

Russell 2000 6-Year Index Analysis

With a registered index-linked annuity from MassMutual Ascend Life Insurance Company, you can allocate funds to 6-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.

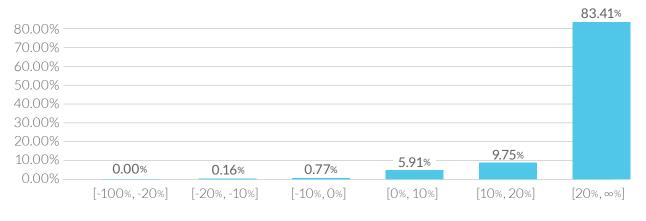
Russell 2000 returns using rolling periods

The data below uses 6-year rolling returns¹ of the Russell 2000 Index from December 31, 2004 through December 31, 2024, for a total of 3,653² observations.

Average Performance			Positive Performance			Negative Performance		
Average Return	Average Gain	Average Loss	Maximum Return ³	Num of Gains		inimum eturn⁴	Num of Losses	
59.41%	60.01%	-4.84%	256.44%	3,619 (99%)	- <u>-</u> -	17.75%	34 (1%)	

Russell 2000 return distribution

Using the same data set and assumptions, the return distribution graph below illustrates how frequently the 6-year returns fell info specific ranges. The table below the graph shows the average return by range.



Return Range	[-100%, -20%]	[-20%, -10%]	[-10%, 0%]	[0%, 10%]	[10%, 20%]	[20%, ∞%]
Average Russell 2000 Return by Range	N/A	-13.96%	-2.88%	6.05%	14.65%	69.14%

MassMutual Ascend first offered annuities with 6-year Russell 2000 indexed strategies in May 2024.

¹6-year rolling returns refers to every 6-year period that started on a business day after December 30, 2004 and ended before January 1, 2025.

²Zero flat 6-year periods, in which the Russell 2000 return was 0%, are included in the number of total observations.

³Maximum return: 6-year period ending 3/9/2015

⁴Minimum return: 6-year period ending 3/18/2020

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.

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