

Special Edition – Understanding Market Volatility

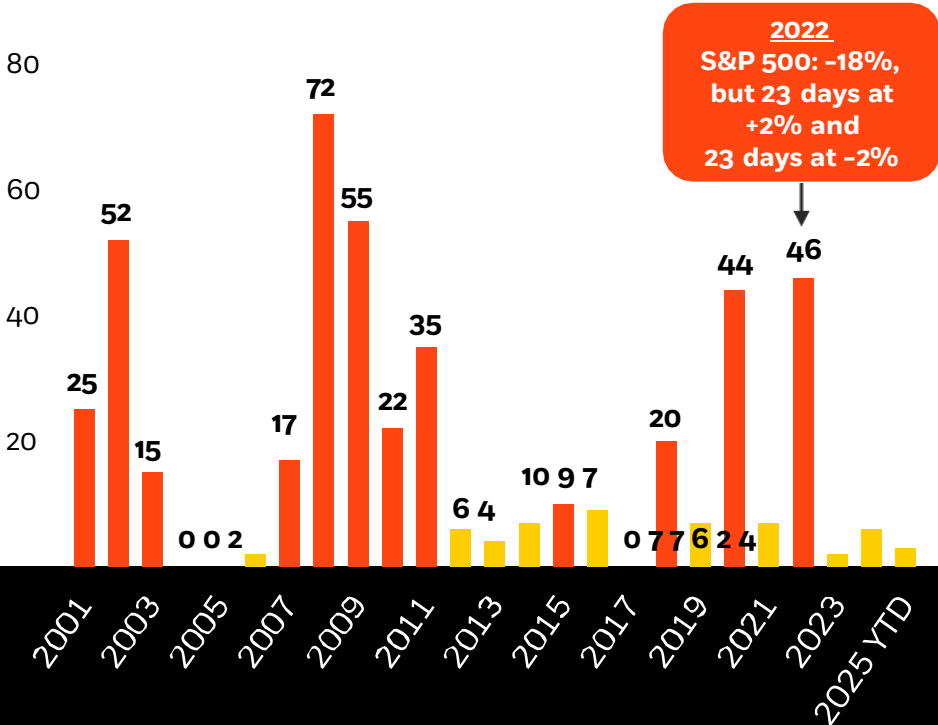
Student of the Market

Volatility increases with economic and policy concerns

The number of big single-day swings are lower than previous years, with most coming during crisis periods

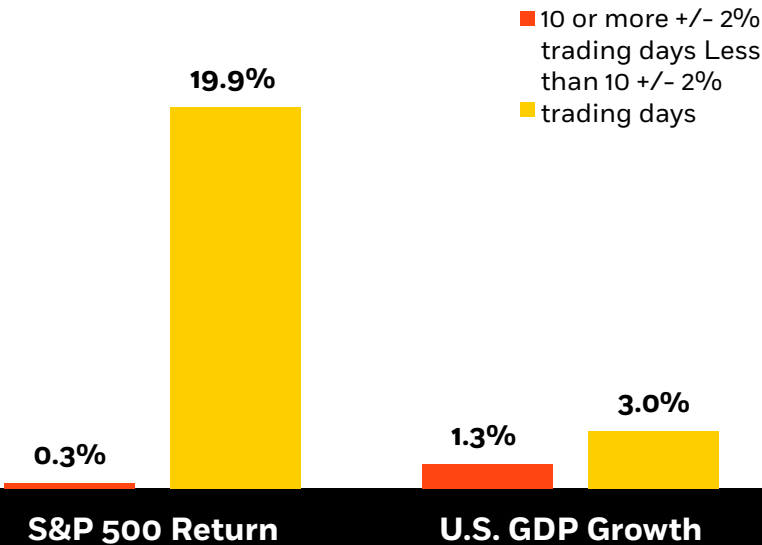
S&P 500 single-day swings of +/-2% or more

Number of single day swings, 1/1/2001 - 4/4/2025



What stock market volatility tells us about potential returns and economic growth

Average return during +/- 2% trading days in calendar years, 1/1/2001 - 3/31/2025



Source: Morningstar as of 4/4/25. Stock market represented by the S&P 500 Index. Past performance does not guarantee or indicate future results. Index performance is for illustrative purposes only. You cannot invest directly in the index.

