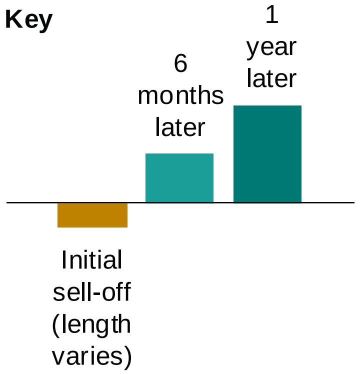
2025 updates

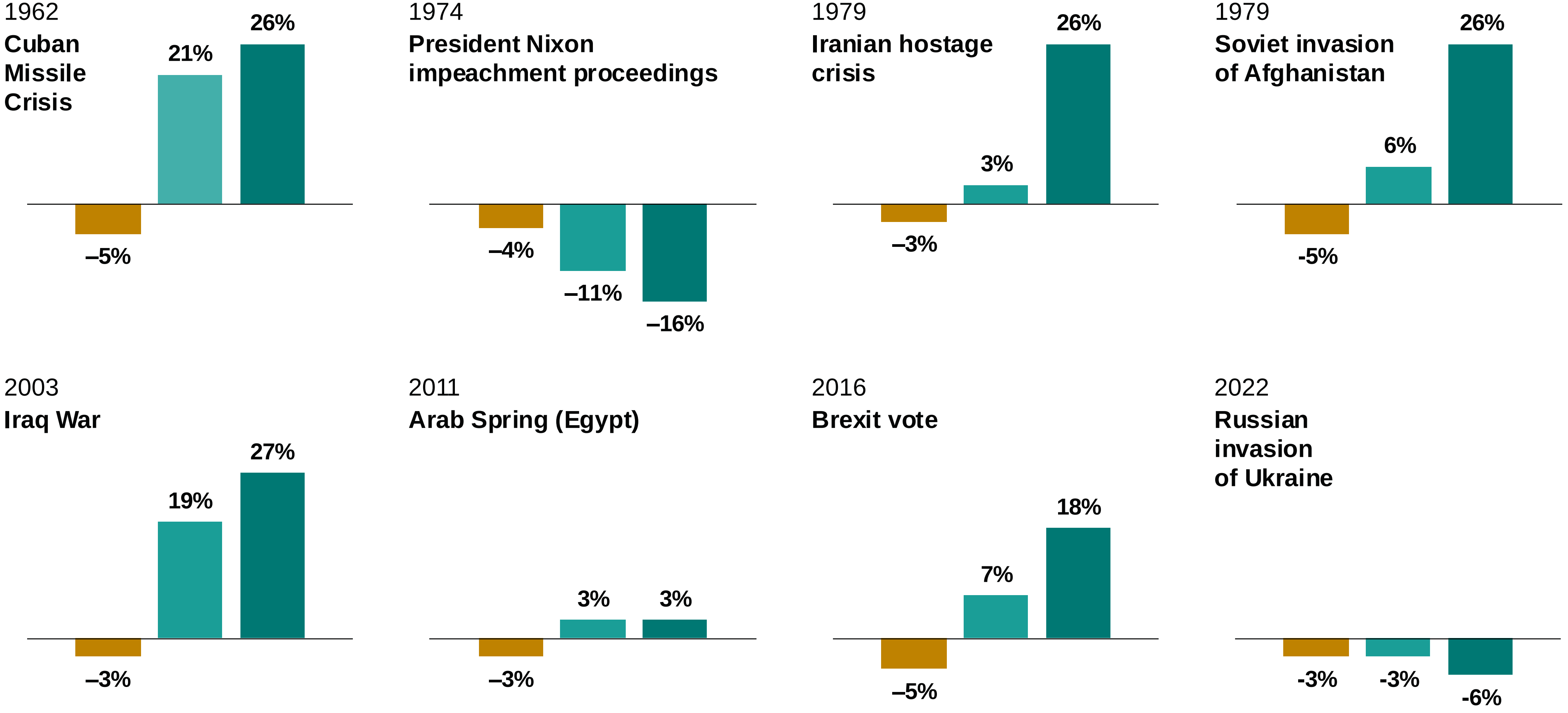
Market volatility slide library

Geopolitical sell-offs are typically short-lived

5% Average total return **6 months** from event

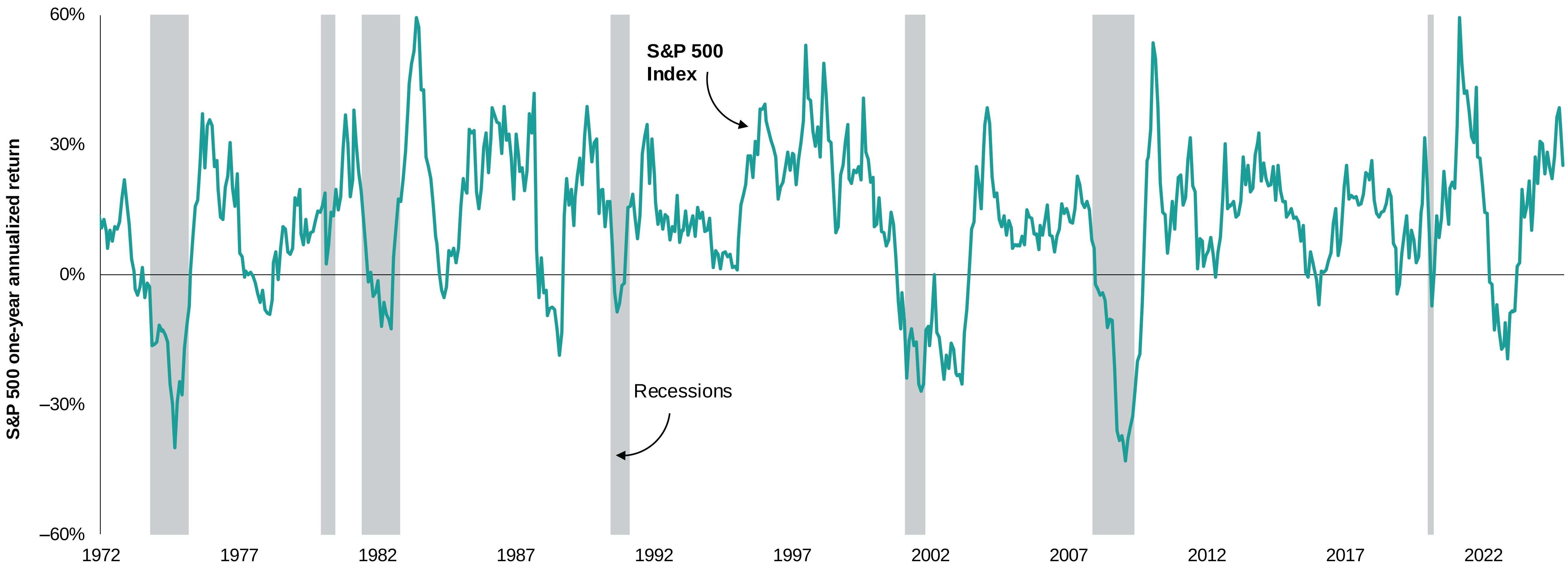
8% Average total return **1 year** from event





Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.
All investments are subject to risk, including the possible loss of the money you invest. Be aware that fluctuations in the financial markets and other factors may cause declines in the value of your account.
Sources: Vanguard calculations as of December 31, 2024, using data from Refinitiv.
Notes: Returns are based on the Dow Jones Industrial Average through 1963 and the Standard & Poor's 500 Index thereafter. All returns are price returns. Not shown in the above charts, but included in the averages, are returns after the following events: the Suez Crisis (1956), construction of the Berlin Wall (1961), assassination of President Kennedy (1963), authorization of military operations in Vietnam (1964), Israeli–Arab Six-Day War (1967), Israeli–Arab War/oil embargo (1973), Shah of Iran's exile (1979), U.S. invasion of Grenada (1983), U.S. bombing of Libya (1986), First Gulf War (1991), President Clinton impeachment proceedings (1998), Kosovo bombings (1999), September 11 attacks (2001), multiforce intervention in Libya (2011), U.S. anti-ISIS intervention in Syria (2014), and President Trump impeachment proceedings (2019 and 2021).

Stocks start to recover before recessions end



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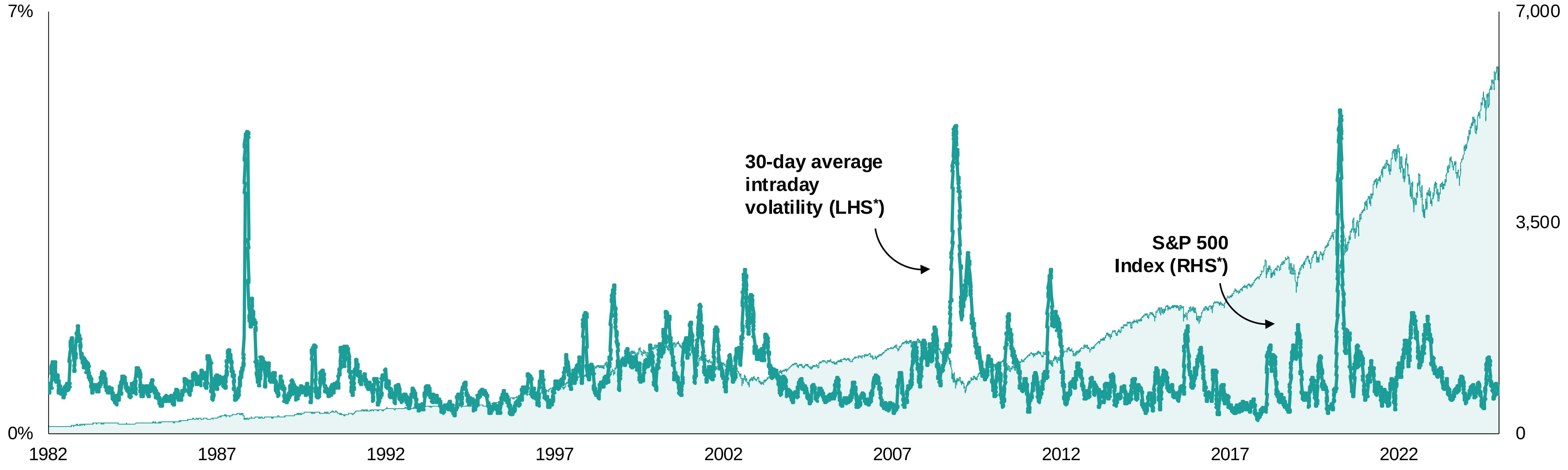
Sources: Vanguard calculations as of December 31, 2024, using data from Refinitiv.
Notes: This chart shows the one-year annualized returns for the Standard & Poor's 500 Index from 1973 through 2024. The shaded areas represent months where the U.S. economy was in recession as defined by the National Bureau of Economic Research (NBER).

Don’t let turbulence distract you: Keep your focus on the longer term

Volatility and index prices for the S&P 500 Index (December 31, 1982, through December 31, 2024)



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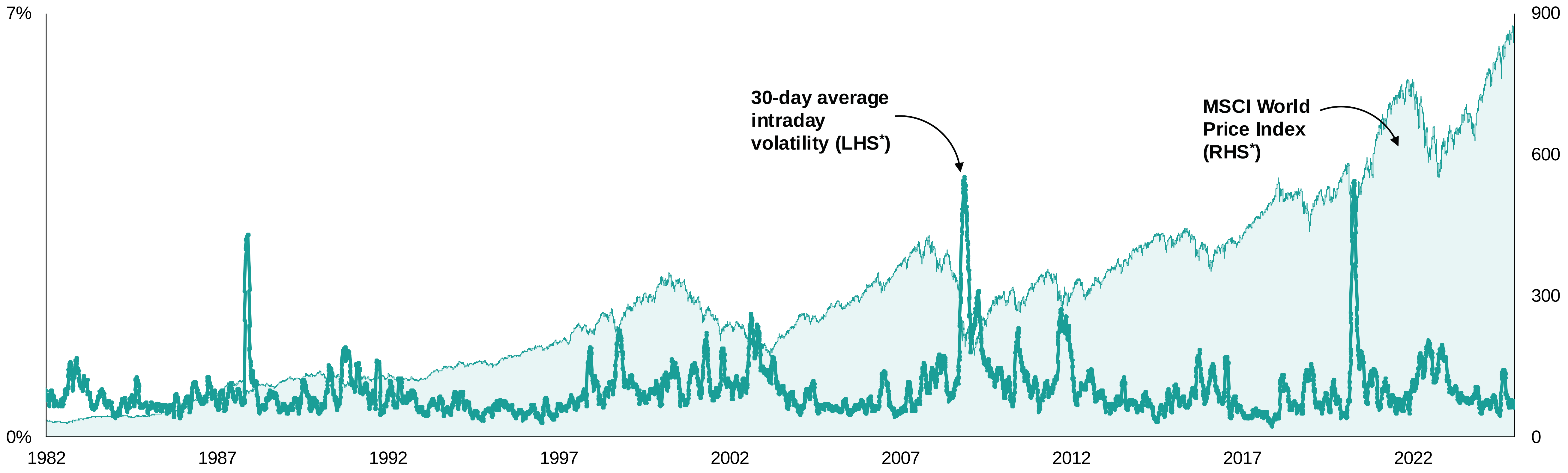
Sources: Vanguard calculations as of December 31, 2024, using data from Refinitiv.
*LHS stands for left-hand side and RHS stands for right-hand side.
Note: Intraday volatility is calculated as the daily range of trading prices [(high-low)/opening price] for the Standard & Poor’s 500 Index.

