Markets and Recessions

Trending Conversations

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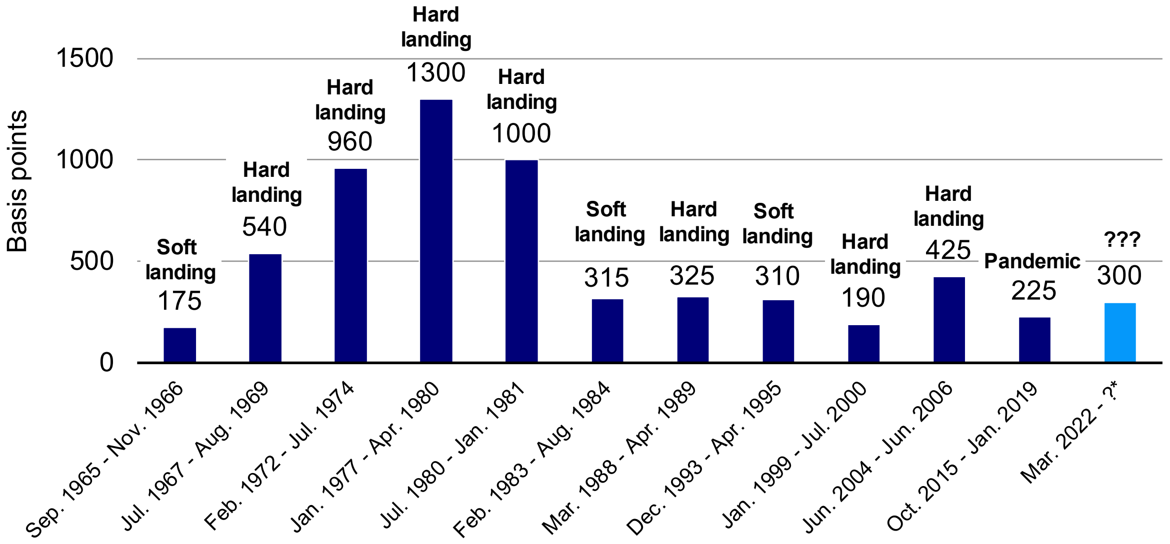
1. Does monetary policy tightening suggest that a US recession is in the offing?

It's said that market and business cycles don't die of old age, they tend to be ended by the US Federal Reserve (Fed) hiking interest rates. Of the past 11 Fed tightening cycles, seven ended in "hard landings." In other words, the economy tipped into an official recession. In three instances, including 1983-1984 and 1994-1995, the Fed was able to manage a soft landing for the economy. Currently, there is still a path to a soft landing, but the risks to the cycle are elevated.

How much does it matter for investors whether a recession emerges? In the following pages, we assess market performance before, during, and after US recessions and attempt to quantify what the market has already priced.

US monetary policy tightening: Fed Funds Rate



Source: US Federal Reserve, National Bureau of Economic Research, 6/22. A basis point is one hundredth of a percentage point. *Based on Fed Funds Implied Futures (as of 6/23/22) from the start of policy tightening in March 2022 through February 2023. Fed funds futures are financial contracts that represent the market's opinion of where the federal funds rate will be at a specified point in the future. The federal funds rate is the rate at which banks lend balances to each other overnight.

2. Do all bear markets end in recessions?

The economist Paul Samuelson famously quipped that the stock market had predicted nine of the past five recessions. Nonetheless, official bear markets (20% or greater decline) have been generally more predictive of the economy than Samuelson's quote would suggest. For example, bear markets have been associated with seven of the past eleven US recessions.

Recently, stock markets have been rattled with the S&P 500 Index officially in bear market territory and the NASDAQ Composite Index down by over 30% this year alone.

