4th Quarter 2023

Data as of September 30, 2023

Nationwide Market Insights℠

Our perspective on the market and economic forces influencing investment planning and retirement

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Nationwide Market Insights℠

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Executive Summary

Risk assets were mixed in the third quarter as core inflation eased slightly and the Federal Reserve slowed its aggressive monetary tightening. Stocks and Treasury yields rose while credit spreads and commodity prices slipped. The dollar rallied with the rise in oil prices.

The economy showed mixed signs with employment gains healthy and manufacturing activity decidedly in recession territory. Risks remain elevated that a mild recession will grip the economy in the middle of 2024. Leading indicators continue to flash a red warning sign for the economy while financial strains are appearing for both households and businesses. Near the end of the quarter, elevated long-term rates showed a rebound in real rates and inflation concerns that impaired the housing market and other investment activities. An outright downturn still does not appear to be imminent, but it is a growing probability in the quarters ahead.

Table of contents

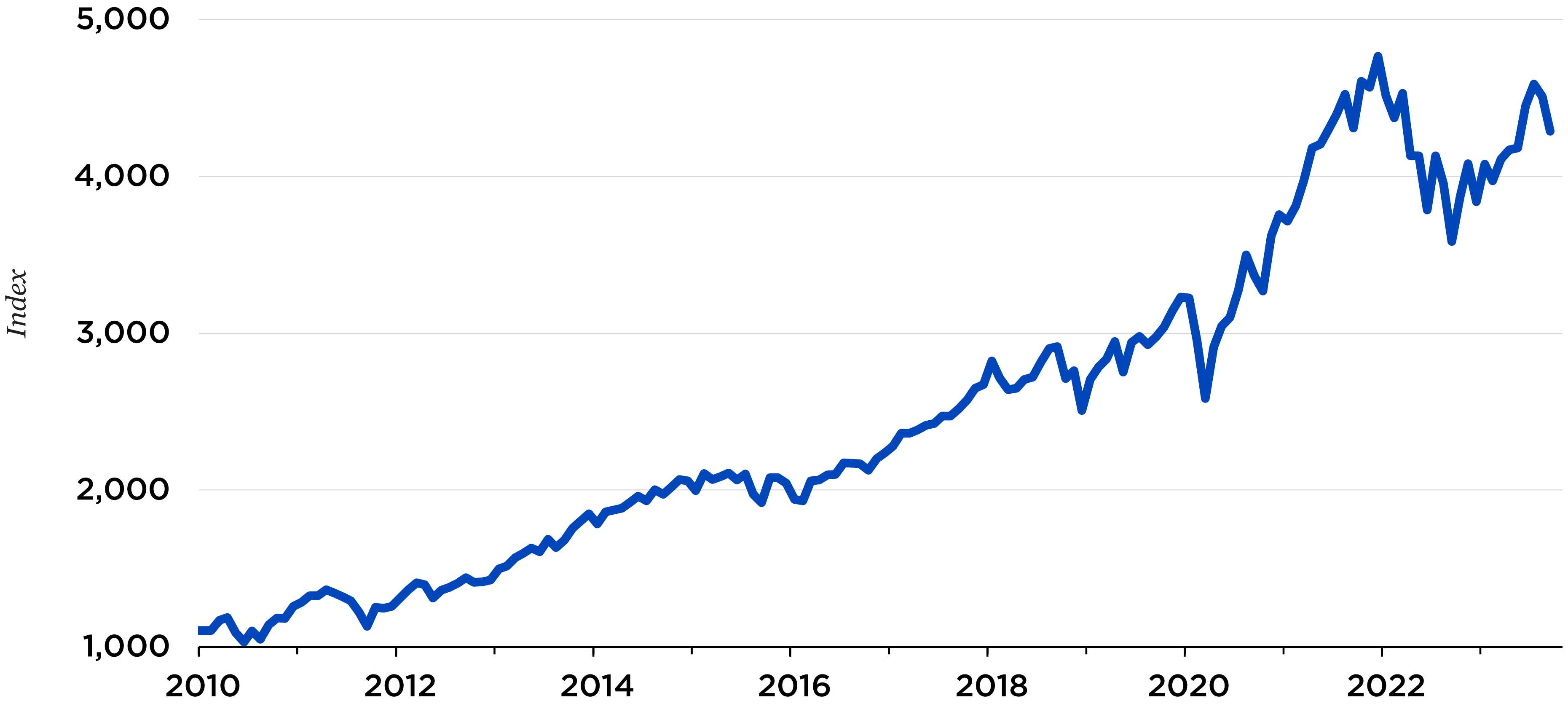
Financial Markets

Highlights

Stocks falter as interest rates soar

The S&P 500® Index rose in July and August but ended Q3 on a sour note as investors grew more reticent amid persistent recession worries and worries over the UAW strike and potential government shutdown.

