

Fixed Income Investing in US Recessions

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In brief

- Fixed income has outperformed both cash and equities during recessions in the US since 1972.
- Interest rates tend to begin to decline three months ahead of recessions and reach a cycle low about five months into recessions.
- During economic downturns, fixed income has been shown to provide diversification benefits and reduce the volatility of portfolios that include risk assets such as equities.

Since the beginning of 2022, much of the investment universe has been upended as central banks around the world have worked to rein in multi-decade high inflation by raising interest rates and through a reversal of quantitative easing. The magnitude of financial tightening in this cycle — the US Federal Reserve’s policy rate has risen from 0.25% to 5.50% — has historically coincided with US economic recessions. While there is still debate over whether a recession is approaching, investors might want to consider how fixed income has performed during economic downturns in the past. In fact, according to our historical analysis, it has outperformed and significantly reduced portfolio volatility during periods of stress.

Defining Recessions

There have been eight recessions (as defined by the National Bureau of Economic Research) in the United States since 1969. We put them into two categories: mild and severe. Severe recessions have three qualities:

- Year-on-year GDP declines greater than 2%
- A 3% increase in the unemployment rate
- A decline in the output gap that exceeds 4%

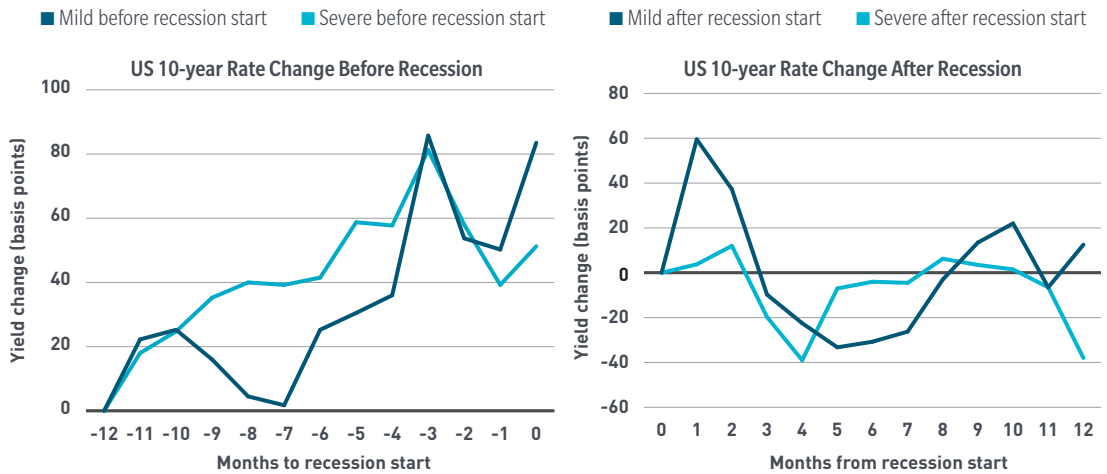
Recession Classifications	
Severe	Mild
1973–1975	1969–1970
1981–1982	1980–1980
2007–2009	1990–1991
2020–2020	2001–2001

Recessions that do not have these characteristics fall into the mild recession category. Since 1969 there have been four severe and four mild recessions. Many began at the end of monetary tightening cycles initiated by the Fed, which, along with other central banks, tends to engage in countercyclical monetary policy, trying to tighten financial conditions when the economy is running too hot or heat up the economy when it has cooled down too much. For fixed income and rate-sensitive products, that generally means an increase in rates during the tightening cycle leading into recession and then a decline in rates as the Fed cuts its policy rate to stimulate economic activity.

Rate movements before and after recessions

Exhibit 1 traces the average path of US 10-year Treasury rates 12 months before and 12 months into both mild and severe recessions.

Exhibit 1: Average US 10-year rate changes 12 months before and after recession



Source: Bloomberg, NBER, Federal Reserve Bank of St. Louis. Monthly data from 31 December 1968 through 28 February 2021. Mild recessions = 1969, 1980, 1990, 2000. Severe Recessions = 1973, 1981, 2007, 2020. Yields changes indexed to 0 at start of analysis.