S&P 500 Index bear markets

Month of peak	Month of low	Length (months)	Recession?	S&P 500 Index % decline
Dec. 1961	Jun. 1962	6	No	-28%
Feb. 1966	Oct. 1966	8	No	-22%
Dec. 1968	May 1970	17	Yes	-36%
Jan. 1973	Oct. 1974	21	Yes	-48%
Nov. 1980	Aug. 1982	21	Yes	-27%
Aug. 1987	Dec. 1987	4	No	-34%
Jul. 1990	Oct. 1990	3	Yes	-20%
Mar. 2000	Oct. 2002	31	Yes	-49%
Oct. 2007	Mar. 2009	17	Yes	-56%
Sep. 2018	Dec. 2018	3	No	-20%
Feb. 2020	Mar. 2020	1	Yes	-34%

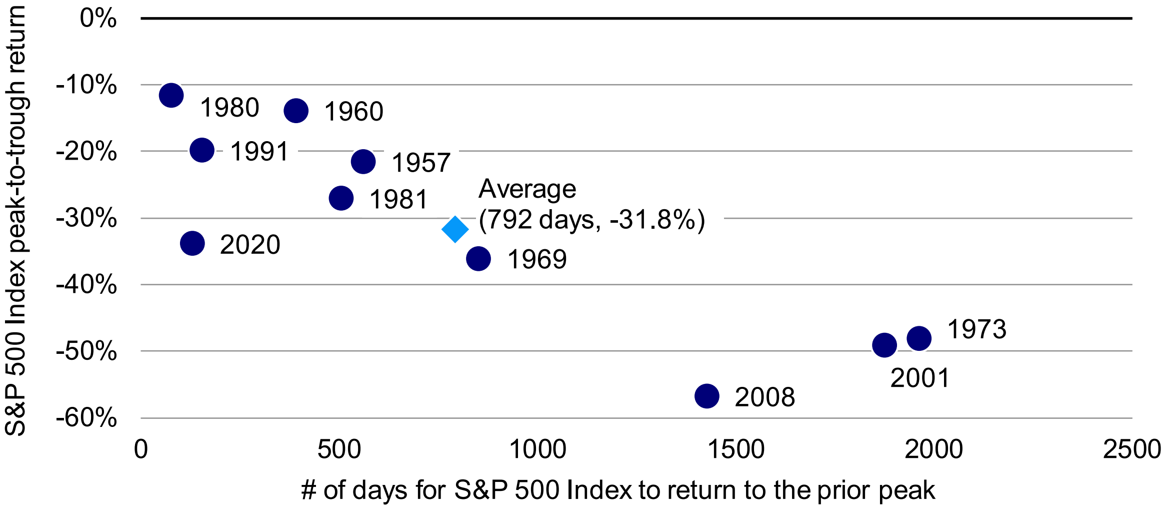
Source: Bloomberg, 6/23/22. Based on recession dates defined by the National Bureau of Economic Research: Apr. 1960 – Feb. 1961, Dec. 1969 – Nov. 1970, Nov. 1973 – Mar. 1975, Jan. 1980 – Jul. 1980, Jul. 1981 – Nov. 1982, Jul. 1990 – Mar. 1991, Mar. 2001 – Nov. 2001, Dec. 2007 – Jun. 2009 and Feb. 2020 – Apr. 2020. The S&P 500 Index is a market-capitalization-weighted index of the 500 largest domestic US stocks. The NASDAQ Composite Index is a broad-based capitalization-weighted index of stocks in all three NASDAQ tiers: Global Select, Global Market and Capital Market. Indices cannot be purchased directly by investors. **Past performance does not guarantee future results.**

3. What are the peak US market declines associated with recessions, and how long has it taken for the market to recover?

It depends on the severity of the recession. Markets in more mild recessions, such as 1960 and 1991, experienced more modest drawdowns and recovered relatively quickly. More severe recessions, such as 1973 and 2008, experienced significant downturns and took years to recover.

The average peak-to-trough decline associated with each of these recessions is 31.8%, and the time to recovery is 792 days (3.1 years based on 252 trading days per year).

S&P 500 Index performance associated with recessions: Peak-to-trough decline and days to recovery



Source: Bloomberg, 6/23/22. Based on recession dates defined by the National Bureau of Economic Research: Aug. 1957 – Apr. 1958, Apr. 1960 – Feb. 1961, Dec. 1969 – Nov. 1970, Nov. 1973 – Mar. 1975, Jan. 1980 – Jul. 1980, Jul. 1981 – Nov. 1982, Jul. 1990 – Mar. 1991, Mar. 2001 – Nov. 2001, Dec. 2007 – Jun. 2009 and Feb. 2020 – Apr. 2020. The S&P 500 Index is a market-capitalization-weighted index of the 500 largest domestic US stocks. Indices cannot be purchased directly by investors. **Past performance does not guarantee future results.**

4. How have US markets performed before, during, and after recessions?

Markets, on average, have performed the worst in the months leading up to recessions.