The best days for equities have followed the worst

March 2020 volatility showcased how quickly markets can rebound even after significant drawdowns

3 of the Worst Days Since 1950

Worst days since 1950	Calendar Days	S&P 500 Decline	Return 1 year later
#2	3/16/2020	-12.0%	69.0%
#3	3/12/2020	-9.5%	61.8%
#9	3/9/2020	-7.6%	43.6%

5 of the Best Days Since 1950

Best days since 1950	Calendar Days	S&P 500 Gain	Return 1 year later
#3	3/24/20	9.4%	61.7%
#4	3/13/20	9.3%	48.0%
#7	4/6/20	7.0%	55.6%
#12	3/26/20	6.2%	53.7%
#13	3/17/20	6.0%	59.9%

Over the last 20 years, 24 of 25 of the best days in the market occurred within 1 month of one of the 25 worst days

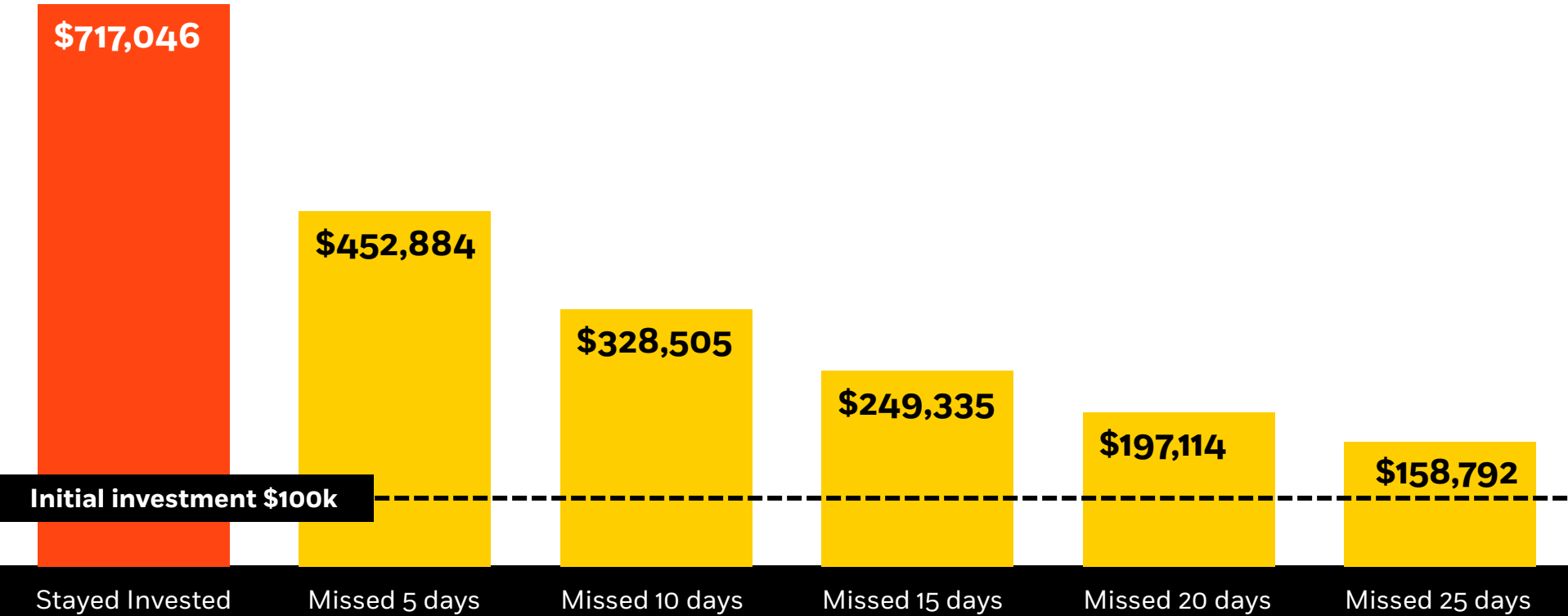
Sources: BlackRock; Morningstar as of 3/31/25. "S&P 500" is represented by the S&P 500 Index from 3/4/57 to 3/31/25 and the IA S&P 500 U.S. Lrg Stock Tr USD Index from 1/1/26 to 3/4/57, unmanaged indexes that are generally considered representative of the U.S. stock market during each given time period. Index performance is for illustrative purposes only. It is not possible to invest directly in an index. Past performance does not guarantee or indicate future results.