S&P 500® Index



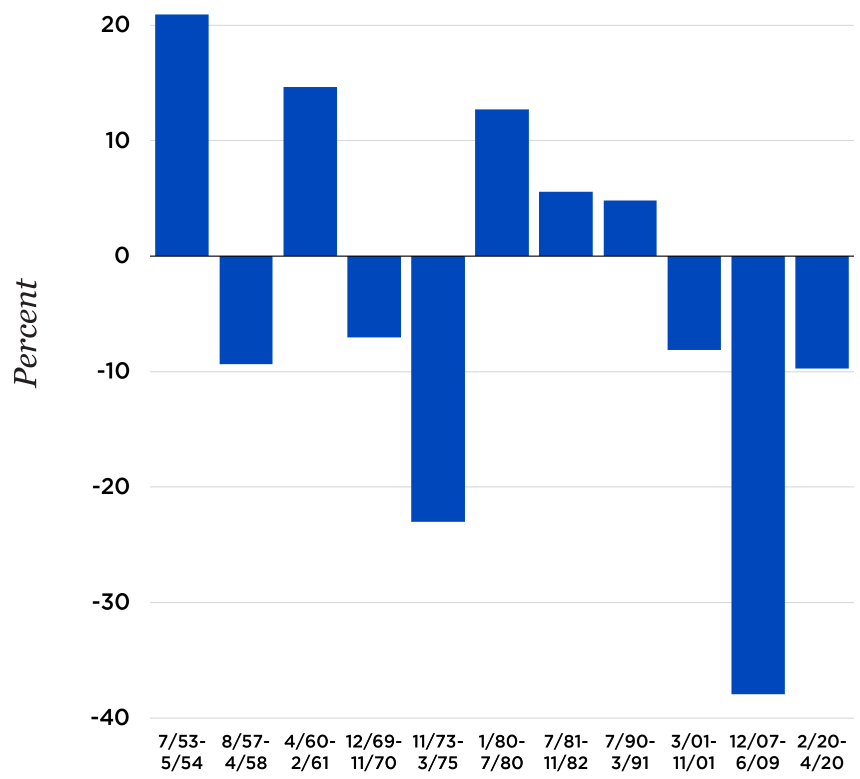
Source: Standard and Poor's

Market performance has been mixed within recessions

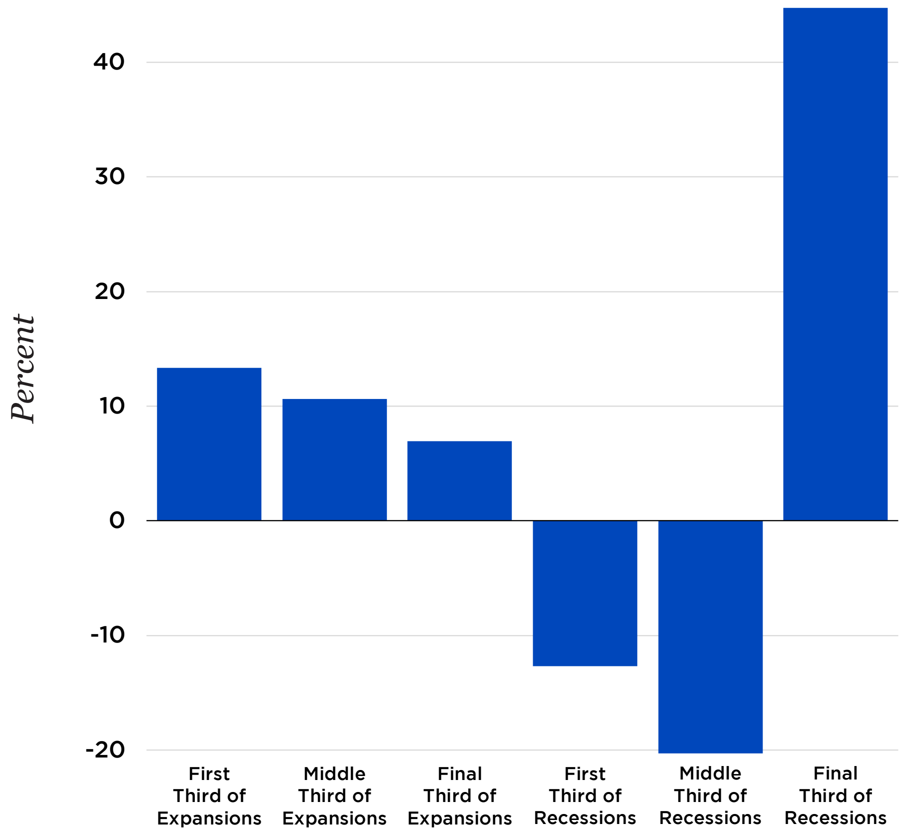
Equity market performance has varied widely across recessions, from deep declines in the 1973-75 and 2007-09 contractions to double-digit gains in the 1953-54, 1960-61, and 1980 downturns.

In most cases, however, stocks have performed poorly in the early and middle stages of economic contractions and robustly in the latter stages.

Changes in the S&P 500® by recession



Median annualized changes in the S&P 500® across the business

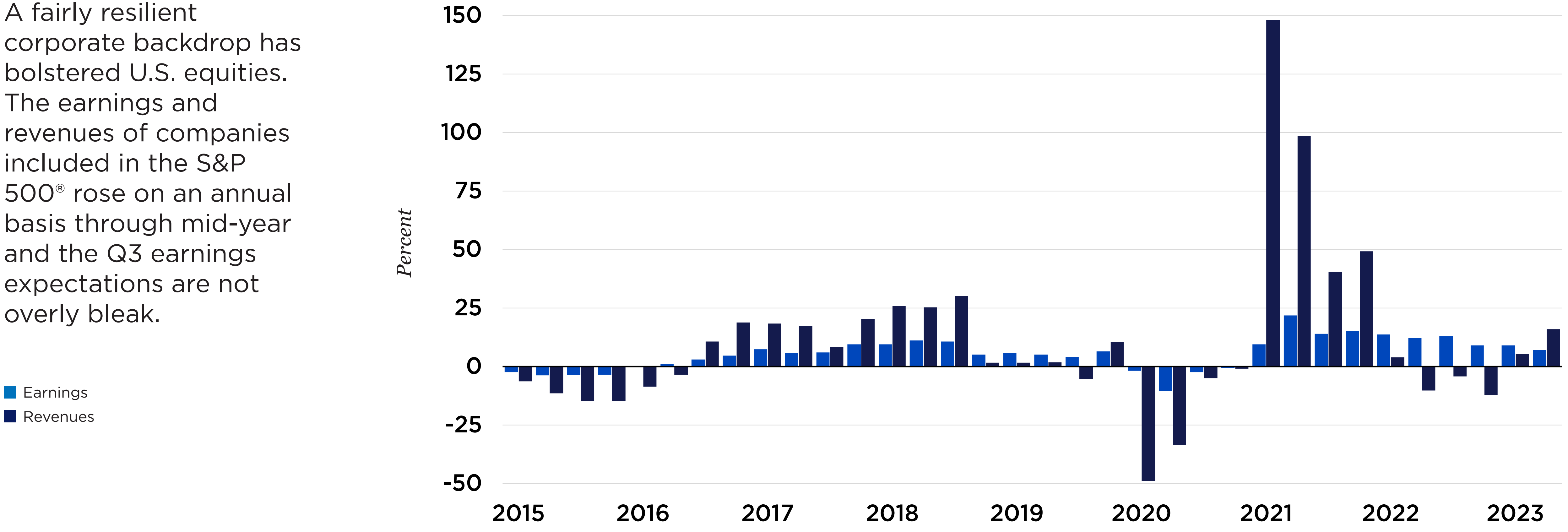


Source: Standard and Poor's

Earnings show modest gains

A fairly resilient corporate backdrop has bolstered U.S. equities. The earnings and revenues of companies included in the S&P 500® rose on an annual basis through mid-year and the Q3 earnings expectations are not overly bleak.

Yearly changes in S&P 500® earnings and revenues



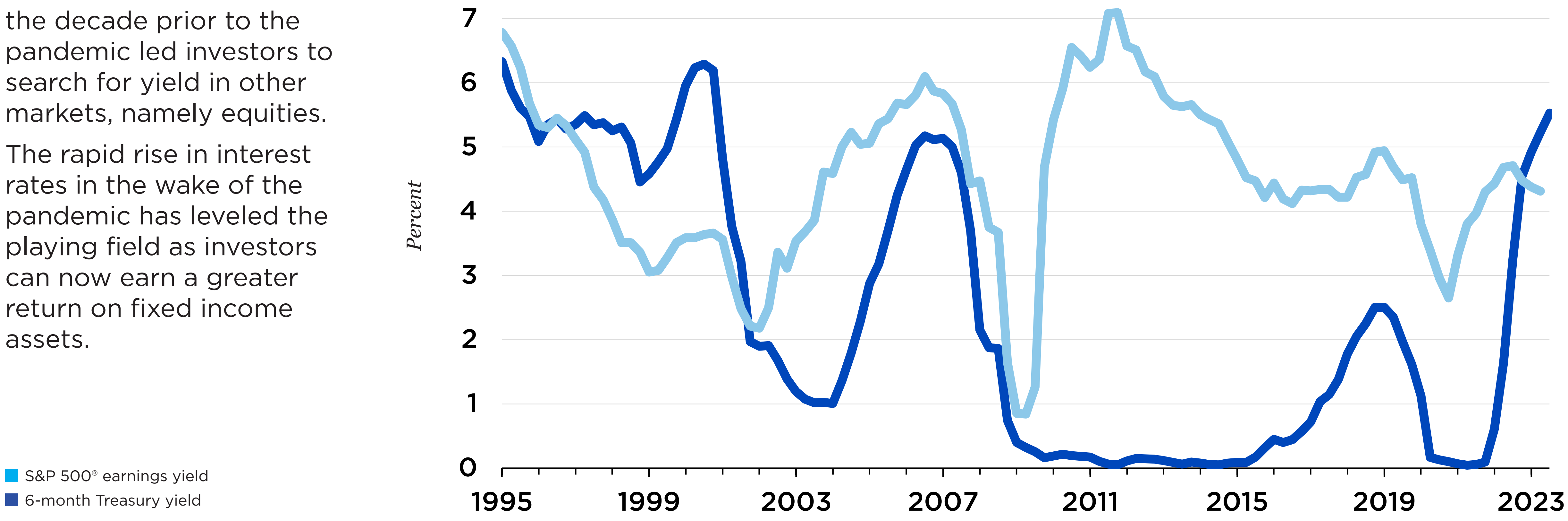
Source: Standard & Poor's

Higher rate environment provides new option for investors

Low interest rates in the decade prior to the pandemic led investors to search for yield in other markets, namely equities.