Interestingly, markets don't always decline in recessions. The average decline for the S&P 500 during the past nine recessions is 1%. However, as the table shows, the index was positive during four of the past 10 recessions, including the double-dip recessions of the early 1980s in which Paul Volcker and the Fed were breaking inflation through sharply rising interest rates. Markets performed poorly during the recessions of 1973 and 2008.

The market tended to perform well in the subsequent, 6, 12, and 24 months. The average return for stocks in the year following a recession was 16%, with markets positive 90% of the time.

S&P 500 Index returns: Before, during, and after recessions

Recession Start	Length (Years)	12M Before	6M Before	During Recession	6M After	12M After	2Y After
08-31-1957	0.67	-5%	5%	-4%	18%	33%	25%
04-30-1960	0.83	-6%		17%	7%	10%	1%
12-31-1969	0.92	-11%	-6%	-5%	14%	8%	34%
11-30-1973	1.33	-18%	-9%	-13%	1%	23%	18%
01-31-1980	0.50	14%	10%	7%	6%	8%	-12%
07-31-1981	1.33	8%	1%	6%	-19%	20%	18%
07-31-1990	0.67	3%	8%	5%	3%	8%	20%
03-31-2001	0.67	-23%	-19%	-2%	-6%	-18%	-7%
12-31-2007	1.50	4%	-2%	-37%	21%	12%	44%
02-29-2020	0.17	6%	1%	-1%	12%	44%	?
Average Return		**-3%**	**-2%**	**-1%**	**7%**	**16%**	**20%**
% Positive Return Periods		**45%**	**45%**	**45%**	**82%**	**91%**	**82%**

Source: Bloomberg, 6/23/22. Based on recession dates defined by the National Bureau of Economic Research: Aug. 1957 – Apr. 1958, Apr. 1960 – Feb. 1961, Dec. 1969 – Nov. 1970, Nov. 1973 – Mar. 1975, Jan. 1980 – Jul. 1980, Jul. 1981 – Nov. 1982, Jul. 1990 – Mar. 1991, Mar. 2001 – Nov. 2001, Dec. 2007 – Jun. 2009 and Feb. 2020 – Apr. 2020. The S&P 500 Index is a market-capitalization-weighted index of the 500 largest domestic US stocks. Indices cannot be purchased directly by investors. **Past performance does not guarantee future results.**

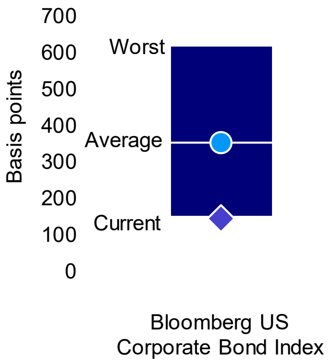
5. Have the US markets priced in a recession?

It's a mixed picture. The equity market appears to be further along in pricing in a potential recession than the credit market. In the charts to the right, the size of the boxes represents the best and worst outcomes for each of the recessions analyzed.

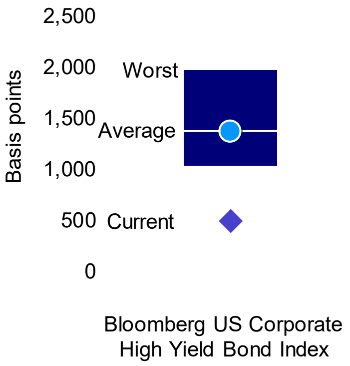
- Investment grade credit: Spreads have currently widened by 143 basis points, in line with that associated with the 1991 recession. However, spreads remain well below the average associated with a recession.
- High yield credit: Spreads have widened modestly, but well below that experienced in other recessions. High yield bonds do not appear to have priced in the potential risk of a recession.
- Equities: Peak-to-trough declines have ranged from 11.7% (1980 recession) to 56.8% (2008 recession) with an average decline of 31.8% over the past 10 recessions. As of mid-June 2022, the S&P 500 Index is down 24% from its peak, or 77% of the average decline associated with recessions.