Staying invested has been more important than timing

It's time in the market that matters; waiting for the "right moment" could mean missing crucial performance

Missing top-performing days can hurt your return

Hypothetical Investment of \$100,000 in the S&P 500 Index over the last 20 years (2005-2024)



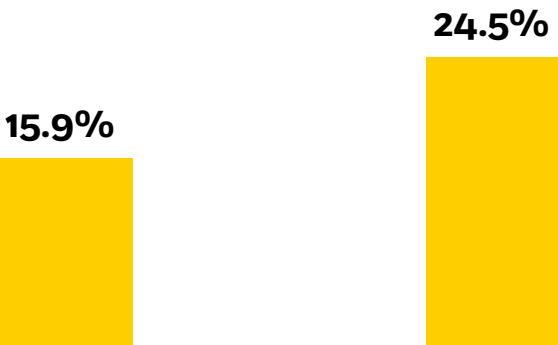
Sources: BlackRock; Bloomberg as of 12/31/24. Past performance is no guarantee of future results. It is not possible to invest directly in an index.

Buying when the stock market is down -10%

Market pullbacks offer a strong opportunity to invest and “buy the dip” while others seek to exit

Median return following a -10% decline

Last 20 years, performance next 12 months



Returns following a 10% market decline

Returns from the market bottom (-10% or worse)

Stock market corrections >10% and bear markets

Last 20 years

Correction >10%	Peak	Through	Date crosses -10%	Forward returns after crossing -10%	Forward returns from the bottom (through)
				next 12 months	next 12 months
-16.0%	4/23/10	7/2/10	5/20/10	24.4%	27.5%
-19.4%	4/29/11	10/3/11	8/4/11	15.9%	19.1%
-14.2%	5/21/15	2/11/16	8/24/15	14.9%	17.1%
-10.2%	1/26/18	2/8/18	2/8/18	11.4%	11.4%
-19.8%	9/20/18	12/24/18	11/23/18	25.8%	24.5%
-10.3%	7/31/23	10/27/23	10/27/23	35.2%	35.2%
-56.8%	10/9/07	3/9/09	11/26/07	-36.9%	64.0%
-33.9%	2/19/20	3/23/20	2/27/20	27.9%	61.9%
-25.4%	1/3/22	10/27/22	2/22/22	-7.3%	22.0%
-10.1%	2/19/25	3/13/25	3/13/25	?	?
Median				15.9%	24.5%

Sources: BlackRock; Bloomberg as of 3/31/25. Stocks are represented by the S&P 500 price index, an unmanaged index that is generally considered representative of the U.S. stock market. “-10% declines” and “>10% corrections” refer to declines of that magnitude or more at any point within the given time frame. Past performance is no guarantee of future results. It is not possible to invest directly in an index.

Growth of \$100k and recent market and economic headlines

The chart illustrates the S&P 500 index's performance from December 2008 to March 2025. The index begins at a blacked-out value in Dec-08, drops sharply, and then generally trends upward with significant volatility. Key events are labeled along the line, including the 2008 financial crisis, the 2015 oil price crash, the 2020 COVID-19 crash, and the 2022 market downturn. The chart ends in Mar-25 at a value of \$851k.

Key Events and Market Movements:

- Dec-08:** Blacked-out starting value.
- Jan-10:** Russia takes market crash.
- Feb-11:** BP oil spill, Chrysler and GM shutdown.
- Mar-12:** Crimea elected, Oil prices plunge.
- Apr-13:** Chinese stock market crash.
- May-14:** U.S. credit downgrade, U.S. financial crisis.
- Jun-15:** U.S. credit downgrade, U.S. financial crisis.
- Jul-16:** Russian market crash, Global financial crisis.
- Aug-17:** U.S. stock market corrections.
- Sep-18:** U.S. stock market corrections.
- Oct-19:** U.S. government shutdown, U.S. stock market corrections.
- Nov-20:** U.S. government shutdown, U.S. stock market corrections.
- Dec-21:** U.S. government shutdown, U.S. stock market corrections.
- Jan-23:** U.S. government shutdown, U.S. stock market corrections.
- Feb-24:** U.S. government shutdown, U.S. stock market corrections.
- Mar-25:** U.S. government shutdown, U.S. stock market corrections.

