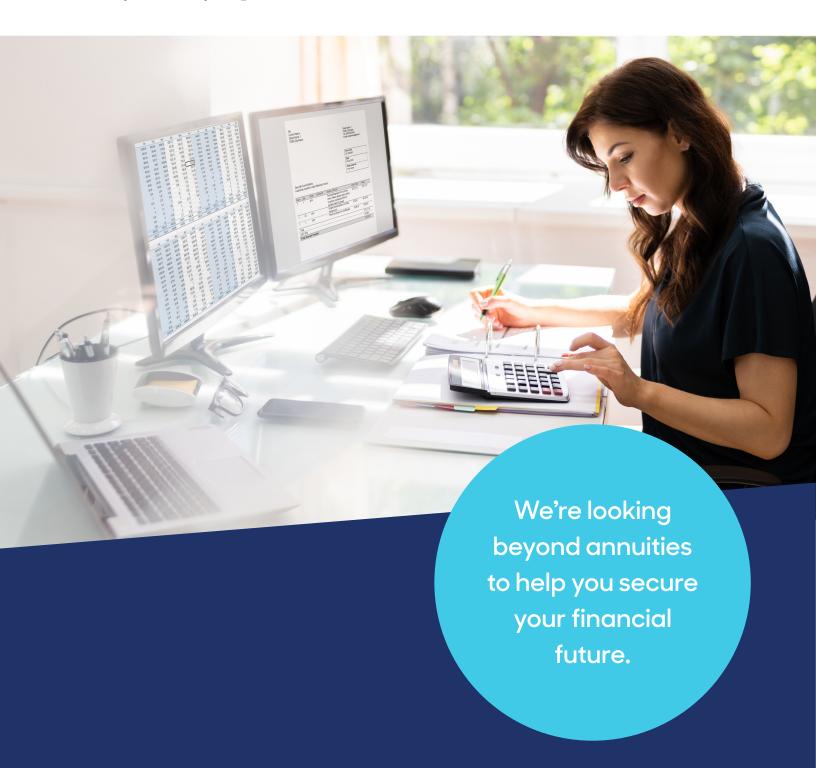
Beyond Annuities:

Market Risks To Consider As You Plan For Your Financial Future



At MassMutual Ascend, we understand the importance of a secure financial future. That's why we don't just offer products to help you reach your goals – we also provide educational tools and resources that can help you prepare for and overcome possible obstacles you may face as you plan ahead.



Volatility

Early 2020 marked the end of the longest-running bull market in modern history. Since then, the market has navigated in and out of bear market territory. This kind of volatility can wipe out years of accumulated assets and derail your plans.

The table below shows historical bear markets since 1929 – with the average bear market return being -41%.¹

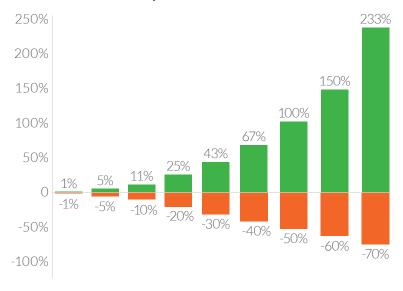
Historical Bear Markets	Decline from All-time High
1929-1932	-86%
1937-1942	-60%
1946-1949	-30%
1956-1957	-22%
1961-1962	-28%
1966	-22%
1968-1970	-36%

Historical Bear Markets	Decline from All-time High
1973-1974	-48%
1980-1982	-27%
1987	-34%
2000-2002	-49%
2007-2009	-57%
2020	-34%
2022	-25%

Average Bear Market Return (1929-2022): -41%

Plus, it can take a significant return to recover from loss – and if you're nearing retirement, you might not have the time to wait for a major market rebound.





¹J.P. Morgan Asset Management, Guide to the Markets – U.S., Data as of December 31, 2022.