Don’t let turbulence distract you: Keep your focus on the longer term

Volatility and index prices for the MSCI World Price Index (December 31, 1982, through December 31, 2024)



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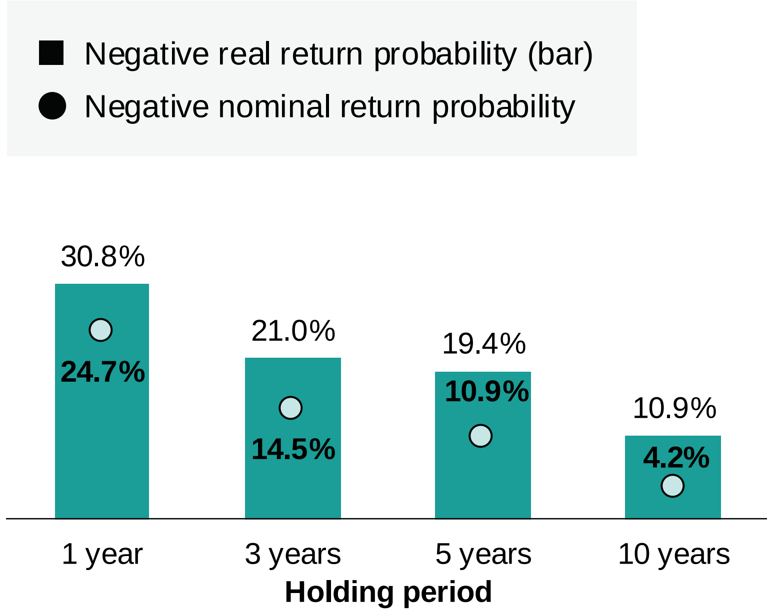
Sources: Vanguard calculations as of December 31, 2024, using data from Refinitiv.
*LHS stands for left-hand side and RHS stands for right-hand side.
Note: Volatility is calculated as the standard deviation of price return from trailing 30 business days for the MSCI World Price Index.

Longer holding periods reduce the chances of a negative return

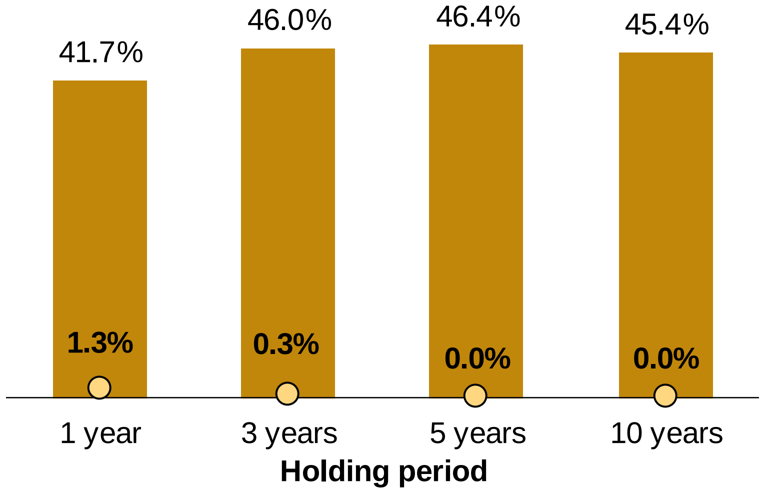
Historical probability of negative return for various holding periods

100% stocks



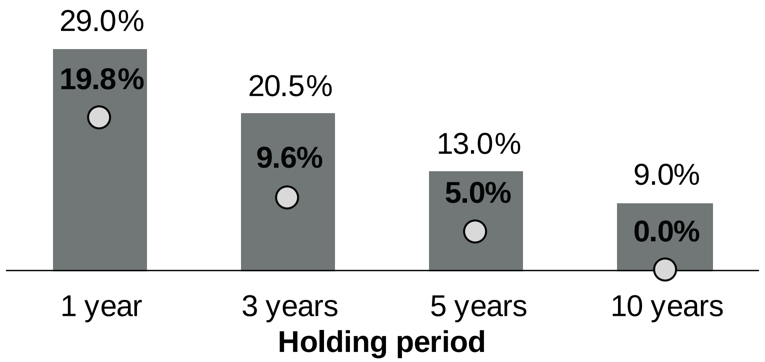
100% Treasury bills

Understanding inflation risk: When adjusted for inflation, U.S. Treasury bills are more likely than stocks to have negative returns.



60% stocks/40% bonds

Benefit of diversification: A 60/40 portfolio has 36% less volatility than a portfolio that is 100% stocks.