Ending value: \$851k

Investing at the worst times in history

Average annual returns if you had been invested when event occurred, %

Event	Avg Duration (Months)
Avg since 1926	10.4
1929 Great Depression	9.8
1940 World War 2	11.3
1973 Bear market	11.0
1987 Market crash	10.4
2000 Tech bubble bursts	7.7
2007 Global financial crisis	10.2
2020 Covid	14.3
2022 Inflation shock	8.9

Recent investor sentiment very bearish

Historically, periods with high bearish sentiment have led to outsized performance

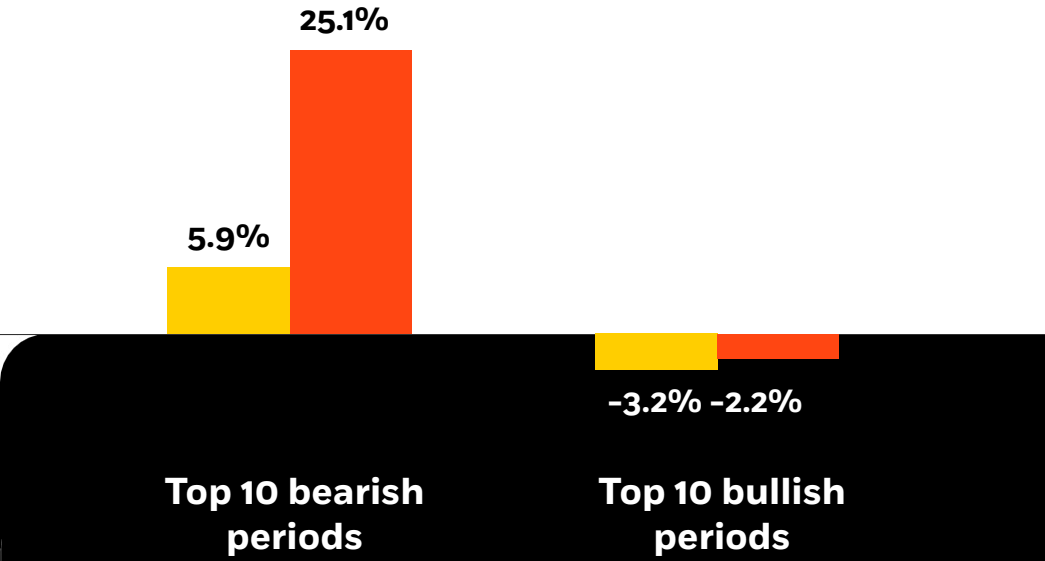
Top 10 bearish investor sentiment periods

Date	Percent bearish sentiment	Avg annual return next 3 mo.	Avg annual return next 1 yr.
3-5-09	70.3%	38.6%	70.5%
10-19-90	67.0%	7.3%	29.9%
8-31-90	61.0%	0.9%	26.9%
9-22-22	60.9%	2.2%	16.9%
10-9-08	60.8%	-1.4%	20.9%
9-29-22	60.8%	6.2%	19.8%
2-27-25	60.6%	?	?
4-28-22	59.4%	-4.6%	-1.1%
6-23-22	59.3%	-2.3%	16.6%
3-13-25	59.2%	?	?
Average		5.9%	25.1%

Performance following periods of top 10 bearish and bullish periods

Average annual returns if you had been invested when event occurred

Next 3 mo. Next 1 year



Sources: BlackRock; Morningstar, St. Louis Federal Reserve and AAI as of 3/31/25. Returns are represented by the S&P 500 Index, an unmanaged index that is generally considered representative of the U.S. stock market. Past performance is no guarantee of future results. It is not possible to invest directly in an index.