Bloomberg US Corporate Bond Index and Bloomberg US Corporate High Yield Bond Index spread widening during recessions (best/worst/average outcome vs. current)

Investment grade credit spreads
(1988 – 2021)

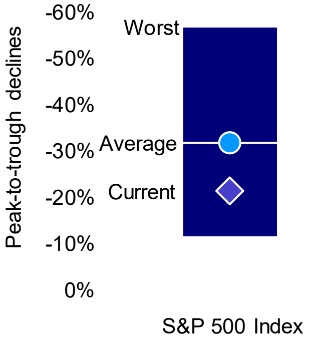


High yield credit spreads
(1993 – 2021)



S&P 500 Index performance during recessions (best/worst/average outcome vs. current)

Equities
(1957 – 2021)



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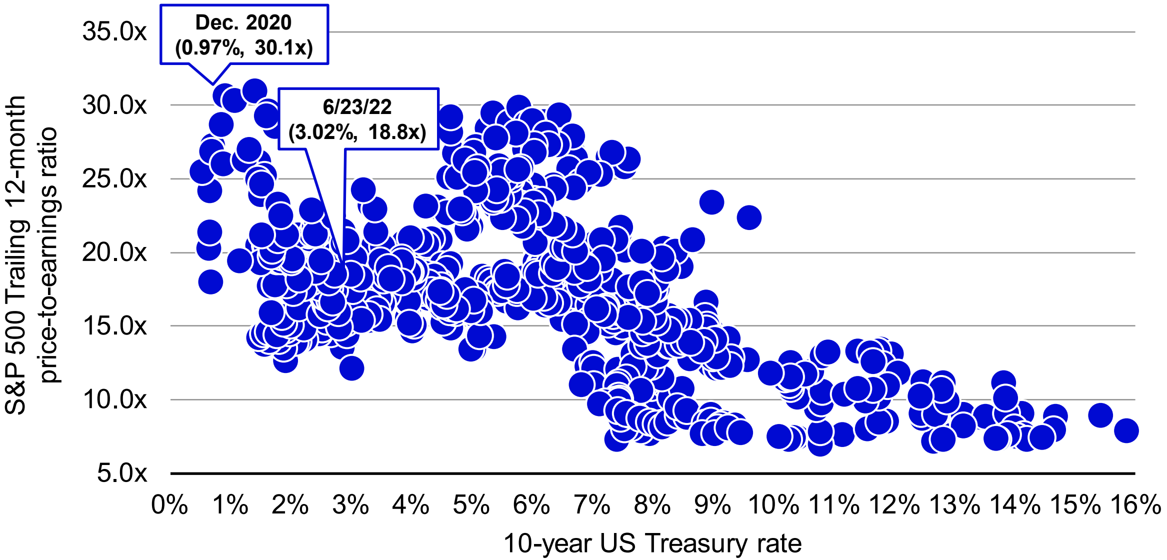
6. Have US equity valuations adjusted by enough?

US equity valuations, as measured by the price-to-earnings ratio of the S&P 500 Index, have declined considerably as interest rates have risen.

As the US economy slows, it is a reasonable assumption that long-term Treasury rates will stabilize and may even decline. This suggests that much of the valuation adjustment may have already occurred and valuations are in line with where they bottomed in the past three recessions.

However, if there were to be a recession, then the market may have more room to go to assess the potential hit to earnings (see the next page).

S&P 500 Index price-to-earnings ratio and 10-year US Treasury rate (1961 to June 2022)



Source: Bloomberg, 6/23/22. The S&P 500 Index is a market-capitalization-weighted index of the 500 largest domestic US stocks. Indices cannot be purchased directly by investors. **Past performance does not guarantee future results.** A price-to-earnings ratio calculates the current market price of the companies shares divided by the earnings per share of the companies.