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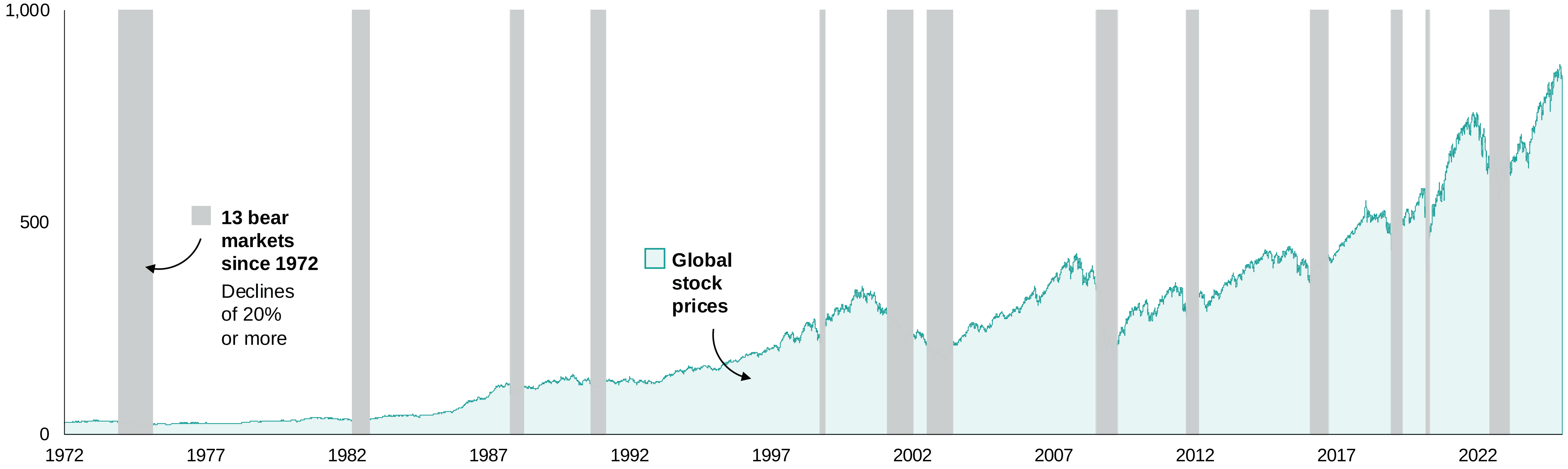
Source: Vanguard calculations as of December 31, 2024.
Notes: Rolling return periods are based on quarterly return data. Nominal return is expressed in the money of the day, while real return includes the effect of inflation. When determining which index to use and for what period, we selected the index that we deemed to be a fair representation of the characteristics of the referenced market, given the information currently available. For U.S. stock market returns, we used the Standard & Poor's 90 Index from 1935 through March 3, 1957, the S&P 500 Index from March 4, 1957, through 1974, the Wilshire 5000 Index from 1975 through April 22, 2005, the MSCI US Broad Market Index from April 23, 2005, through June 2, 2013, and the CRSP US Total Market Index thereafter. For U.S. bond market returns, we used the S&P High Grade Corporate Index from 1935 through 1968, the Citigroup High Grade Index from 1969 through 1972, the Lehman Brothers U.S. Long Credit AA Index from 1973 through 1975, the Bloomberg U.S. Aggregate Bond Index from 1976 through 2009, and the Bloomberg U.S. Aggregate Float Adjusted Bond Index thereafter. For Treasury bill returns, we used the Ibbotson 1-Month Treasury Bill Index from 1935 through 1977 and the FTSE 3-Month Treasury Bill Index thereafter.

Downturns aren't rare events: Typical investors, in all markets, will endure many of them during their lifetime

Global stock prices (January 1, 1980, through December 31, 2024)



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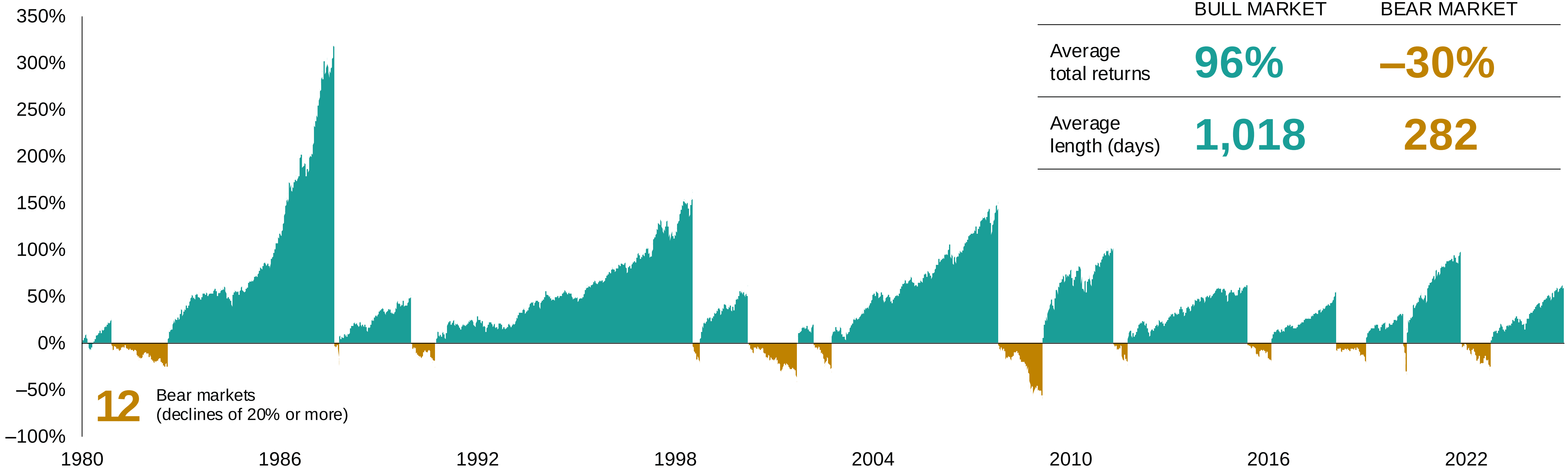
Sources: Vanguard calculations as of December 31, 2024, using the MSCI World Index from January 1, 1972, through December 31, 1987, and the MSCI ACWI thereafter.
Note: Although the downturns that began in August 1987 (related to Black Monday) and February 2020 (related to the start of the COVID-19 pandemic) don't meet a widely accepted definition of a bear market because they lasted less than two months, we are counting them as bear markets and including them in our analysis because of their historic nature.

Bear markets are challenging, but bull markets have been longer and stronger

Global stock prices (January 1, 1980, through December 31, 2024)



	BULL MARKET	BEAR MARKET
Average total returns	96%	–30%
Average length (days)	1,018	282

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Sources: Vanguard calculations as of December 31, 2024, using the MSCI World Index from January 1, 1980, through December 31, 1987, and the MSCI ACWI thereafter. Indexed to 100 as of December 31, 1979.
Note: Although the downturns that began in August 1987 (related to Black Monday) and February 2020 (related to the start of the COVID-19 pandemic) don't meet a widely accepted definition of a bear market because they lasted less than two months, we are counting them as bear markets and including them in our analysis because of their historic nature.