Stay the course amid market volatility

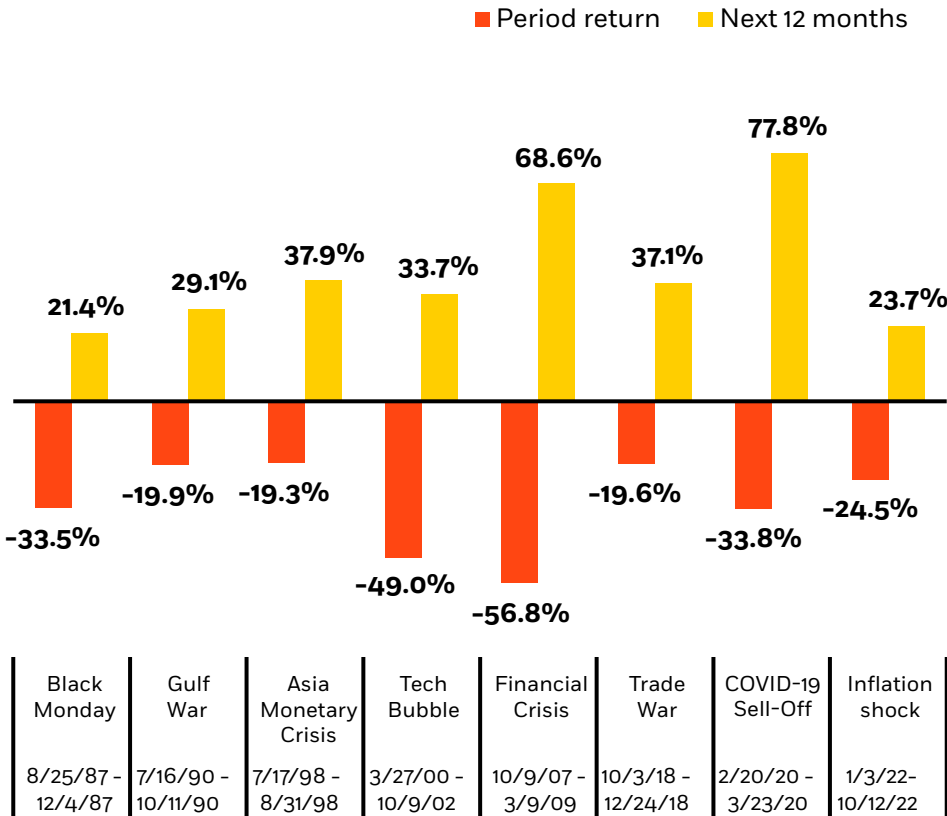
Top 15 worst market days since 1950*

Top S&P 500 single day declines and subsequent 1 year return

Calendar Days	S&P 500 Decline*	Return 1 year later*
10/19/87	-20.5%	23.1%
3/16/20	-12.0%	69.0%
3/12/20	-9.5%	61.8%
10/15/08	-9.0%	20.8%
12/01/08	-8.9%	35.9%
9/29/08	-8.8%	-4.1%
10/26/87	-8.3%	23.5%
10/09/08	-7.6%	17.8%
3/9/20	-7.6%	43.6%
10/27/97	-6.9%	21.5%
08/31/98	-6.8%	38.0%
01/08/88	-6.8%	15.3%
11/20/08	-6.7%	45.1%
05/28/62	-6.7%	26.7%
08/08/11	-6.7%	25.2%
Average	-8.9%	30.9%

Past growth scares and bear markets

Since 1987



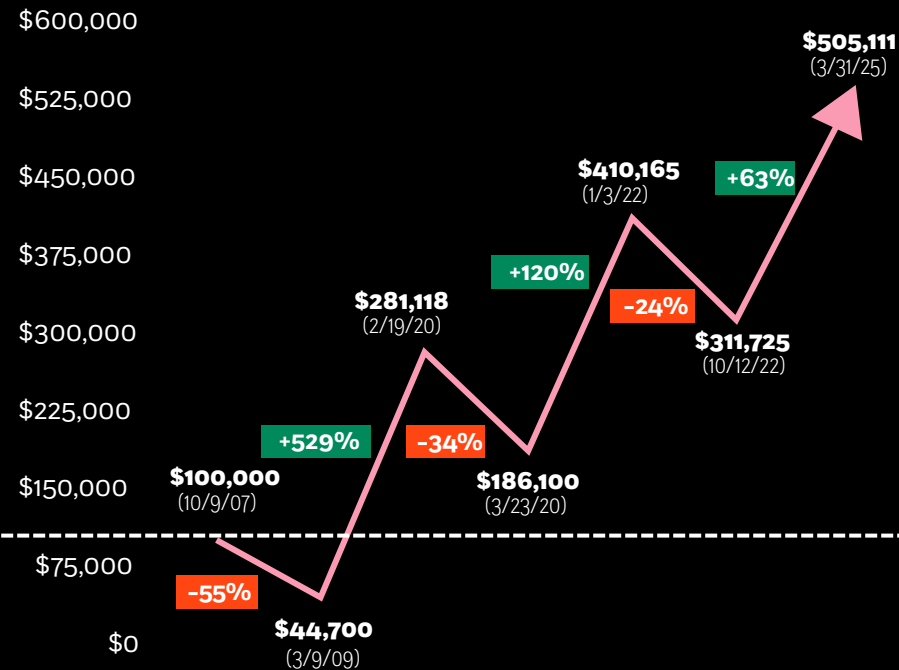
Source: BlackRock; Morningstar as of 3/31/25.S&P500 is represented by the S&P 500 Index from 3/4/57 to 3/31/25 and the IA SBBI U.S. Lrg Stock Tr USD Index from 1/1/26 to 3/4/57, unmanaged indexes that are generally considered representative of the U.S. stock market during each given time period. Index performance is for illustrative purposes only. It is not possible to invest directly in an index. Past performance does not guarantee or indicate future results. *Indicates principal return, dividends not included. Returns are principal only not including dividends..

