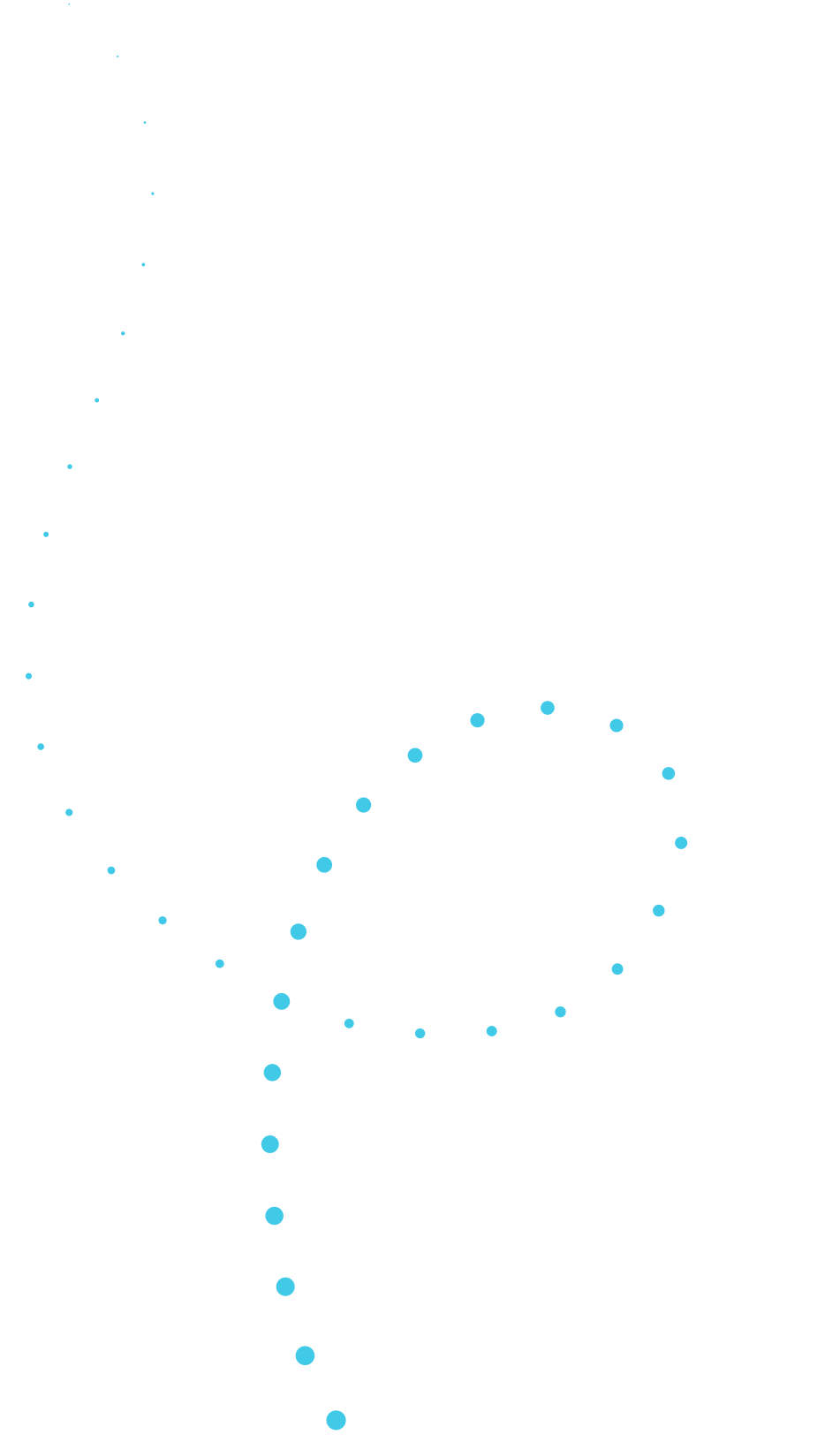
Index Protector 7 renewal history (cont.)