The rapid rise in interest rates in the wake of the pandemic has leveled the playing field as investors can now earn a greater return on fixed income assets.

S&P 500® earnings yield and 6-month Treasury yield

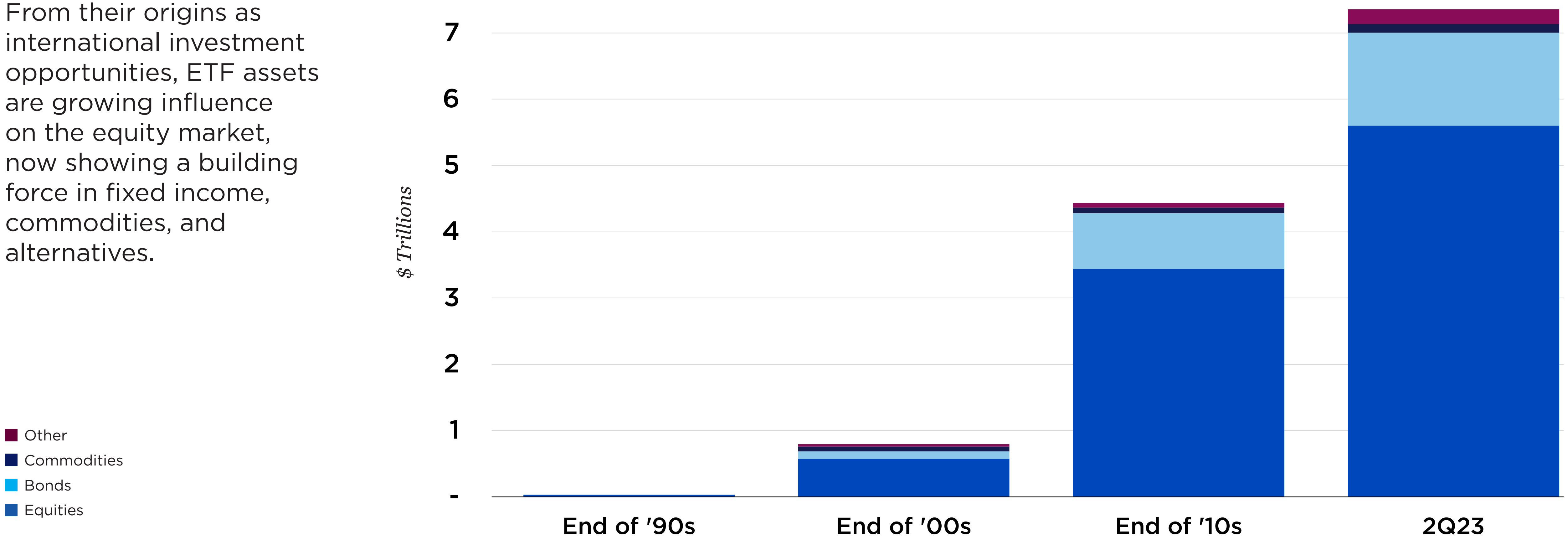


Source: Standard & Poor's and Bloomberg

ETFs are a growing force in the equity and bond markets

From their origins as international investment opportunities, ETF assets are growing influence on the equity market, now showing a building force in fixed income, commodities, and alternatives.

ETFs assets under management by decades



Source: Morningstar

A bounce back in higher beta sectors

The higher beta sectors moved to the top of the table at the start of the year after largely underperforming in 2022.

Yearly changes in the S&P 500® sectors

Percent

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 YTD
Utilities 24%	Discretionary 8%	Energy 24%	Technology 37%	Health Care 5%	Technology 48%	Technology 42%	Energy 48%	Energy 59%	Technology 42%
Health Care 23%	Health Care 5%	Financials 20%	Materials 21%	Utilities 0%	Telecoms 31%	Discretionary 32%	Technology 33%	Utilities -1%	Telecoms 36%
Technology 18%	Technology 4%	Telecoms 18%	Discretionary 21%	Discretionary 0%	Financials 29%	Telecoms 22%	Financials 33%	Staples -3%	Discretionary 32%
Financials 13%	Staples 4%	Industrials 16%	Financials 20%	Technology -2%	S&P 500 29%	Materials 18%	S&P 500 27%	Health Care -4%	S&P 500 16%
Staples 13%	S&P 500 -1%	Materials 14%	Health Care 20%	S&P 500 -6%	Industrials 27%	S&P 500 16%	Materials 25%	Industrials -7%	Industrials 9%
S&P 500 11%	Telecoms -2%	Utilities 12%	S&P 500 19%	Staples -11%	Discretionary 26%	Health Care 11%	Health Care 24%	Financials -12%	Materials 7%
Discretionary 8%	Financials -3%	Technology 12%	Industrials 19%	Financials -15%	Staples 24%	Industrials 9%	Discretionary 24%	Materials -14%	Staples 0%
Industrials 8%	Industrials -5%	S&P 500 10%	Staples 10%	Industrials -15%	Utilities 22%	Staples 8%	Telecoms 21%	S&P 500 -19%	Financials -2%
Materials 5%	Utilities -8%	Discretionary 4%	Utilities 8%	Telecoms -16%	Materials 22%	Utilities -3%	Industrials 19%	Technology -29%	Health Care -2%
Telecoms -2%	Materials -10%	Staples 3%	Energy -4%	Materials -16%	Health Care 19%	Financials -4%	Staples 16%	Discretionary -38%	Utilities -7%
Energy -10%	Energy -24%	Health Care -4%	Telecoms -6%	Energy -20%	Energy 8%	Energy -37%	Utilities 14%	Telecoms -40%	Energy -7%

