

Russell 2000 3-Year Index Analysis

With a registered index-linked annuity from MassMutual Ascend Life Insurance Company, you can allocate funds to 3-year term indexed strategies that credit returns based on the Russell 2000 Index. This index measures the performance of about 2,000 small-cap U.S. equities. Let's take a closer look.

Russell 2000 returns using rolling periods

The data below uses 3-year rolling returns of the Russell 2000 Index from December 31, 2004 through December 31, 2024, for a total of 4,437 observations.

Table with 7 columns: Average Performance (Average Return, Average Gain, Average Loss), Positive Performance (Maximum Return, Num of Gains), Negative Performance (Minimum Return, Num of Losses). Data includes percentages and counts with percentages in parentheses.

Russell 2000 return distribution

Using the same data set and assumptions, the return distribution graph below illustrates how frequently the 3-year returns fell into specific ranges. The table below the graph shows the average return by range.

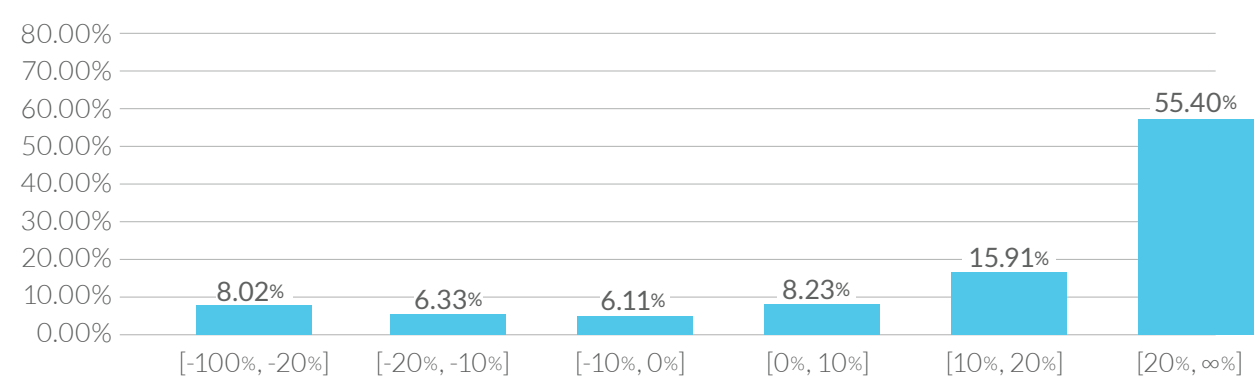


Table with 7 columns: Return Range, Average Russell 2000 Return by Range. Data shows average returns for each range, with negative values in red and positive values in green.

MassMutual Ascend first offered annuities with 3-year Russell 2000 indexed strategies in May 2025.
13-year rolling returns refers to every 3-year period that started on a business day after December 30, 2004 and ended before January 1, 2025.
2Zero flat 3-year periods, in which the Russell 2000 return was 0%, are included in the number of total observations.
3Maximum return: 3-year period ending 3/9/2012
4Minimum return: 3-year period ending 3/5/2009
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**MassMutual Ascend offers several annuity solutions that have varying levels of upside potential and downside protection. Annuities also offer benefits such as tax deferral and guaranteed lifetime income. Talk with your financial professional about how an annuity can fit into your portfolio and help you reach your goals.**

Registered index-linked annuities can only be sold through a Broker/Dealer that is contracted with MassMutual Ascend Life Insurance Company<sup>SM</sup>. Any sales solicitation must be accompanied or preceded by a prospectus. To obtain a copy of the prospectus, please visit [MassMutualAscend.com/RILArates](https://MassMutualAscend.com/RILArates).

Annuities are long-term investments and may not be suitable for all investors. Withdrawals from an annuity contract may have tax consequences.

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**All guarantees subject to the claims-paying ability of MassMutual Ascend Life Insurance Company<sup>SM</sup>.**

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