Timing the market is futile: The best and worst trading days happen close together

S&P 500 Price Index daily returns (January 1, 1980, through December 31, 2024)

Sources: Vanguard calculations as of December 31, 2024, based on data from Refinitiv using the Standard & Poor's 500 Price Index.

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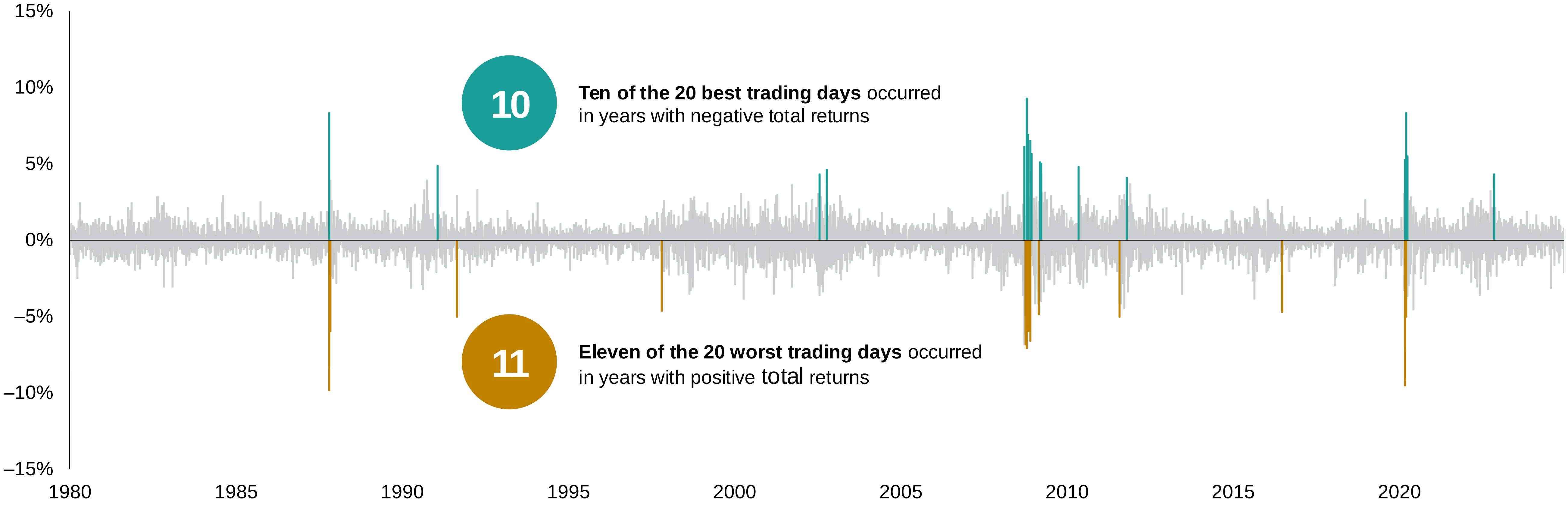
Timing the market is futile:
The best and worst trading days happen close together

MSCI World Price Index daily returns (January 1, 1980, through December 31, 2024)



Sources: Vanguard calculations as of December 31, 2024, based on data from Refinitiv using the MSCI World Price Index.

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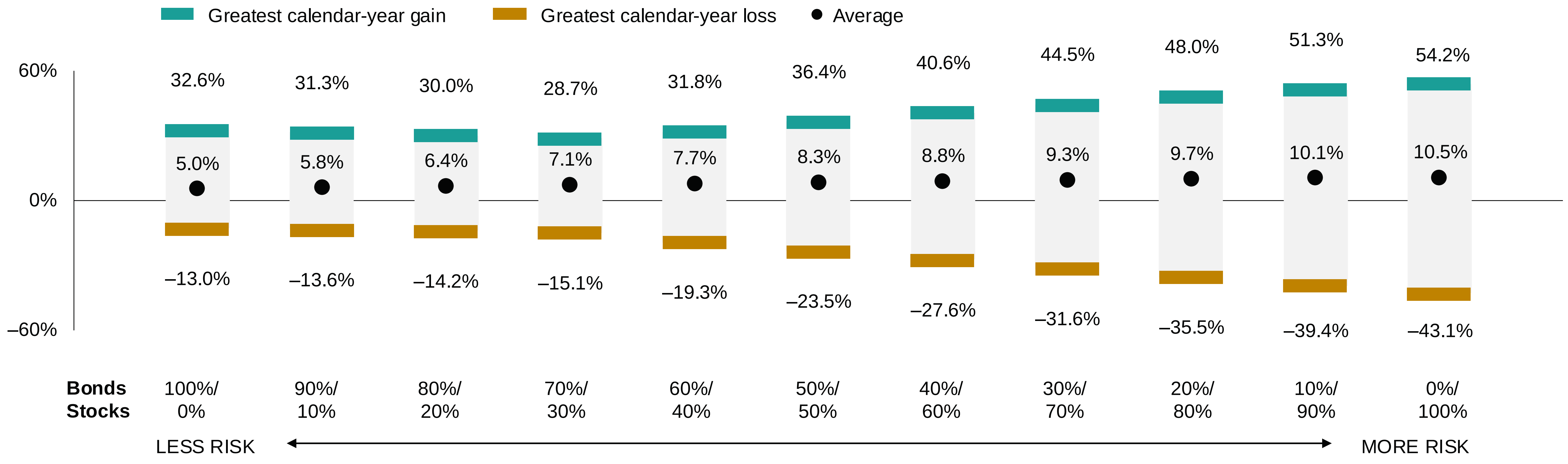
Expected long-term returns increase with higher equity allocation, but investors bear greater risk

Range of calendar-year returns (1926 through 2024)