We find that rates tend to take a similar path during mild and severe recessions, rising leading into recession and falling as the recession lands. Rates tend to peak three months before the recession before declining, bottoming four to five months into the recession on average. For severe recessions, rates decline nearly 70 basis points on average, somewhere between three months prerecession and four months into recession. In mild recessions, rates tend to rise longer, typically peaking in the first month, and declining through the fifth and sixth. In mild recessions, on average, rates decline 93 bps through the first and fifth months of recession. Not including the 1980 recession, during which rates fell precipitously from a high base, mild recessions decline an average of only 55 bps.

Treasury performance through recessions

While recessions are challenging for investors, declining interest rates can be beneficial to the fixed income segment of a diversified investor’s portfolio. Looking at three- and six-month returns for US Treasury bonds, we have found the low point in performance occurs roughly three months prior to recessions while peaks in Treasury bond performance occur roughly five months into them.

Exhibit 2: Average US Treasury returns during recession

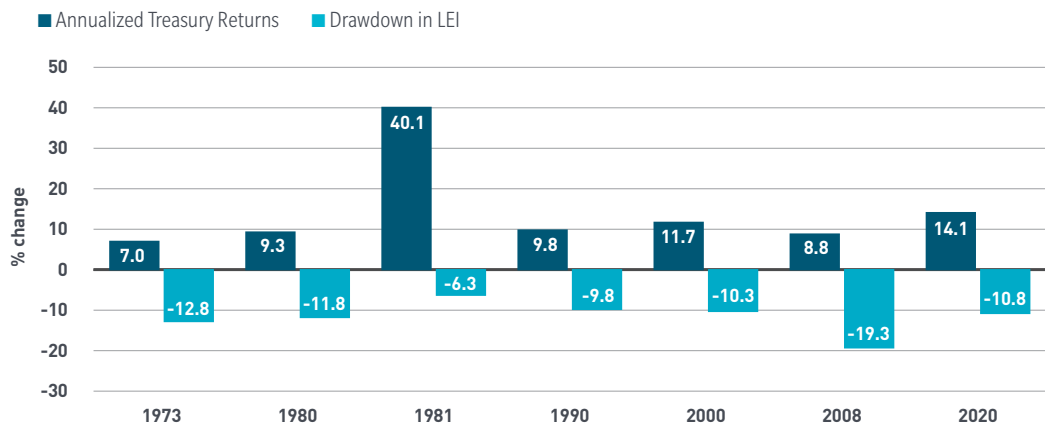
US Treasury Index	3-Month Return	6-Month Return
6m Prior	2.09%	2.92%
3m Prior	0.22%	2.29%
Recession Start	3.34%	3.58%
3m Into	3.34%	3.58%
4m Into	0.44%	2.76%
5m Into	6.12%	7.15%
6m Into	2.81%	5.96%
Recession End	3.34%	7.31%
6m Out of Recession	1.15%	1.94%

Source: Bloomberg. Monthly data from 31 January 1973 through 31 October 2020. US Treasury = Bloomberg US Treasury Index. Returns are gross and in USD. Past performance is no guarantee of future results.

While the returns shown above illustrate how fixed income performance picks up during a recession, this analysis is done with the benefit of hindsight, because we know the start and end dates of the recessions we look at. To predict the timing of a future recession, investors need to look for signals.

One useful signal is the Conference Board’s US Leading Indicator Index (LEI) which aggregates several economic indicators that tend to lead the business cycle. Since 1973, the LEI has fallen below zero on ten occasions, seven of which led to recession. The three false signals were characterized by a single monthly reading below zero before the index rebounded. Therefore, any sustained drop below zero is a strong indication that a recession may be on the horizon. Of the seven readings that foretold a recession, on average the LEI index began to roll over six months prior to the recession and bottomed roughly 14 months into it. This time horizon overlaps closely with the peak and subsequent decline observed in interest rates. Exhibit 3 shows the annualized performance of the US Treasury index beginning when the LEI first went negative and ending at its recessionary trough. On average, Treasuries have returned 14.4% during these LEI drawdowns. This suggests that when paired with risk assets like equities, which tend to have less favorable performance during recessionary periods, fixed income can help manage downside risk during downturns.