Start of First Term	iShares® U.S. Real Estate 1-year Point-to-Point (Indexed Strategy)					S&P U.S. Retiree Spending 1-year Point-to-Point (Indexed Strategy)					iShares MSCI EAFE ETF 1-Year Point-to-Point (Indexed Strategy)				
	Initial Rate	2022	2023	2024	2025	Initial Rate	2022	2023	2024	2025	Initial Rate	2022	2023	2024	2025
10/6/21	6.75%	6.75%	6.75%	6.75%	6.75%	80%	80%	80%	80%	80%	5.75%	5.75%	5.75%	5.75%	5.75%
10/20/21	6.75%	6.75%	6.75%	6.75%	6.75%	80%	80%	80%	80%	80%	5.75%	5.75%	5.75%	5.75%	5.75%
11/6/21	6.75%	6.75%	6.75%	6.75%	6.75%	80%	80%	80%	80%	80%	5.75%	5.75%	5.75%	5.75%	5.75%
11/20/21	6.75%	6.75%	6.75%	6.75%	6.75%	80%	80%	80%	80%	80%	5.75%	5.75%	5.75%	5.75%	5.75%
12/6/21	6.75%	6.75%	6.75%	6.75%	6.75%	80%	80%	80%	80%	80%	5.75%	5.75%	5.75%	5.75%	5.75%
12/20/21	6.75%	6.75%	6.75%	6.75%	6.75%	80%	80%	80%	80%	80%	5.75%	5.75%	5.75%	5.75%	5.75%
10/6/22	13.00%	N/A	13.00%	13.00%	13.00%	100%	N/A	100%	100%	100%	11.50%	N/A	11.50%	11.50%	11.50%
10/20/22	13.00%	N/A	13.00%	13.00%	13.00%	100%	N/A	100%	100%	100%	11.50%	N/A	11.50%	11.50%	11.50%
11/6/22	13.00%	N/A	13.00%	13.00%	13.00%	100%	N/A	100%	100%	100%	11.50%	N/A	11.50%	11.50%	11.50%
11/20/22	13.00%	N/A	13.00%	13.00%	13.00%	100%	N/A	100%	100%	100%	11.50%	N/A	11.50%	11.50%	11.50%
12/6/22	13.00%	N/A	13.00%	13.00%	13.00%	100%	N/A	100%	100%	100%	11.50%	N/A	11.50%	11.50%	11.50%
12/20/22	13.00%	N/A	13.00%	13.00%	13.00%	100%	N/A	100%	100%	100%	11.50%	N/A	11.50%	11.50%	11.50%
10/6/23	12.50%	N/A	N/A	12.50%	12.50%	85%	N/A	N/A	85%	85%	11.00%	N/A	N/A	11.00%	11.00%
10/20/23	15.00%	N/A	N/A	15.00%	15.00%	90%	N/A	N/A	90%	90%	13.00%	N/A	N/A	13.00%	13.00%
11/6/23	15.00%	N/A	N/A	15.00%	15.00%	90%	N/A	N/A	90%	90%	13.00%	N/A	N/A	13.00%	13.00%
11/20/23	15.50%	N/A	N/A	15.50%	15.50%	100%	N/A	N/A	100%	100%	14.00%	N/A	N/A	14.00%	14.00%
12/6/23	15.50%	N/A	N/A	15.50%	15.50%	100%	N/A	N/A	100%	100%	14.00%	N/A	N/A	14.00%	14.00%
12/20/23	15.50%	N/A	N/A	15.50%	15.50%	95%	N/A	N/A	95%	95%	13.50%	N/A	N/A	13.50%	13.50%
10/6/24	14.00%	N/A	N/A	N/A	14.00%	85%	N/A	N/A	N/A	85%	10.50%	N/A	N/A	N/A	10.50%
10/20/24	14.00%	N/A	N/A	N/A	14.00%	85%	N/A	N/A	N/A	85%	10.50%	N/A	N/A	N/A	10.50%
11/6/24	14.00%	N/A	N/A	N/A	14.00%	85%	N/A	N/A	N/A	85%	10.50%	N/A	N/A	N/A	10.50%
11/20/24	14.00%	N/A	N/A	N/A	14.00%	85%	N/A	N/A	N/A	85%	10.50%	N/A	N/A	N/A	10.50%
12/6/24	14.00%	N/A	N/A	N/A	14.00%	85%	N/A	N/A	N/A	85%	10.50%	N/A	N/A	N/A	10.50%
12/20/24	14.00%	N/A	N/A	N/A	14.00%	85%	N/A	N/A	N/A	85%	10.50%	N/A	N/A	N/A	10.50%

Continued on next page

Index Protector 7 renewal history (cont.)

Start of First Term	First Trust Barclays Edge Index PTP Strategy				
	Initial Rate	2022	2023	2024	2025
10/6/21	N/A	N/A	N/A	N/A	N/A
10/20/21	N/A	N/A	N/A	N/A	N/A
11/6/21	N/A	N/A	N/A	N/A	N/A
11/20/21	N/A	N/A	N/A	N/A	N/A
12/6/21	N/A	N/A	N/A	N/A	N/A
12/20/21	N/A	N/A	N/A	N/A	N/A
10/6/22	N/A	N/A	N/A	N/A	N/A
10/20/22	N/A	N/A	N/A	N/A	N/A
11/6/22	N/A	N/A	N/A	N/A	N/A
11/20/22	N/A	N/A	N/A	N/A	N/A
12/6/22	N/A	N/A	N/A	N/A	N/A
12/20/22	N/A	N/A	N/A	N/A	N/A
10/6/23	N/A	N/A	N/A	N/A	N/A
10/20/23	N/A	N/A	N/A	N/A	N/A
11/6/23	N/A	N/A	N/A	N/A	N/A
11/20/23	N/A	N/A	N/A	N/A	N/A
12/6/23	N/A	N/A	N/A	N/A	N/A
12/20/23	N/A	N/A	N/A	N/A	N/A
10/6/24	14.75%	N/A	N/A	N/A	14.75%
10/20/24	14.75%	N/A	N/A	N/A	14.75%
11/6/24	14.75%	N/A	N/A	N/A	14.75%
11/20/24	14.75%	N/A	N/A	N/A	14.75%
12/6/24	14.75%	N/A	N/A	N/A	14.75%
12/20/24	14.75%	N/A	N/A	N/A	14.75%



Charts show the initial declared rates and indexed strategy caps and participation rates for terms that started in the fourth quarter and on the 6th and 20th of each month in years 2021-2024 (Chart Terms) and the corresponding declared rates, caps and participation rates when the terms renewed in years 2022-2025. Although the charts show the caps/maximum indexed interest rate for each strategy for each Chart Term, they do not show the indexed interest rate for any strategy for any Chart Term, which may be less than the cap.

Information shown is not a guarantee or representation of future renewal declared rate, cap or participation rate decisions.

When the initial rates and caps we offer for new contracts decrease, our annuity rate lock procedure allows new contracts to receive the previous, higher rate if all required steps are completed within specified time frames. For new contracts in such situations, the initial declared rates, caps or participation rates would have been higher than the relevant figures listed in the Index Protector 7 Renewal History table.

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