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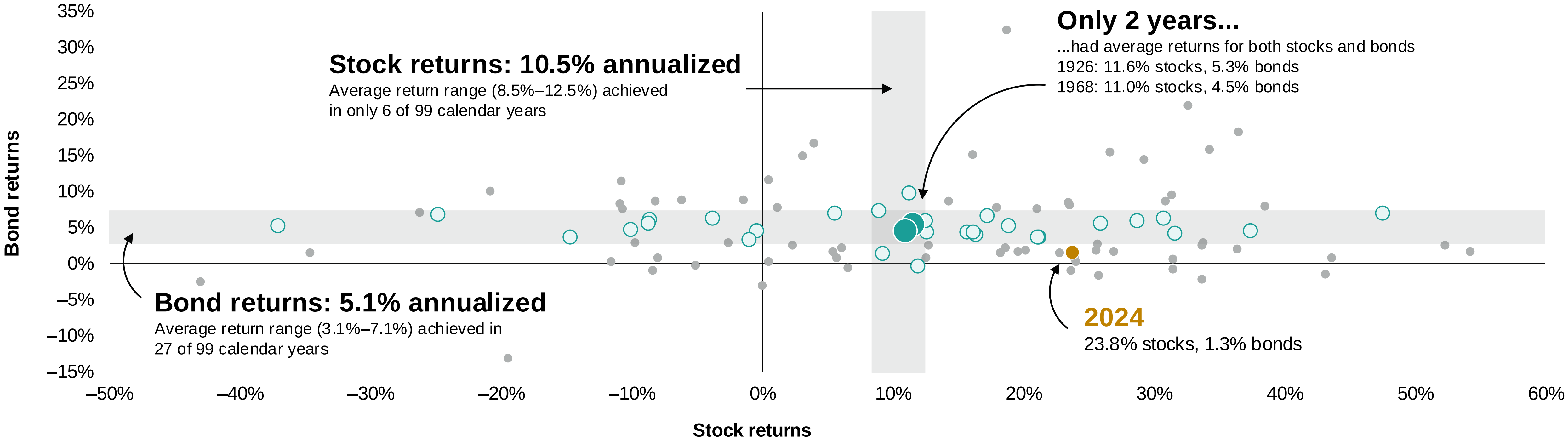
Sources: Vanguard calculations as of December 31, 2024, using data from Refinitiv.
Notes: Stocks are represented by the Standard & Poor's 90 Index from 1926 through March 3, 1957, the S&P 500 Index from March 4, 1957, through 1974, the Wilshire 5000 Index from 1975 through April 22, 2005, the MSCI US Broad Market Index from April 23, 2005, through June 2, 2013, and the CRSP US Total Market Index thereafter. Bonds are represented by the S&P High Grade Corporate Index from 1926 through 1968, the Citigroup High Grade Index from 1969 through 1972, the Lehman Brothers U.S. Long Credit AA Index from 1973 through 1975, the Bloomberg U.S. Aggregate Bond Index from 1976 through 2009, and the Bloomberg U.S. Aggregate Float Adjusted Bond Index thereafter.

Manage your expectations: In the short term, an investor's experience is anything but the historical average

Annualized stock and bond returns (1926 through 2024)



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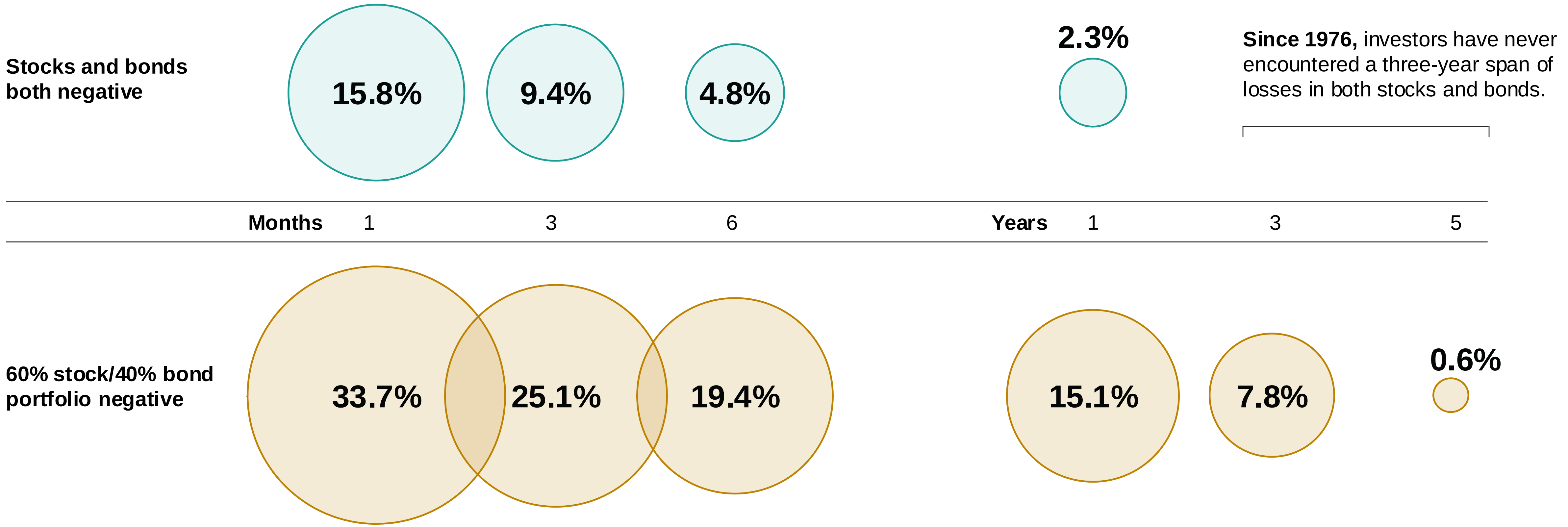
Notes: Each circle represents a calendar year from 1926 through 2024 (98 points = 98 years), plotted at the intersection of that year's stock return and bond return. The vertical shaded area contains all years whose stock return was between 8% and 12%. The horizontal shaded area contains all years whose bond return was between 3% and 7%. The two solid circles within the combined shaded area represent the two years both stock and bond returns fell into an average range. Stock returns are represented by the Standard & Poor's 90 Index from 1926 through March 3, 1957, the S&P 500 Index from March 4, 1957, through 1974, the Wilshire 5000 Index from 1975 through April 22, 2005, the MSCI US Broad Market Index from April 23, 2005, through June 2, 2013, and the CRSP US Total Market Index thereafter. Bond returns are represented by the S&P High Grade Corporate Index from 1926 through 1968, the Citigroup High Grade Index from 1969 through 1972, the Lehman Brothers U.S. Long Credit AA Index from 1973 through 1975, the Bloomberg U.S. Aggregate Bond Index from 1976 through 2009, and the Bloomberg U.S. Aggregate Float Adjusted Bond Index thereafter.