Exhibit 3: US Treasury returns during LEI drawdowns



Source: Bloomberg, Conference Board. Monthly data from 31 January 1973 through 30 April 2020. Treasury = Bloomberg US Treasury Index. Returns are gross and in USD. Drawdown = lowest YoY change in the LEI during the periods noted. Past performance is no guarantee of future results.

Relative performance against other asset classes

It is instructive to compare fixed income to other asset classes from a strategic asset allocation perspective, *i.e.*, how it can be utilized most effectively in a portfolio.

Recent central bank rate increases have made cash an attractive investment for the first time in many years, and fixed income typically underperforms cash during rate hiking cycles, as shown in Exhibit 4. However, based on historical analysis, once central banks hike for the final time in the cycle, to what is called the terminal policy rate, bonds are well positioned to benefit from subsequent rate cuts and have historically outperformed cash investments during and after terminal rate periods.

Exhibit 4: US Treasury yields performance versus cash

Asset Class Performance Surrounding Previous Terminal Rate Episodes		12M prior to Terminal	During Terminal*	12m Post Terminal
Terminal rate = June 2000 to December 2000	Cash	5.87	3.48	5.03
	US Treasury	4.58	6.42	8.13
Terminal rate = July 2006 to July 2007	Cash	4.35	5.52	4.64
	US Treasury	1.80	5.63	8.77
Terminal rate = January 2019 to July 2019	Cash	2.20	1.38	1.92
	US Treasury	2.84	3.36	7.55
Current Rate Hiking Cycle**	Cash	3.92	TBD	TBD
	US Treasury	-2.21	TBD	TBD

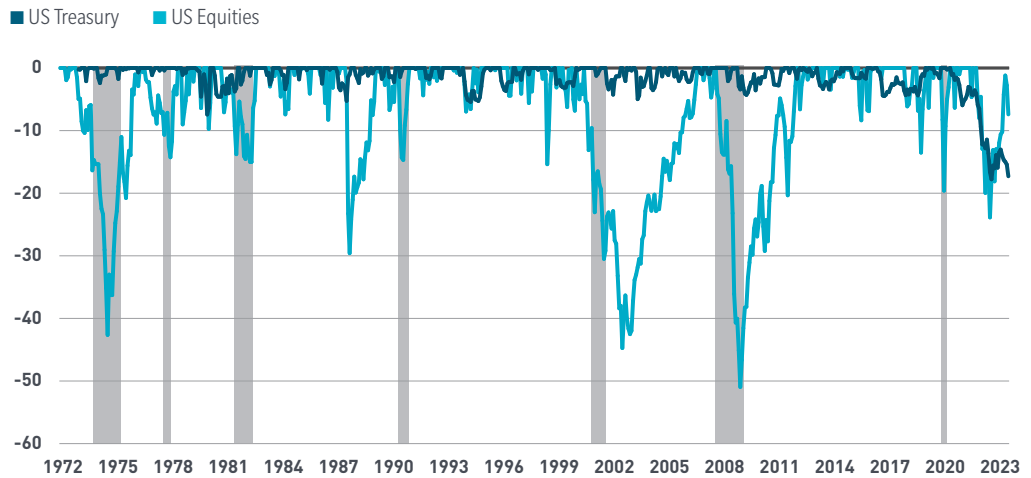
Sources: Bloomberg, Factset, ICE BofA, US Federal Reserve. Monthly data from 31 January 1988 through 31 August 2023. Intermediate Treasury yields = Bloomberg US Treasury Intermediate index. aCash = ICE BofA US Currency deposit offered rate constant maturity (3m) index. Returns shown are gross and in USD. Past performance is no guarantee of future results.

*During terminal uses annualized return figures due to varying lengths of terminal rates being reached and held.

**Current rate hiking cycle is as of 31 July 2023 showing trailing 12m performance during the recent cycle.

In contrast to fixed income, which receives a tailwind from central banks during declines in economic activity, equities have generally underperformed. Exhibit 5 compares Treasuries to US equities during recessionary periods since 1972. In each case, Treasury bonds have a lower drawdown and have recovered more quickly. Of the seven recessions shown, US Treasury bonds have an average recession maximum drawdown of 3.6%, with an average recovery period from the initial drawdown of ten months. This compares with an average equity maximum drawdown of 38.4% and a recovery time of 44 months, or a little over 3.5 years.