Win more by losing less

Diversification and minimizing losses, even at the cost of upside capture, can have a larger effect on the longterm return of a portfolio than full participation in both bull and bear markets

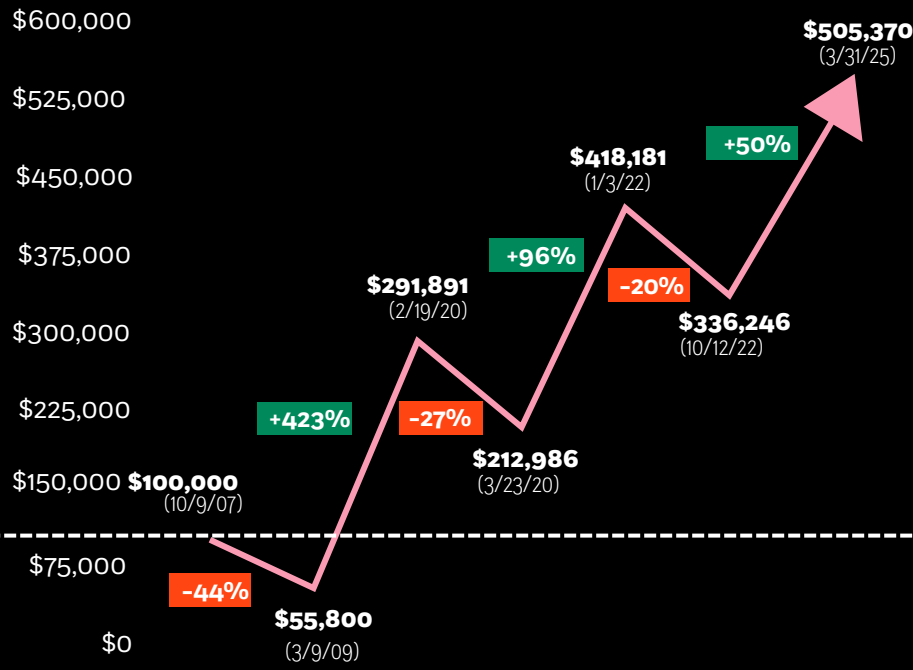
All the up and all the down

100% capture of both up and down markets of S&P 500 Index



Part of the up and down gets you all the up with less of the down

80% capture of up and down markets of S&P 500 Index



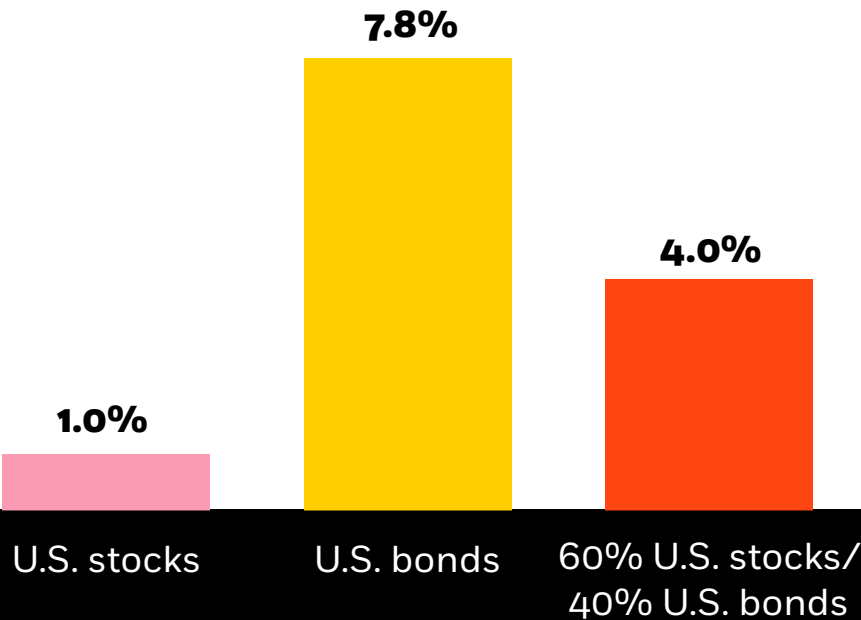
Source: Morningstar as of 3/31/25. *Hypothetical investment or portfolio that captured 80% of each bull and bear market return of the S&P 500 when benchmarked to that index. Returns shown are based on the S&P 500 index only. This showcases the benefits of diversifying and minimizing losses even at the expense of capturing some upside. Returns shown are based on the S&P 500 index only. Past performance does not guarantee or indicate future results. Index performance is for illustrative purposes only. You cannot invest directly in the index.

Recessions and asset class performance

Diversified portfolios with fixed income exposure have performed better during recessionary environments

Average performance during a recession

1/1/1929 – 3/31/2025



Recession and asset class performance

1/1/1929 – 3/31/2025

Recessions	U.S. stocks	U.S. bonds	60/40 portfolio
1929-09-01 to 1933-03-31	-33.6	4.9	-19.1
1937-06-01 to 1938-06-30	-22.4	6.4	-9.9
1945-03-01 to 1945-10-31	19.5	1.0	12.4
1948-12-01 to 1949-10-31	15.2	2.5	10.1
1953-08-01 to 1954-05-31	24.2	5.1	16.6
1957-09-01 to 1958-04-30	-1.5	9.7	3.3
1960-05-01 to 1961-02-28	20.3	7.2	14.9
1970-01-01 to 1970-11-30	-2.0	16.2	5.3
1973-12-01 to 1975-03-31	-5.9	5.7	0.0
1980-02-01 to 1980-07-31	9.6	9.5	9.5
1981-08-01 to 1982-11-30	10.5	29.1	17.9
1990-08-01 to 1991-03-31	8.0	7.5	8.1
2001-04-01 to 2001-11-30	-0.9	5.9	1.9
2008-01-01 to 2009-06-30	-25.0	4.8	-11.5
2020-03-01 to 2020-04-30	-1.1	1.2	-0.1
Average	1.0	7.8	4.0