Historically, diversified portfolios have recovered within a few months

Percentage of time periods with negative total returns for the Standard & Poor's 500 Index



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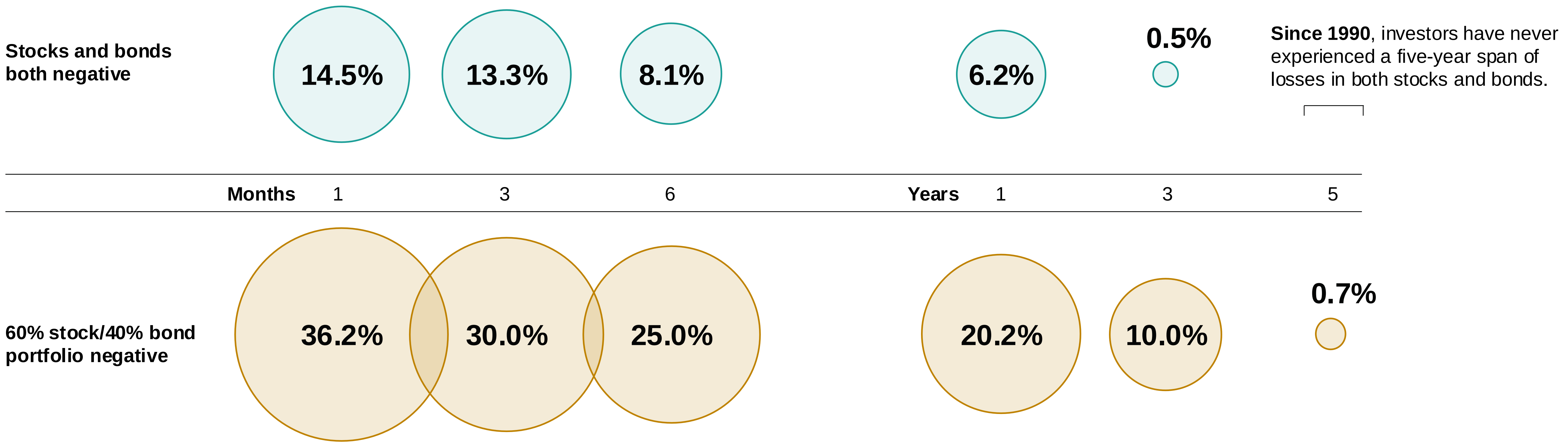
Source: Vanguard, as of December 31, 2024.

Notes: Data reflect rolling total returns for the periods shown and are based on underlying monthly total returns for the period from February 1976 through December 2024. The Standard & Poor's 500 Index and the Bloomberg U.S. Aggregate Bond Index were used as proxies for stocks and bonds, respectively.

Historically, diversified portfolios have recovered within a few months

Percentage of time periods with negative total returns for the MSCI World Price Index



Notes: Data reflect rolling total returns for the periods shown and are based on underlying monthly total returns for the period from January 1990 through December 2024. The MSCI ACWI and Bloomberg Global Aggregate Total Return Index Unhedged were used as proxies for stocks and bonds, respectively.

Source: Vanguard, as of December 31, 2024.

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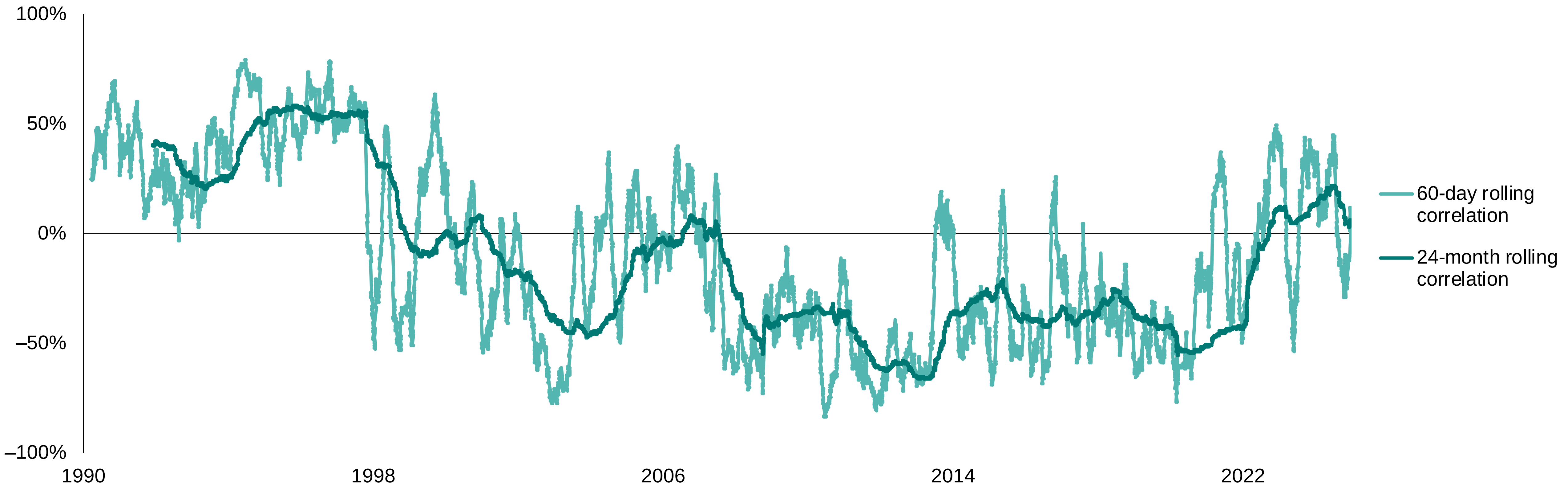
Short-term trends can vary, but over the long term, stock/bond correlations have tended to be negative