Source: Stamdard & Poor's

Global stocks took a breather in Q3

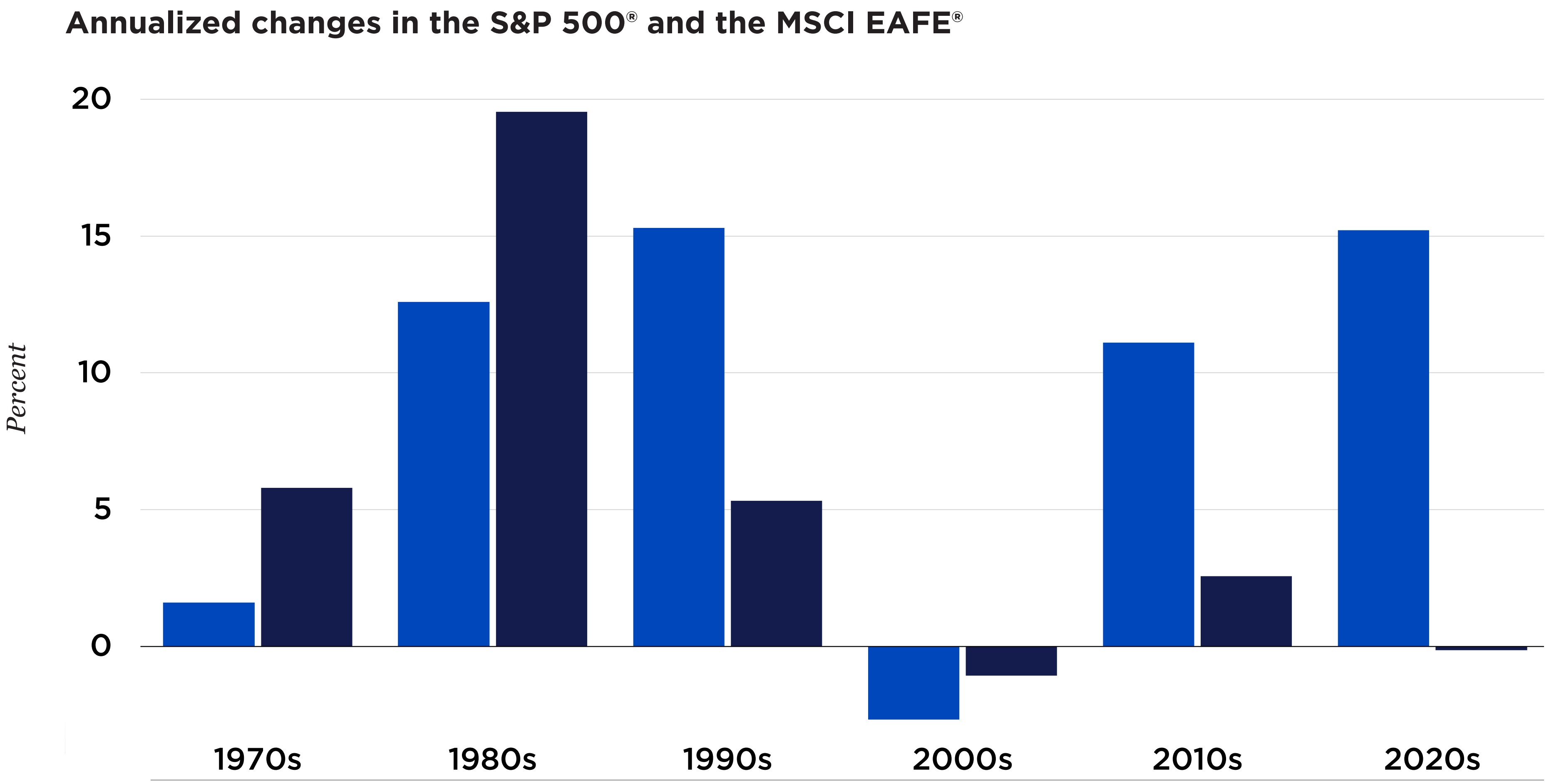
Central bank tightening and a downbeat global backdrop outside the U.S. constrained developed market equities in Q3.

MSCI EAFE® Index

Source: Bloomberg

Global equities continue to underperform

Global stocks trailed the S&P 500® in the first nine months of the year, continuing the theme from the decade prior.



Source: Bloomberg

European stocks keep pace with U.S. equities

Key European equity markets, including Italy, Germany and France, recorded similar gains as U.S. equities in Q3.

Yearly changes in benchmark equity indices

Percent

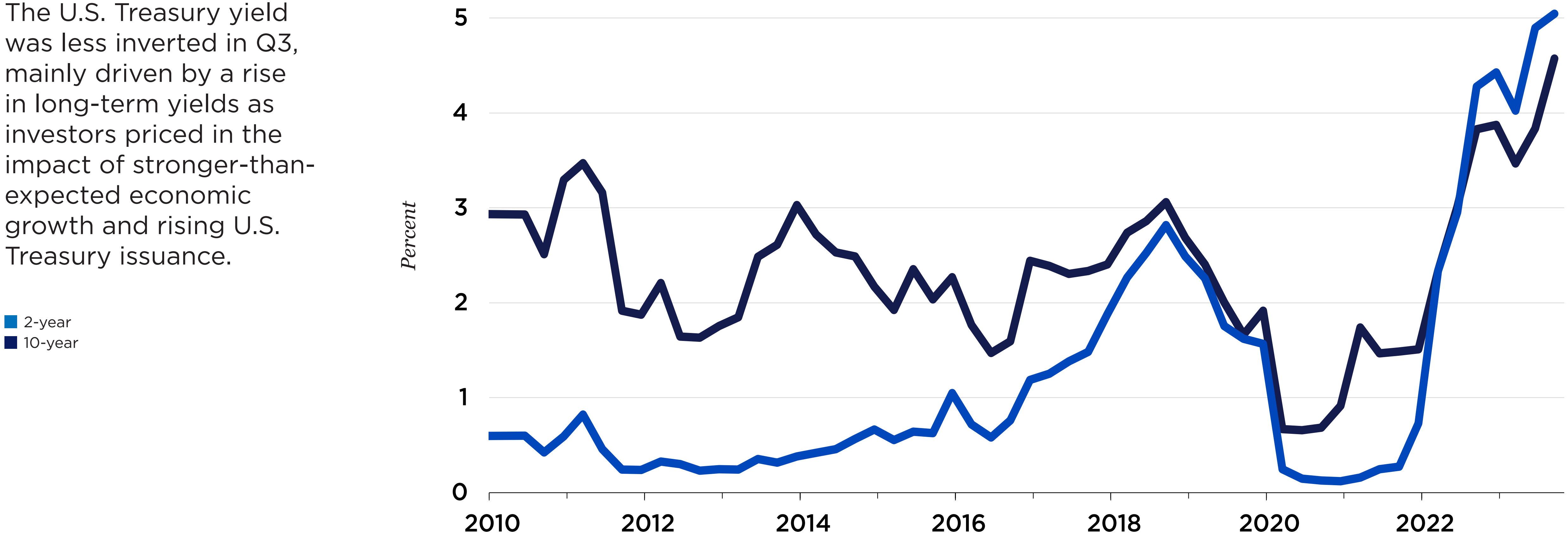
2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 YTD
China 49%	Japan 8%	Brazil 69%	India 36%	Brazil -2%	Russia 45%	Japan 22%	US 27%	Brazil 10%	Russia 46%
India 27%	China 5%	Russia 52%	Italy 30%	India -3%	US 29%	China 21%	Canada 23%	India -6%	Japan 22%
US 11%	Italy 1%	Canada 21%	Germany 28%	US -6%	Brazil 27%	US 16%	France 20%	UK -10%	Italy 19%
Canada -2%	US -1%	US 10%	Brazil 25%	Russia -7%	Italy 26%	Germany 14%	India 20%	Canada -15%	US 12%
Japan -6%	Germany -2%	Japan 4%	France 25%	Japan -10%	Canada 25%	India 13%	Russia 15%	France -15%	Germany 11%
UK -8%	France -3%	Germany 3%	Japan 23%	France -15%	France 24%	Canada 4%	UK 13%	Germany -17%	France 10%
Germany -10%	Russia -4%	France 2%	US 19%	UK -18%	Germany 23%	Italy 4%	Italy 13%	Italy -18%	India 8%
Italy -12%	India -9%	India -1%	UK 18%	Canada -19%	China 21%	France 1%	China 8%	US -19%	Brazil 6%
France -13%	UK -10%	UK -4%	Canada 14%	Italy -20%	Japan 20%	Russia -10%	Germany 7%	Japan -20%	UK 2%
Brazil -13%	Canada -25%	Italy -13%	China 14%	Germany -22%	UK 17%	UK -12%	Japan -6%	China -22%	Canada 1%
Russia -45%	Brazil -42%	China -18%	Russia 0%	China -29%	India 12%	Brazil -20%	Brazil -18%	Russia -39%	China 1%

Source: Bloomberg

Bond market inversion narrows

The U.S. Treasury yield was less inverted in Q3, mainly driven by a rise in long-term yields as investors priced in the impact of stronger-than-expected economic growth and rising U.S. Treasury issuance.

