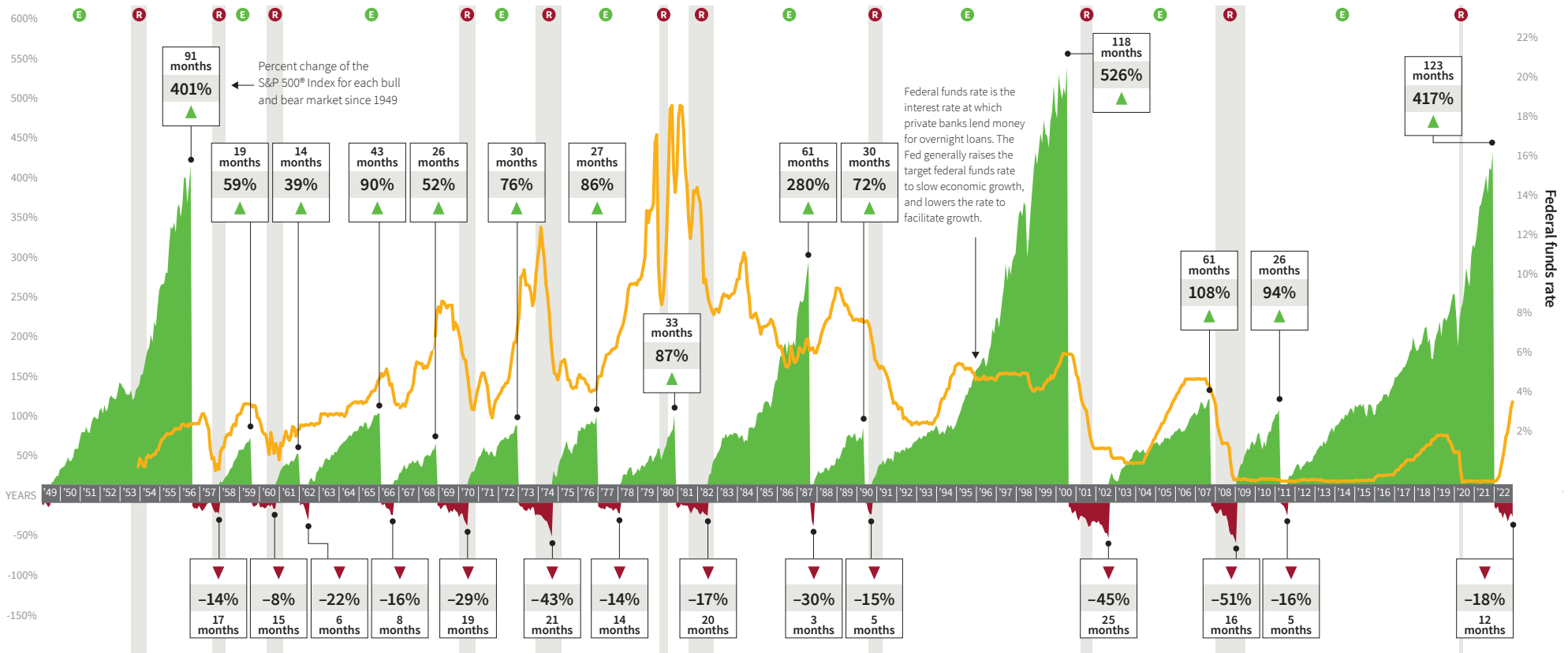


Bull markets versus bear markets

To pursue the greater return potential of stocks, it makes more sense to stay committed to an investment plan rather than try to guess the best time to be in the market. Over the past 74 years, bull markets have lasted longer (50 months on average) than bear markets (13 months on average) and have more than made up for the periodic market declines. Bull markets have begun during economic recessions and expansions and at all levels of rates. And while it is impossible to predict when a bull market will begin, it is possible to miss one by waiting on the sidelines.

- ▲ Bull market
- ▼ Bear market
- E Expansion
- R Recession
- ~ Federal funds rate



Sources: S&P 500®, Putnam Investments. Data is as of 12/31/22, is historical, and reflects reinvested dividends. Past performance and market conditions do not guarantee future results and may not be duplicated. The S&P 500® Index is an unmanaged index of common stock performance. It is not possible to invest directly in an index. Federal funds rate data was not available before July 1954. A bull market is here defined as a period when the stock market rises for at least four straight months. A bear market is defined as a market decline of at least four months (except for the 2022 bear market, when the market declined in eight of 12 months but not in four consecutive months).