Exhibit 5: US Treasury and equity drawdowns

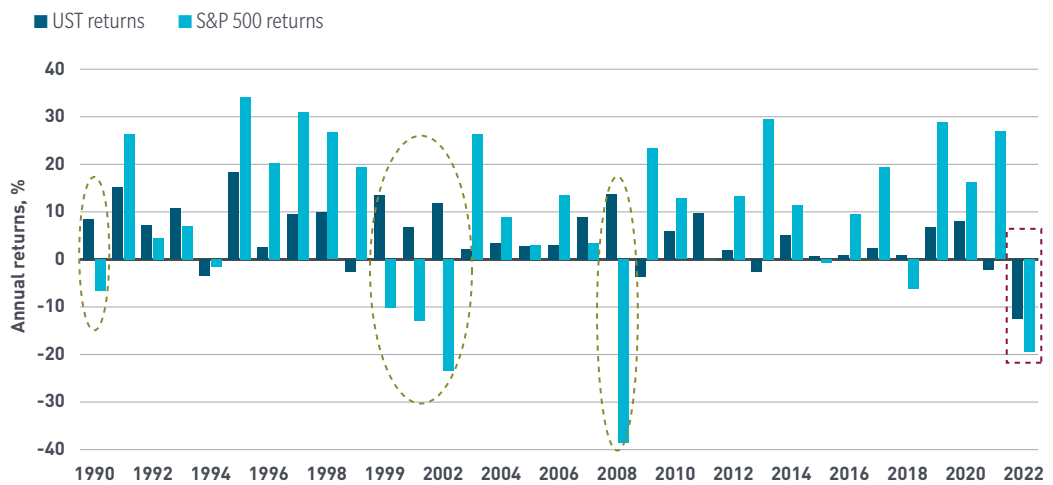


Source: FactSet. Monthly data from 31 October 1972 to 29 September 2023. US Equities = S&P 500 Index. US Treasury = Bloomberg US Treasury Index. Returns are gross and in USD. Past performance is no guarantee of future results.

Diversification benefits

While drawdowns have been milder and recoveries quicker for fixed income, government bonds have also provided positive returns during recessions. Exhibit 6 highlights the divergence in government bonds and equity returns during periods of market stress, further demonstrating the diversification benefits of fixed income, which can help manage downside risk.

Exhibit 6: US Treasury and equity annual returns

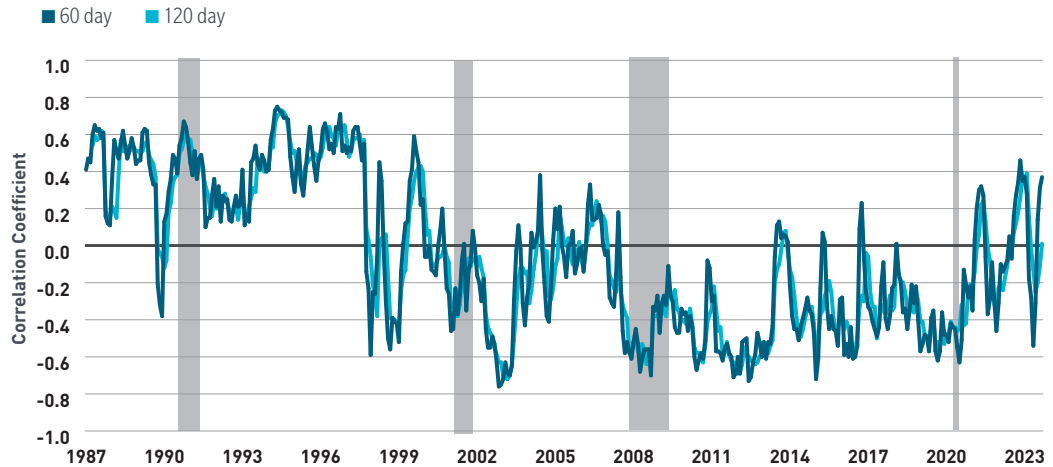


Source: Bloomberg. Annual data from 1990 to 2022. S&P 500 return = S&P 500 Total Return index. UST returns = Bloomberg US Treasury index. Returns are gross and in USD. Past performance is no guarantee of future results.