10-year and 2-year U.S. Treasury yields

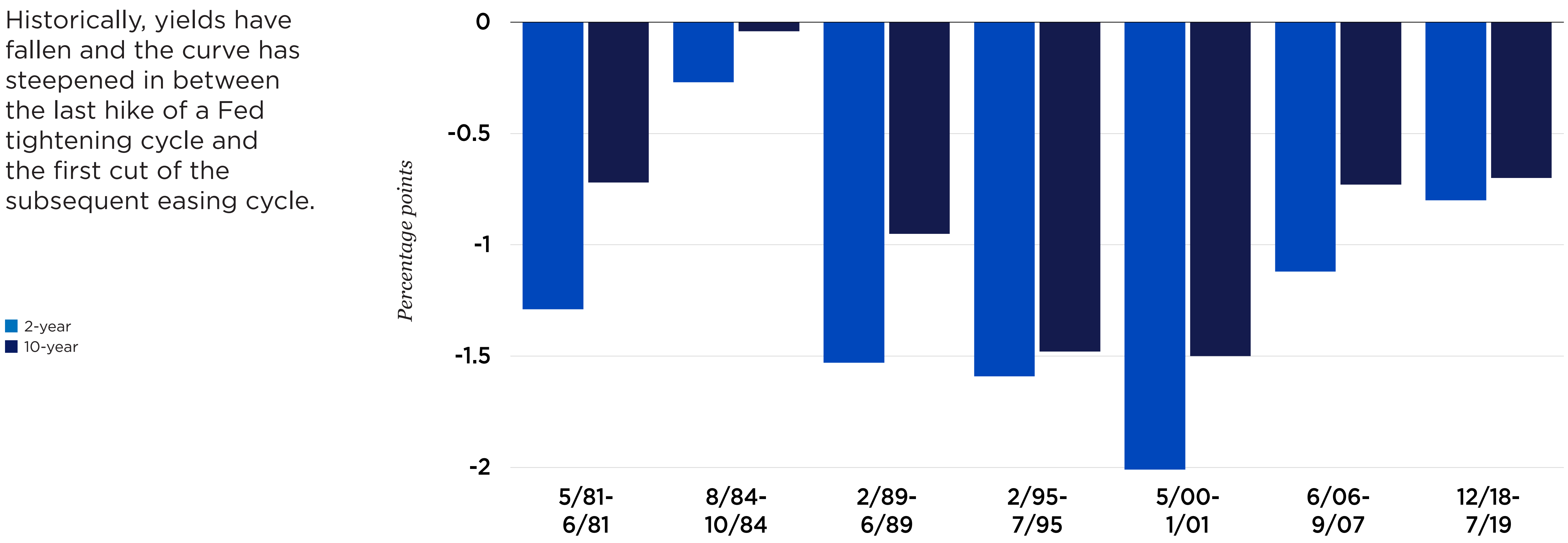


Source: Bloomberg

Treasuries rally between tightening and easing cycles

Historically, yields have fallen and the curve has steepened in between the last hike of a Fed tightening cycle and the first cut of the subsequent easing cycle.

Changes in 10-year and 2-year U.S. Treasury yields between Fed tightening and easing cycles

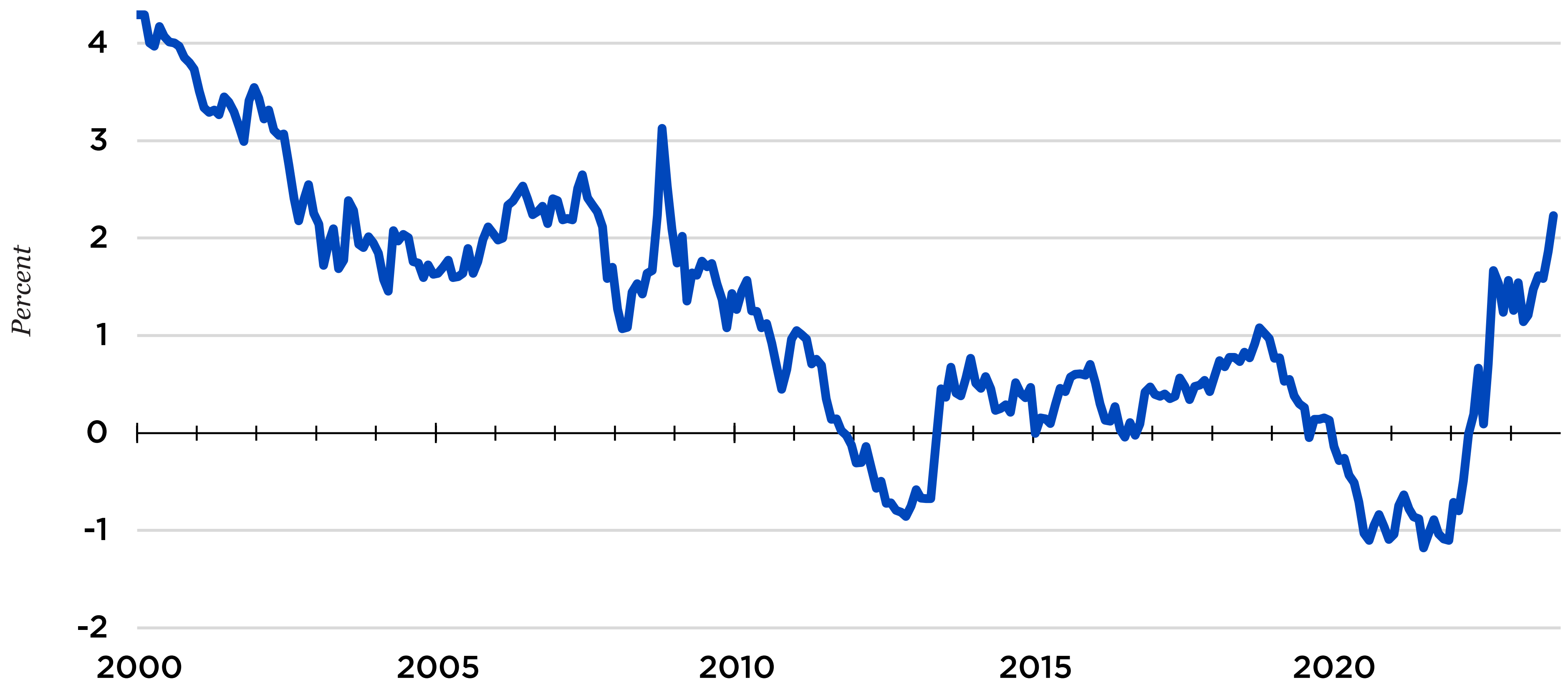


Source: Federal Reserve Board of Governors

Real rates breakout

Stronger-than-expected economic growth, moderating inflation, and hawkish rhetoric from the Fed have pushed real rates to multi-year highs.

Yield on the U.S. Treasury Inflation-Protected Note



Source: Bloomberg

High yield led the fixed income 2023 recovery

High yield has led the charge year-to-date for 2023, posting the highest positive return. On the other side of the spectrum, Treasuries have underperformed.