7. What's a reasonable estimate for the S&P 500 Index if the economy goes into a recession?

As of late June, the S&P 500 Index is trading close to 3800, or roughly at a 19x multiple on $200 earnings per share. Based on the current earnings power of US businesses, it is estimated that earnings will climb to roughly $220-$230 per share. That may be a reasonable estimate of peak earnings, if the economy were to head into a recession.

In the past three recessions (excluding 2008) earnings fell by 26% peak to trough. In the recessions of 2001, 2008, and 2020, valuations bottomed at an average of 18.5x. Per that simple math, 3,000 could be a potentially reasonable price target for the S&P 500 if a recession were to occur. That would be in line with the average 31% peak-to-trough decline associated with the past ten recessions.*

Again, a recession is not a foregone conclusion, and this analysis should be viewed as a "back of the envelope" estimate of a potential bad-case outcome.

S&P 500 Index potential earnings per share 2023

	Recession earnings		Current earnings	Peak earnings?			
Price-to-earnings ratio	160	180	200	220	240	260	280
21x	3,360	3,780	4,200	4,620	5,040	5,460	5,880
20x	3,200	3,600	4,000	4,400	4,800	5,200	5,600
19x	3,040	3,420	3,800	4,180	4,560	4,940	5,320
18x	2,880	3,240	3,600	3,960	4,320	4,680	5,040
17x	2,720	3,060	3,400	3,740	4,080	4,420	4,760
16x	2,560	2,880	3,200	3,520	3,840	4,160	4,480

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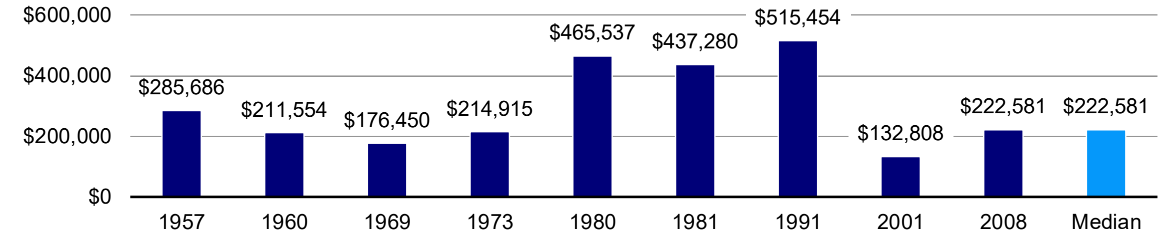
8. What were the longer-term returns for investors who invested at the beginning of recessions?

Investing at the start of recessions may not be ideal, but it hasn't been a detriment over the long term, either. In every instance, the investor would have had more money within 10 years than when they started.

The median amount of a $100,000 investment over 20 years when invested at the start of each recession is $676,256. The average is over $900,000.

S&P 500 Index Growth of $100,000: Ten Years from the Start of the Recession



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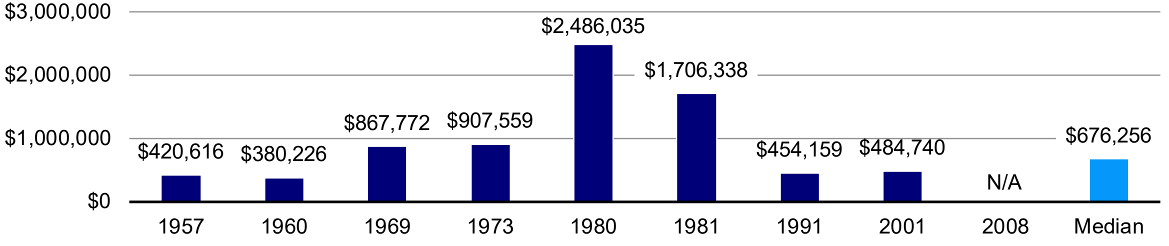

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- Fixed-income investments are subject to credit risk of the issuer and the effects of changing interest rates. Interest rate risk refers to the risk that bond prices generally fall as interest rates rise and vice versa. An issuer may be unable to meet interest and/or principal payments, thereby causing its instruments to decrease in value and lowering the issuer's credit rating.

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