This relationship was tested in 2022, when the world economy was facing levels of inflation last seen in the 1980s, and mammoth monetary tightening was enacted in very short order in response to it (Exhibit 6).

Correlations between equity and fixed income can shift before and after a recession. As seen in Exhibit 7, the last four recessions have typically seen correlations between Treasuries and equities peak several months before the recession has begun and decline into and during the recession. Across all the recessions examined, we see tangible declines in correlation, with some of the severe recessionary episodes such as 2008 showing significant declines.

Exhibit 7: US Treasury rolling correlations to US equities



Difference in Correlation (Trough Level Minus Peak Level)	60 Day	120 Day	Time to Trough (Years)
4/26/1989–5/23/1991	-0.26	-0.18	2.08
9/28/2000–9/13/2001	-0.66	-0.18	0.96
10/18/2006–10/6/2008	-1.02	-0.84	1.97
11/29/2019–3/10/2020	-0.28	-0.09	0.28
Averages	-0.55	-0.32	1.32

Source: ICE BofA, Bloomberg. Correlation calculated using daily data and stepped monthly from 30 November 1986 to 29 September 2023. US Equities = S&P 500 Index. US Treasury = ICE BofA US Treasury and Agency index. Daily data used for table calculations over same period. Returns are gross and in USD.

The decline in correlation often benefits investors’ portfolios as a lower correlation has generally resulted in lower overall portfolio risk. For example, an investor with a portfolio of 60% stocks with a volatility of 20%, and 40% bonds with a volatility of 5%, would see their overall portfolio risk decline by 70 bps if the correlation declines by 0.35 points. This bolsters the case for fixed income given its excellent diversification and risk reduction benefits at the portfolio level.

Impact of fixed income in portfolios

How much fixed income is appropriate for a given portfolio? Every investor’s objective and risk tolerances differ; however, we believe greater allocations to fixed income going into a recession generally helps to manage downside risk throughout the recession relative to portfolios with a higher allocation to equities. Exhibit 8 compares the monthly drawdowns of three hypothetical portfolios, ranging from 20% fixed income to 60% fixed income.

Exhibit 8: Hypothetical portfolio performance during recession

Portfolio Allocation:	Recessionary Period Max Drawdown:					
	1980 Recession	1982 Recession	1991 Recession	Early 2000s	GFC	Pandemic
80% Equity, 20% Fixed Income	-8.47%	-8.49%	-10.95%	-6.72%	-39.54%	-9.30%
60% Equity, 40% Fixed Income	-7.25%	-6.54%	-8.38%	-3.75%	-29.40%	-6.25%
40% Equity, 60% Fixed Income	-6.08%	-4.57%	-5.79%	-0.79%	-17.88%	-3.21%
Difference Between 60% FI and 20% FI Portfolios	2.39%	3.92%	5.16%	5.92%	21.66%	6.10%
S&P 500 Index	-9.73%	-13.28%	-13.83%	-9.68%	-48.45%	-12.35%
Bloomberg US Treasury	-4.91%	-1.08%	-1.44%	-1.24%	0.00%	0.00%

Source: Bloomberg. Monthly data from 31 December 1979 to 30 April 2020. Returns are gross and in USD. Equity = S&P 500 index. Fixed Income = Bloomberg US Treasury Index. **Hypothetical portfolios analyzed are for illustrative purposes only.**

As can be seen above, in each hypothetical portfolio the maximum drawdown for US equities was much larger than that of US Treasuries and higher allocations to fixed income provided less volatility. Also, as Treasury performance has historically turned positive well before equities, we believe an investor may benefit from rebalancing portfolios back to the target allocation, buying into equities at a time when they are more likely to do well going forward, which can place a portfolio in a stronger position for the next beginning of a business cycle.

In conclusion

While every recession is different, we believe the benefits of fixed income in recessionary periods will continue to be seen in the future. As central bank hiking and cutting cycles continue, we expect that the historical pattern of rates rising into a recession, falling just prior, and continuing to fall into the first four to five months of recessions is likely to continue. We also expect that many of the diversification and risk reduction advantages of fixed income relative to equities will continue to potentially benefit investors during economic downturns. If the dark clouds of recession are indeed brewing, an allocation to fixed income is an important tool for investors to consider. ▲

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