Yearly changes by asset class

Percent

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 YTD
Treasuries 10.70%	Municipals 3.30%	High Yield 17.10%	High Yield 7.50%	Agencies 1.30%	Corporates 14.50%	TIPS 11.20%	TIPS 6.10%	Agencies -7.90%	High Yield 5.86%
Municipals 9.10%	MBS 1.50%	Corporates 6.10%	Corporates 6.40%	Municipals 1.30%	High Yield 14.30%	Treasuries 10.60%	High Yield 5.30%	Municipals -8.50%	Agencies 1.40%
Corporates 7.50%	Agencies 1.00%	TIPS 4.80%	Municipals 5.40%	MBS 1.00%	Treasuries 8.90%	Corporates 9.90%	Municipals 1.50%	MBS -11.80%	Corporates 0.02%
MBS 6.10%	Treasuries 0.90%	Bloomberg Agg 2.60%	Bloomberg Agg 3.50%	Bloomberg Agg 0.00%	TIPS 8.80%	Bloomberg Agg 7.50%	Corporates -1.00%	High Yield -11.90%	TIPS -0.87%
Bloomberg Agg 6.00%	Bloomberg Agg 0.50%	MBS 1.70%	TIPS 3.30%	Treasuries 0.00%	Bloomberg Agg 8.70%	High Yield 7.10%	MBS -1.00%	TIPS -12.60%	Bloomberg Agg -1.21%
TIPS 4.40%	Corporates -0.70%	Agencies 1.40%	MBS 2.50%	TIPS -1.50%	Municipals 7.50%	Agencies 5.50%	Agencies -1.30%	Bloomberg Agg -13.00%	Municipals -1.38%
Agencies 3.60%	TIPS -1.70%	Municipals 0.20%	Treasuries 2.10%	High Yield -2.10%	MBS 6.40%	Municipals 5.20%	Bloomberg Agg -1.50%	Corporates -15.80%	MBS -2.26%
High Yield 2.50%	High Yield -4.50%	Treasuries -0.20%	Agencies 2.10%	Corporates -2.50%	Agencies 5.90%	MBS 3.90%	Treasuries -3.60%	Treasuries -16.30%	Treasuries -3.43%

Source: Bloomberg

Livestock prices record strong gains

Solid food demand has bolstered food prices, which are poised to record their third straight year of gains in 2023.

Yearly changes in commodity prices

Percent

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 YTD
Livestock 14%	Precious Metals -11%	Energy 18%	Industrials 29%	Livestock -1%	Energy 30%	Precious Metals 23%	Energy 61%	Energy 42%	Livestock 11%
Precious Metals -4%	Agriculture -17%	Industrials 18%	Precious Metals 12%	Precious Metals -4%	Precious Metals 18%	Agriculture 15%	Industrials 30%	Agriculture 12%	Precious Metals 6%
Industrials -7%	Livestock -18%	Precious Metals 8%	Livestock 8%	Agriculture -8%	Industrials 3%	Industrials 15%	Agriculture 25%	Livestock 5%	Energy 6%
Agriculture -11%	Industrials -25%	Agriculture -4%	Energy 6%	Energy -17%	Agriculture 0%	Livestock -22%	Livestock 8%	Precious Metals 0%	Agriculture -4%
Energy -44%	Energy -42%	Livestock -7%	Agriculture -12%	Industrials -18%	Livestock -6%	Energy -46%	Precious Metals -5%	Industrials -8%	Industrials -7%

Source: ICE

Greenback stays strong

Fed rate hikes and the outperformance of the U.S. economy have bolstered the dollar's value relative to other currencies.

The U.S. dollar index

Source: ICE

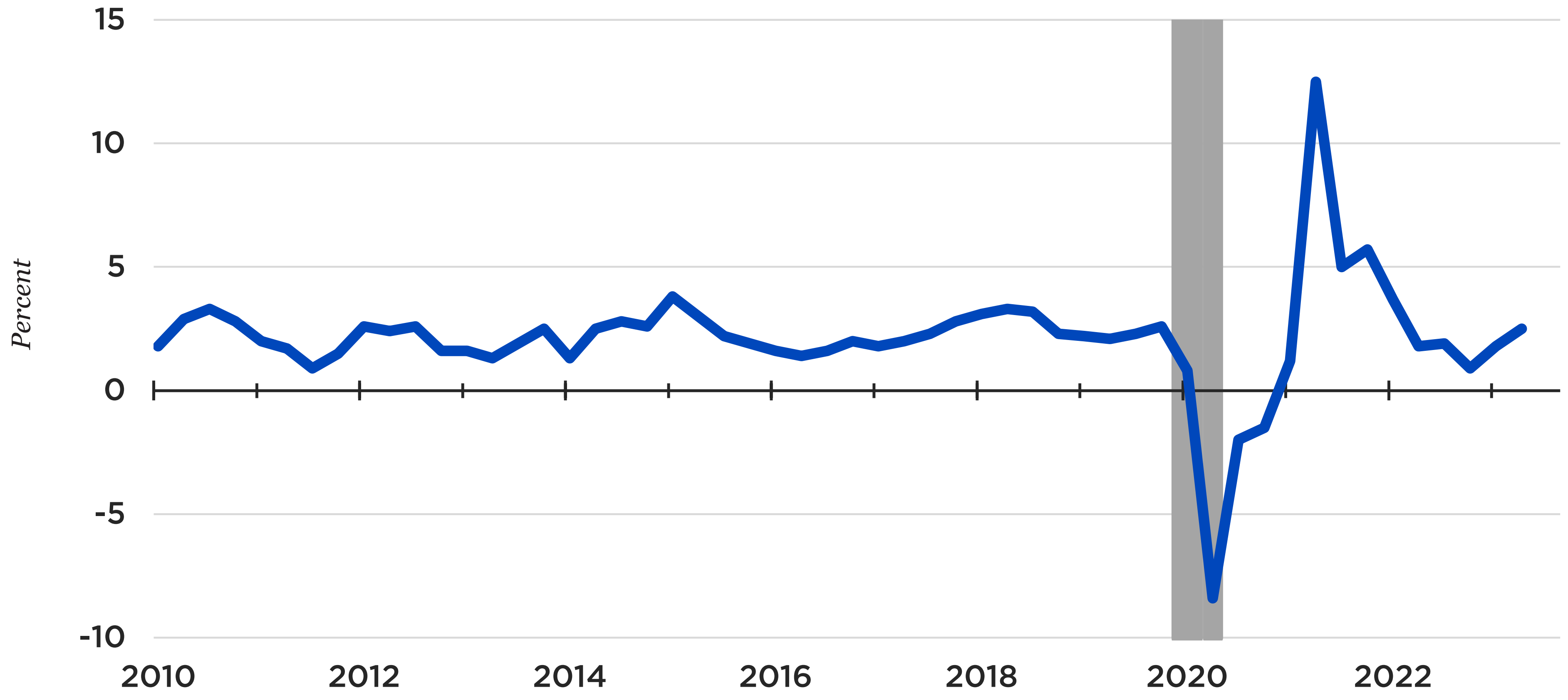
U.S. Economy

Highlights

Summer travel boosted growth

Rising incomes and the tapping of credit lines and excess savings allowed consumers to keep spending through mid-year 2023.

Yearly change in real gross domestic production



Source: Bureau of Economic Analysis and National Bureau of Economic Research

Government spending leads the charge so far in 2023

Government spending growth has outperformed the other components of GDP year-to-date in 2023.