Black Swan Events

The term Black Swan Event refers to a rare, unpredictable event or occurrence with widespread consequences and catastrophic effects on the economy. Chances are you recall these Black Swan Events over the last two decades:





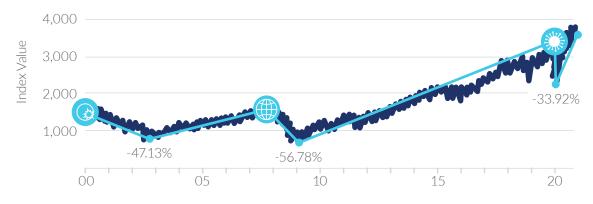






It might be easy to think, "a Black Swan Event won't affect my financial plan" – but take a look at the impact each of these Black Swan Events had on the market:

Historical Fluctuations in S&P Index Values and their correlation to Black Swan Events



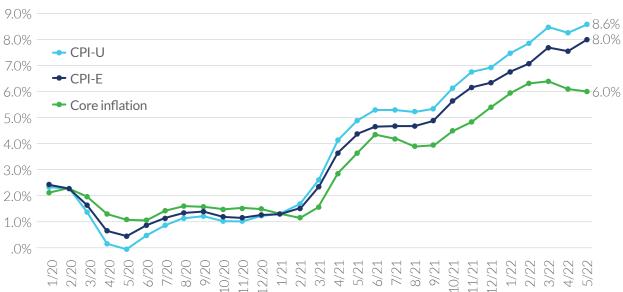
To demonstrate the correlation between stock market volatility and Black Swan Events, historical S&P 500 (SPX) values are shown in the graph above. The connecting lines between the points represent high and low index values. The last value shown is as of 12/31/2020. Index values fluctuate over time.

Inflation

It's no secret that inflation is among today's most pressing financial issues. In fact, inflation is a major concern for more than 7 in 10 Americans,¹ with nearly one third of retirees reporting that their basic living expenses are more costly than expected.²

The graphic below shows how widely-followed inflation indexes have jumped in recent years. While younger Americans still in the workforce may have time on their side, those nearing retirement may need a plan to combat these historic levels of inflation.





Note: The Consumer Price Index for All Urban Consumers (CPI-U) is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. The Consumer Price Index for Americans 62 years of age and older, or CPI-E, is a research price index designed to measure price change specifically based on the spending patterns of Americans age 62 and older. Core Inflation refers to price changes excluding food and energy sectors.

Source: U.S. Bureau of Labor Statistics, 2022.

¹Consumer Sentiment in the Time of COVID-19, LIMRA, July 2022.

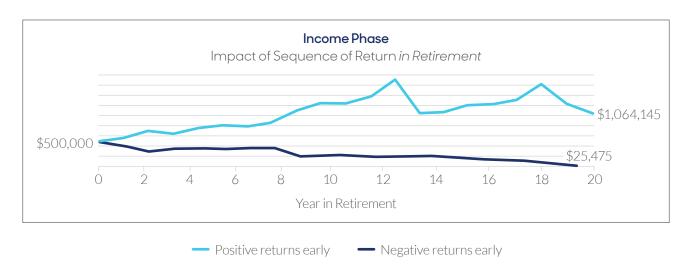
²Impact of Inflation, LIMRA, 2022.

Sequence of Returns

The order or sequence of returns on your portfolio is an important factor to consider in retirement. While the sequence does not have an impact during the accumulation phase, a poor sequence of returns can have a major impact on how long your money will last once you start drawing income from your portfolio. If your retirement coincides with a bear market, your savings could be depleted, leaving you short on income.

Take a look at how a \$500,000 portfolio fares during the accumulation and income phases when it experiences early positive returns vs. early negative returns:





Source: Secure Retirement Institute, 2021. The analysis is based on actual S&P 500 index annual return from 2001 to 2020 (20-year period). The impact of sequence of return in retirement assumes an initial withdrawal rate of 5 percent, adjusted by 3 percent inflation during retirement. The hypothetical portfolio, 'Positive returns early' reflects the actual S&P performance in both charts. The portfolio, 'Negative returns early' is based on the same performance date, only sequenced from the reverse end.

Longevity

No matter how you envision your retirement, it's important to consider how long this life stage might last. While it's good news that retirees are living longer, healthier and more active lives than in the past, longer life expectancies may mean greater risk of outliving your savings. Take a look at these longevity quick facts:







Approximately 48% of pre-retirees are concerned about outliving their assets²

¹Retirement Information for Medicare Beneficiaries, Social Security Administration, 2023.

² The Facts of Life and Annuities, LIMRA, 2022.

At MassMutual Ascend, we are committed to going above and beyond – so when it comes to your financial future, the impossible feels possible.

If you have concerns about any of the risks outlined in this brochure, it might be time to consider incorporating an annuity in your financial plan. 69% of annuity owners are confident that their savings and investments won't run out if they live to age 90.¹ Talk to your financial professional today about how an annuity can bring you peace of mind as you plan for a secure financial future.

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¹ 2020 Consumer Survey, Secure Retirement Institute.