

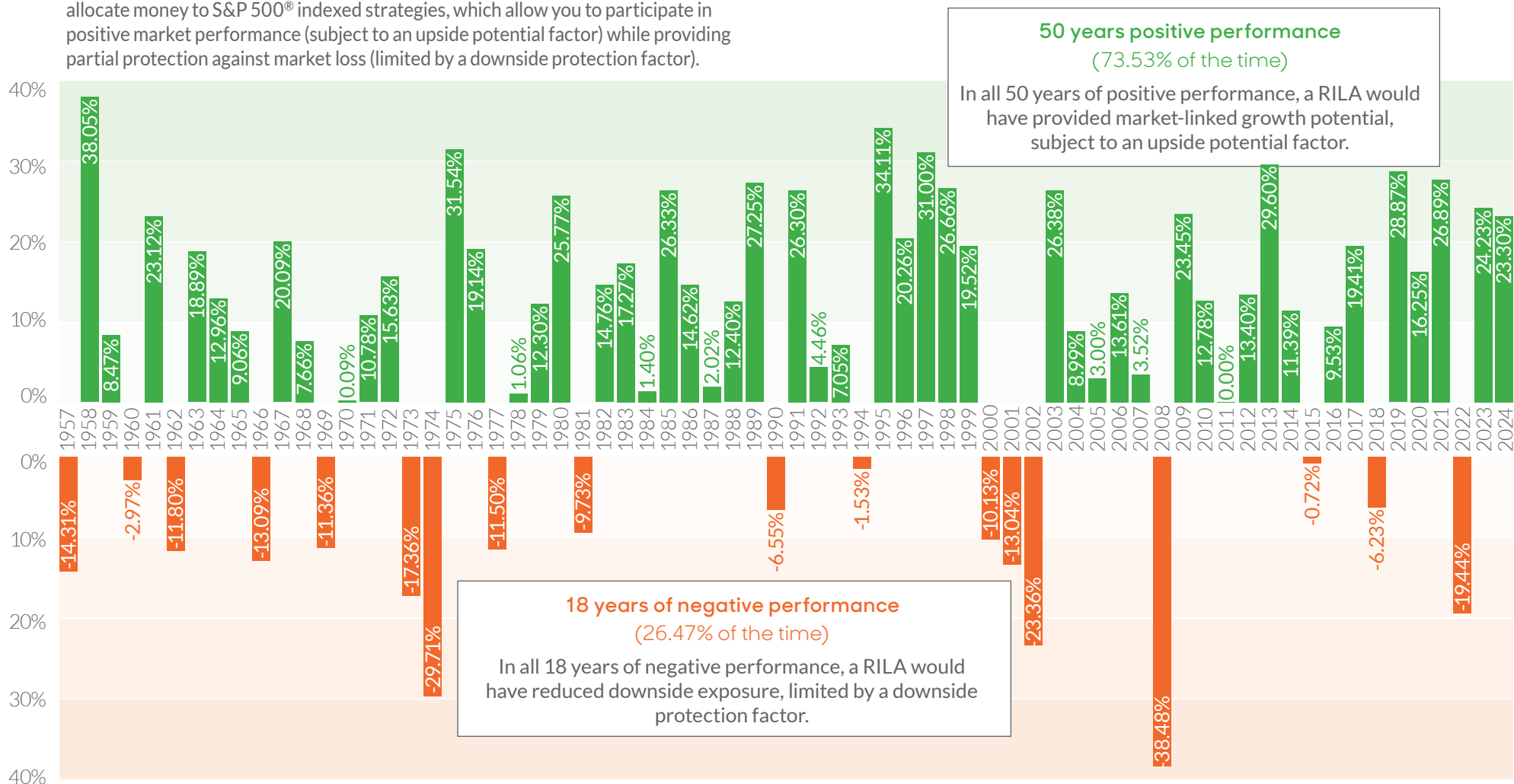
S&P 500: Comparing positive and negative return frequency over time

As you plan for retirement, market volatility is probably top of mind – a major downturn could eliminate years of accumulated assets and derail your future plans. However, there's a solution that offers market-linked growth opportunity and reduced downside risk, helping to mitigate market volatility.

With a registered index-linked annuity (RILA) from MassMutual Ascend Life Insurance Company, you aren't investing directly in the market. Instead, you can allocate money to S&P 500® indexed strategies, which allow you to participate in positive market performance (subject to an upside potential factor) while providing partial protection against market loss (limited by a downside protection factor).

Frequency Of Positive & Negative S&P 500 Returns Since 1957

The S&P 500 Index, which is a common benchmark of the U.S. stock market, has experienced a wide range of positive and negative returns in the **68 years since its inception in 1957**. Let's take a closer look at these returns, and consider the frequency that a RILA would have provided upside potential and reduced risk in the event of positive and negative returns.



Upside potential factors include caps, upside participation rates and trigger rates. Downside protection factors include floors, buffers and downside participation rates. Talk to your financial professional for more information on these upside potential and downside protection factors.

You can't predict market performance, but you can hedge against market declines by adding a level of protection to your portfolio.

Talk with your financial professional about how a RILA could fit into your overall retirement plan and help you reach your long-term financial goals.

For advice tailored to your specific circumstances, contact your financial professional.

MassMutual Ascend is not an investment adviser and the information provided in this document is not investment advice. You should consult your investment professional for advice based on your personal circumstances and financial situation.

MassMutual Ascend's registered index-linked annuities can only be sold through a Broker/Dealer that is contracted with MassMutual AscendSM. This material must be preceded or accompanied by a prospectus. To obtain a copy of the prospectus, please visit [MassMutualAscend.com/RILArates](https://www.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.

The "S&P 500 Index" is a product 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®, US 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 product(s) nor do they have any liability for any errors, omissions, or interruptions of the S&P 500 Index.

Principal Underwriter/Distributor: MM Ascend Life Investor Services, LLC, member FINRA and an affiliate of MassMutual Ascend. Annuities issued by MassMutual Ascend Life Insurance CompanySM (Cincinnati, Ohio), a wholly owned subsidiary of Massachusetts Mutual Life Insurance Company (MassMutual) under contract forms ICC24-P1825224NW, ICC24-P1833624NW, ICC24-P1841624NW and ICC24-P1850824NW.

All guarantees subject to the claims-paying ability of MassMutual Ascend Life Insurance Company.

This content does not apply in the state of New York.

**NOT A BANK OR CREDIT UNION DEPOSIT OR OBLIGATION • NOT FDIC OR NCUA-INSURED • NOT INSURED BY ANY
FEDERAL GOVERNMENT AGENCY • MAY LOSE VALUE • NOT GUARANTEED BY ANY BANK OR CREDIT UNION**