Yearly change in the real GDP components

Percent

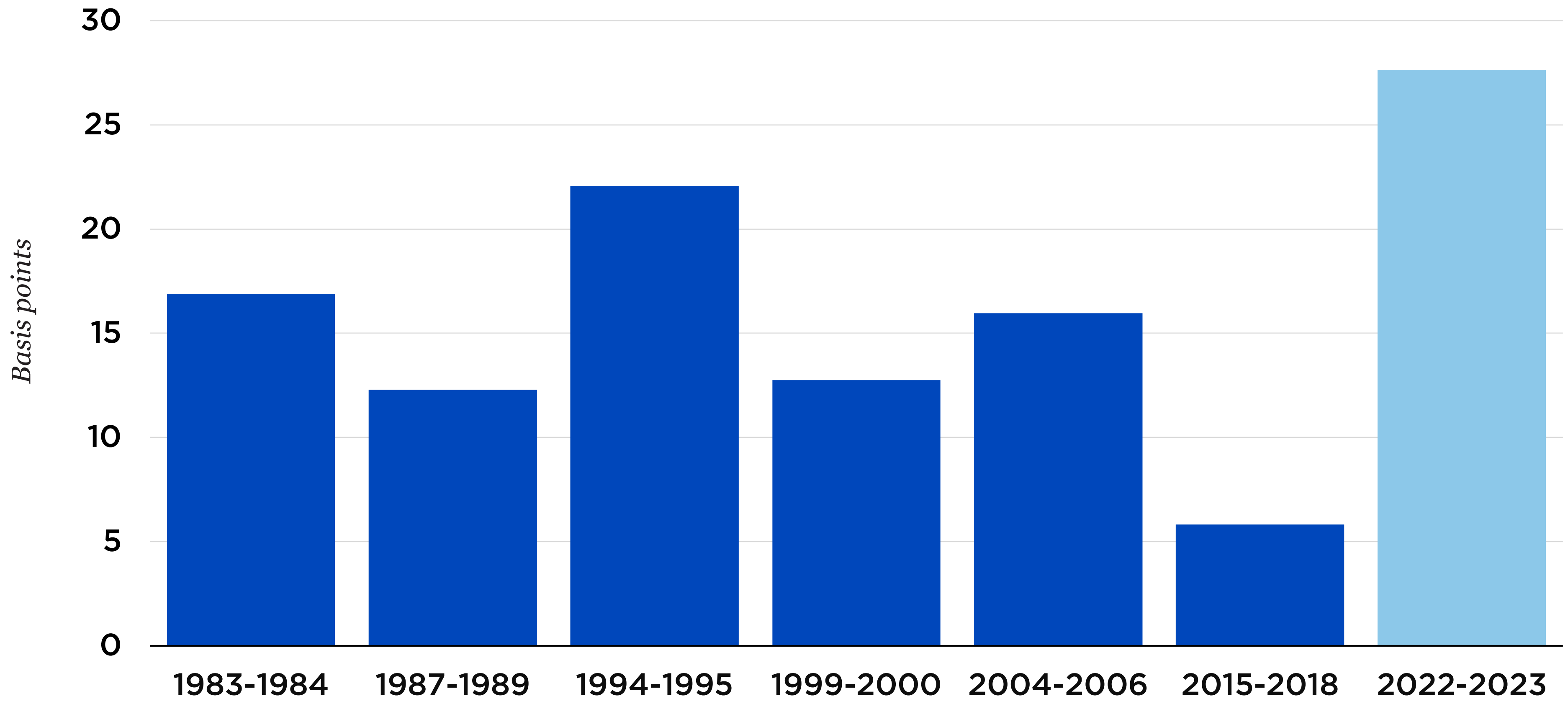
2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 YTD
Investment 9.3%	Imports 6.5%	Imports 3.3%	Consumption 2.3%	Exports 6.2%	Investment 4.8%	Government 4.0%	Investment 2.4%	Imports 10.1%	Exports 4.6%	Government 2.1%
Exports 5.2%	Investment 3.5%	Consumption 2.6%	Imports 2.2%	Imports 5.3%	Imports 3.3%	Consumption 2.2%	Government 1.0%	Investment 8.6%	Imports 1.7%	Consumption 1.4%
Imports 2.9%	Consumption 5.3%	Investment 2.3%	Investment 1.8%	Investment 4.6%	Consumption 2.5%	Exports 0.8%	Imports 0.4%	Consumption 7.2%	Consumption 1.5%	Exports -0.9%
Consumption 1.9%	Exports 0.3%	Government 2.2%	Government 1.6%	Consumption 2.8%	Government 1.6%	Investment 0.1%	Consumption -1.4%	Exports 6.5%	Government 0.9%	Imports -1.3%
Government -2.4%	Government 2.4%	Exports -1.5%	Exports 1.3%	Government 0.7%	Exports 0.2%	Imports -2.0%	Exports -10.0%	Government 0.5%	Investment -3.8%	Investment -2.3%

Source: Bureau of Economic Analysis and National Bureau of Economic Research

An aggressive Fed tightening cycle

The current Fed tightening cycle has been the most aggressive in decades.

Average monthly changes in the federal funds target by monetary tightening cycle

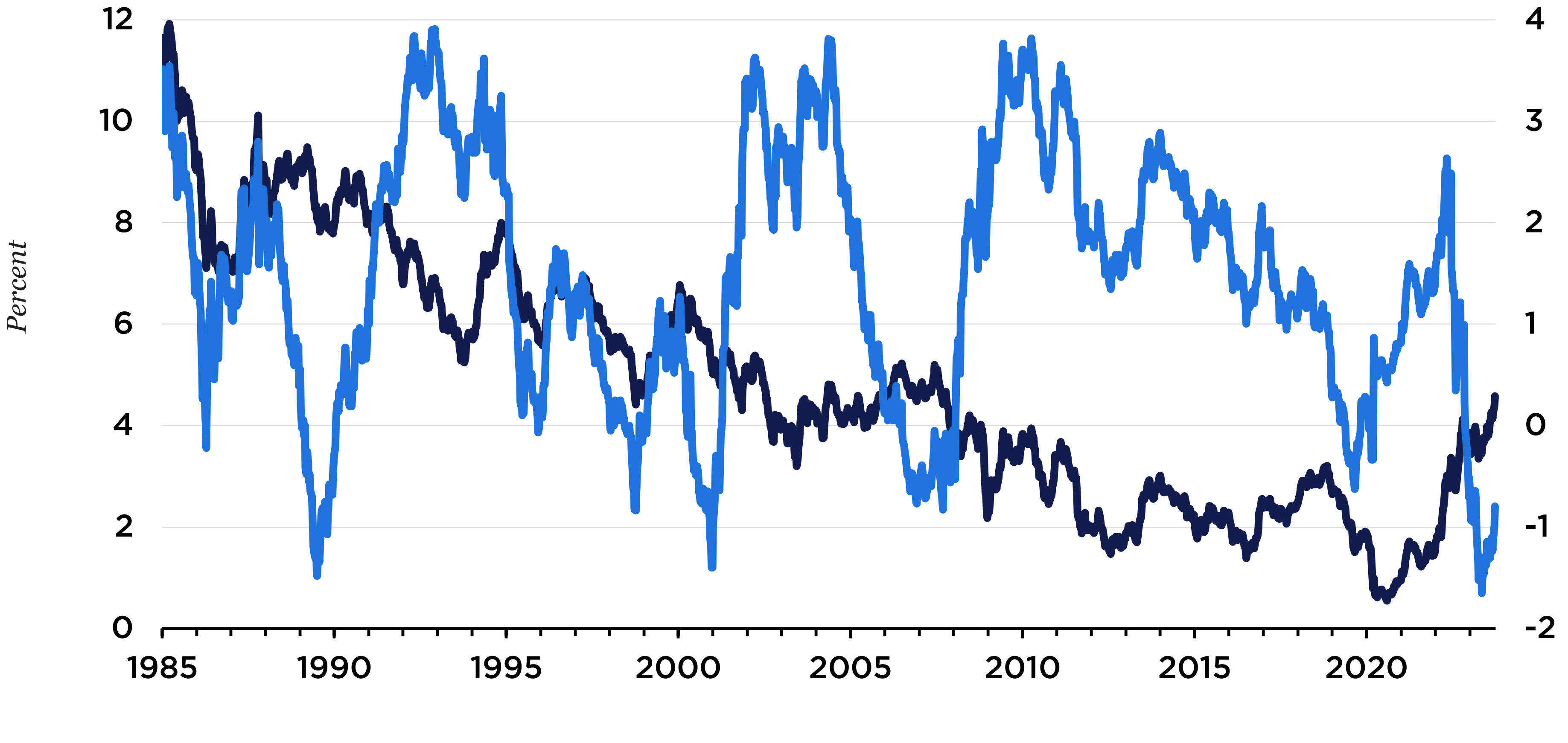


Source: Bloomberg

Yield curve bear steepening

The Treasury yield curve has become significantly less inverted and this typically happens right ahead of recessions. Usually this reflects a bull steepener led by a sharp drop in short-term rates as the Fed cuts the fed funds rate. However, this time it's a bear steepener led by a large jump in long-term yields. This is still likely to be consistent with a recession unfolding in 2024.