Source: BlackRock; Morningstar, NBER as of 3/31/25. Recessionary periods shown are defined by NBER. U.S. stocks are represented by the S&P 500 Index from 3/4/57 to 3/31/25 and the IA SBBI U.S. Lrg Stock Tr USD Index from 1/1/26 to 3/4/57, unmanaged indexes that are generally considered representative of the U.S. stock market during each given time period. U.S. Bonds are represented by the Bloomberg U.S. Aggregate Bond Index. Recession dates noted by NBER business cycle dating. Index performance is for illustrative purposes only. It is not possible to invest directly in an index. Past performance does not guarantee or indicate future results.

Important information

Investing involves risk, including possible loss of principal.

There is no guarantee that a diversified portfolio will enhance overall returns or outperform a non-diversified portfolio. Diversification does not protect against market risk.

This material is provided for educational purposes only and is not intended to constitute investment advice or an investment recommendation within the meaning of federal, state or local law. You are solely responsible for evaluating and acting upon the education and information contained in this material. BlackRock will not be liable for direct or incidental loss resulting from applying any of the information obtained from these materials or from any other source mentioned. BlackRock does not render any legal, tax or accounting advice and the education and information contained in this material should not be construed as such. Please consult with a qualified professional for these types of advice.

Index performance is for illustrative purposes only. Index performance does not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. Past performance does not guarantee future results.

Prepared by BlackRock Investments, LLC, member FINRA.

© 2025 BlackRock, Inc. or its affiliates. All Rights Reserved. **BLACKROCK** is a trademark of BlackRock, Inc. or its affiliates. All other trademarks are those of their respective owners.