Not FDIC insured | May lose value | No bank guarantee

The stock market can provide long-term returns

The market has always recovered

Over the past 74 years, there have been 14 bear markets, lasting an average of 13 months, with declines averaging 25.3% before markets recovered. By contrast, the 14 bull markets since 1949 have been longer and have had disproportionate gains, lasting an average of 50 months and gaining an average of 136.0%.

Investors who stay the course can benefit

Although selling may feel better in times of market turbulence, the fact is that market gains have more than made up for losses for those investors who stay invested over time. A \$10,000 investment in the S&P 500® Index in 2002 would have grown to \$64,844 by December 31, 2022, despite the 51% downturn of 2008–2009. Please keep in mind that returns for other periods may have been less favorable and that other market segments may not have recovered from this downturn.

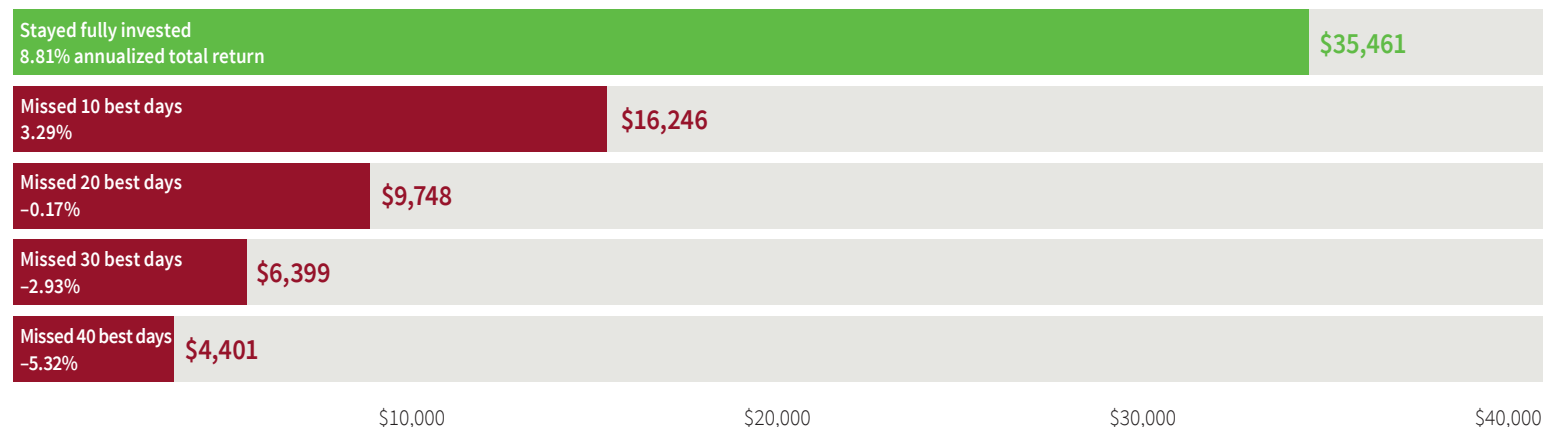
Bull markets versus bear markets

12/31/48–12/31/22

	Bull	Bear
Occurrences	14	14
% of time in economic recessions	49%	51%
% of time in economic expansions	84%	16%
Average length (months)	50	13
Average annual return	22.8%	-23.1%
Average cumulative return	136.0%	-25.3%

Source: Putnam research. Data illustrated using S&P 500® Index.

\$10,000 invested in the S&P 500® (12/31/07–12/31/22)



By staying fully invested over the past 15 years, you would have earned \$19,215 more than someone who missed the market's 10 best days.

Data is historical. Past performance is not a guarantee of future results. The best time to invest assumes shares are bought when market prices are low.

All funds involve risk, including the loss of principal.

For informational purposes only. Not an investment recommendation.

Investors should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing. For a prospectus, or a summary prospectus if available, containing this and other information for any Putnam fund or product, call your financial representative or call Putnam at 1-800-225-1581. Please read the prospectus carefully before investing.