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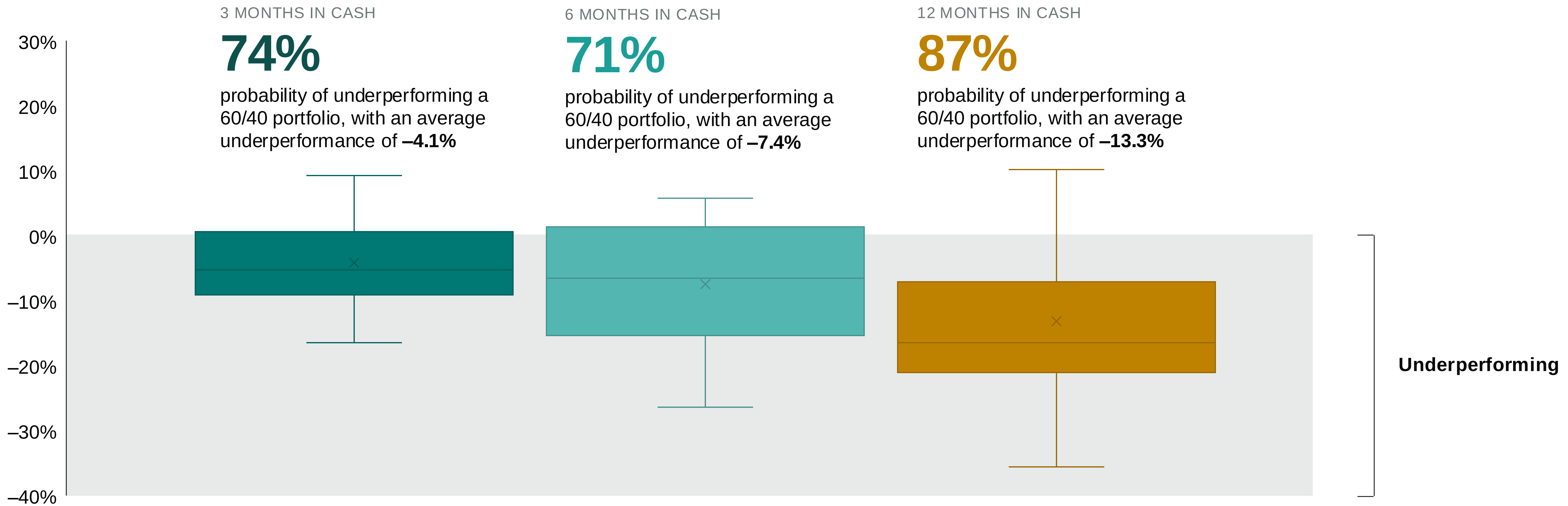
Sources: Vanguard, based on data from FactSet from January 1, 1990, through December 31, 2024, using the Standard & Poor's 500 Total Return Index and the S&P U.S. Treasury Bond Current 10-year Index as proxies for stocks and bonds. Data appear on the chart only at the start of 1992 to reflect the end of the first 24-month rolling correlation.

Notes: Long-term stock/bond correlations were largely positive during much of the 1990s but have mostly been negative since about 2000. It is not uncommon for the correlation to turn positive over the shorter term, but this has not altered the longer-term negative relationship.

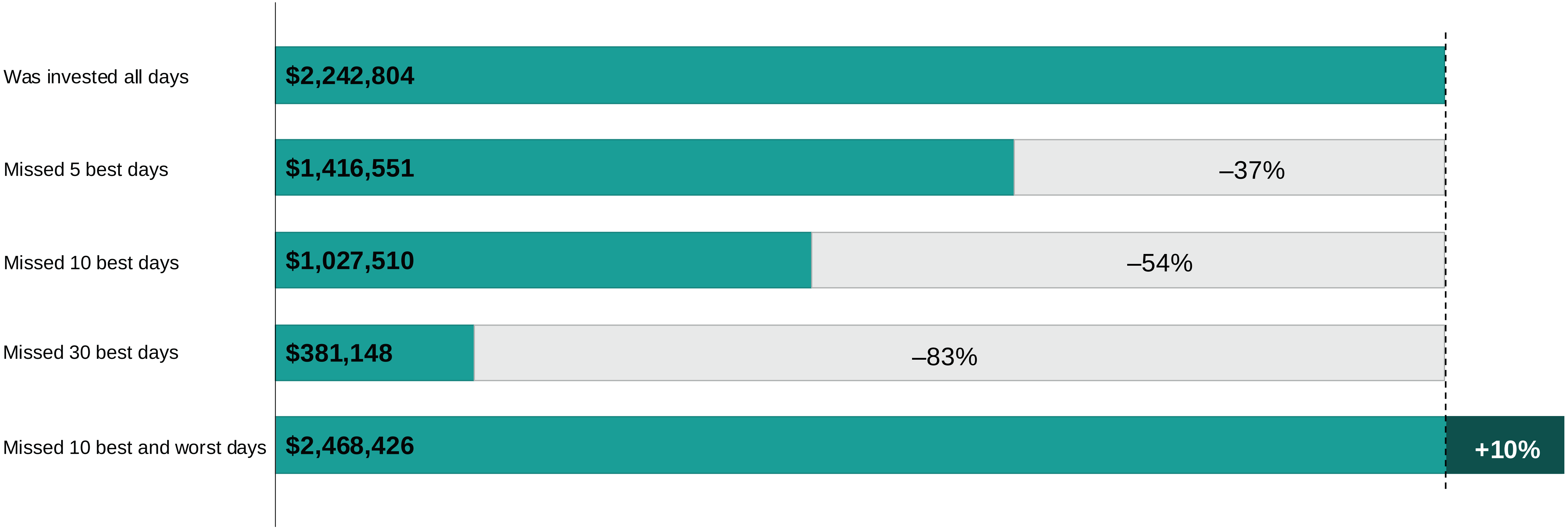
Moving to cash in a panic rarely pays off



Source: Vanguard total return calculations, as of December 31, 2024.
Notes: Equities in the 60% equity/40% fixed income portfolio are represented by the Russell 3000 Index and fixed income is represented by the Bloomberg U.S. Aggregate Bond Index. Cash is represented by the FTSE 3-Month Treasury Bill Index. Monthly data are from January 1980 through December 2024. Equity losses of more than 10% over three months trigger the move from a 60/40 portfolio to all cash in the illustration.

Hypothetical growth of $100k

Standard & Poor's 500 Total Return Index (December 1994–December 2024, 30 years) assuming one…



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Sources: Vanguard calculations as of December 31, 2024, using Bloomberg data.

Notes: Data reflect annualized total return calculations of the S&P 500 Total Return Index using daily return data. Annualized calculations excluding best and/or worst days are adjusted and calculated based on days in the market, not the entire 30-year period.

Important information

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Investments in bond funds are subject to the risk that an issuer will fail to make payments on time and that bond prices will decline because of rising interest rates or negative perceptions of an issuer's ability to make payments.

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