10-year Treasury less the fed funds target rate

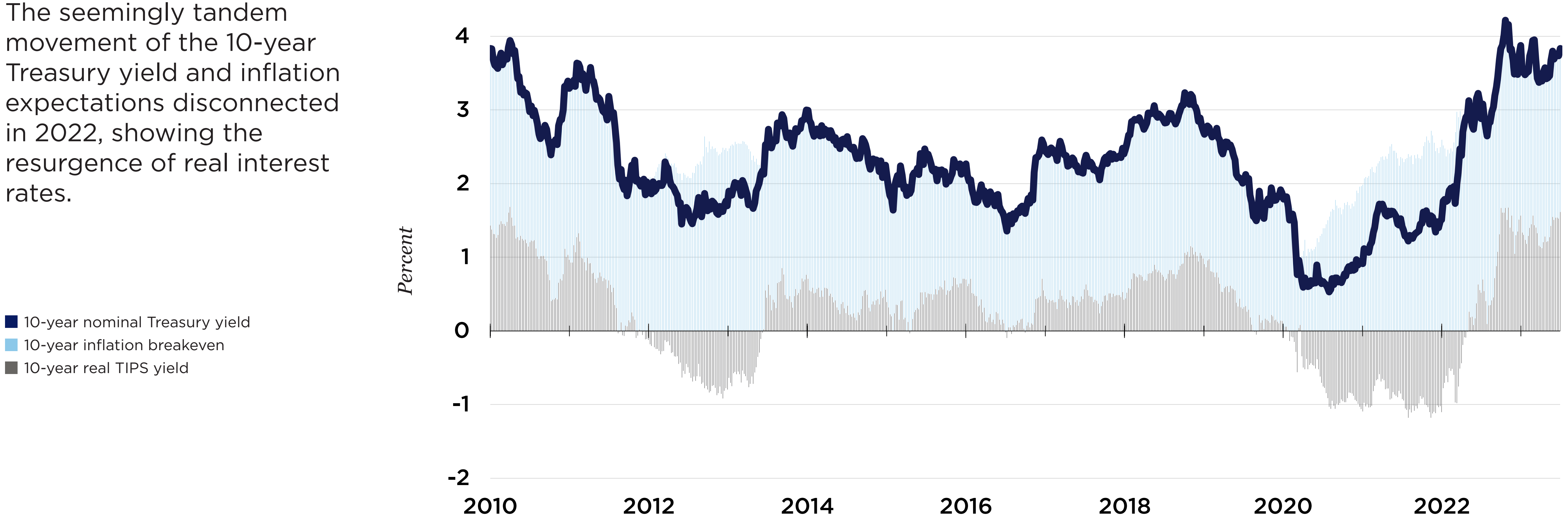


Source: Federal Reserve Board; Haver

Increase in real rates pushes overall yields higher

The seemingly tandem movement of the 10-year Treasury yield and inflation expectations disconnected in 2022, showing the resurgence of real interest rates.

Nominal and real Treasury yields

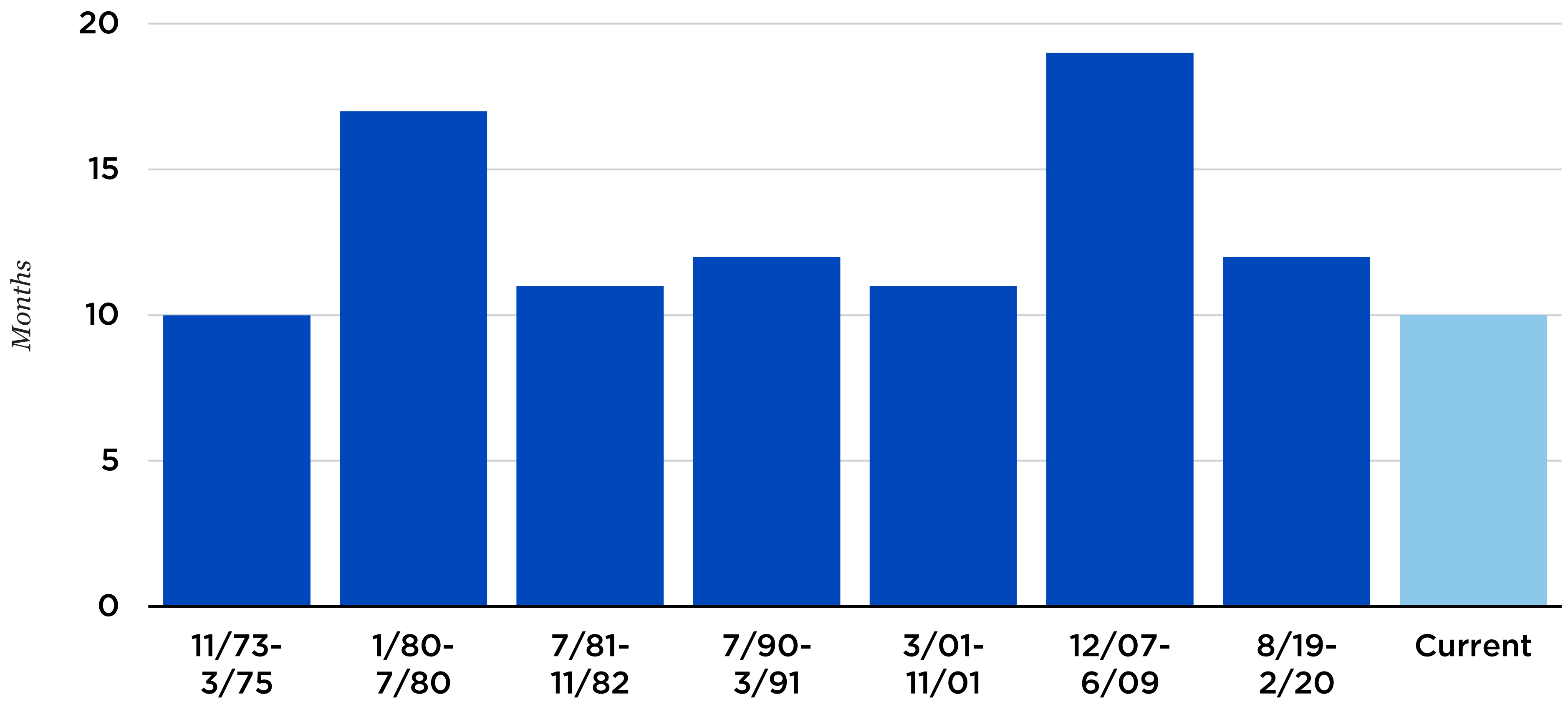


Source: Bloomberg

Length of yield curve inversion still modest by historical standards

The gap between long- and short-term interest rates typically flags a downturn when it has been deeply negative for a sustained period. The duration of the current inversion is consistent with prior recessions.

Months in which the 10-year/federal funds spread has been negative prior to recessions

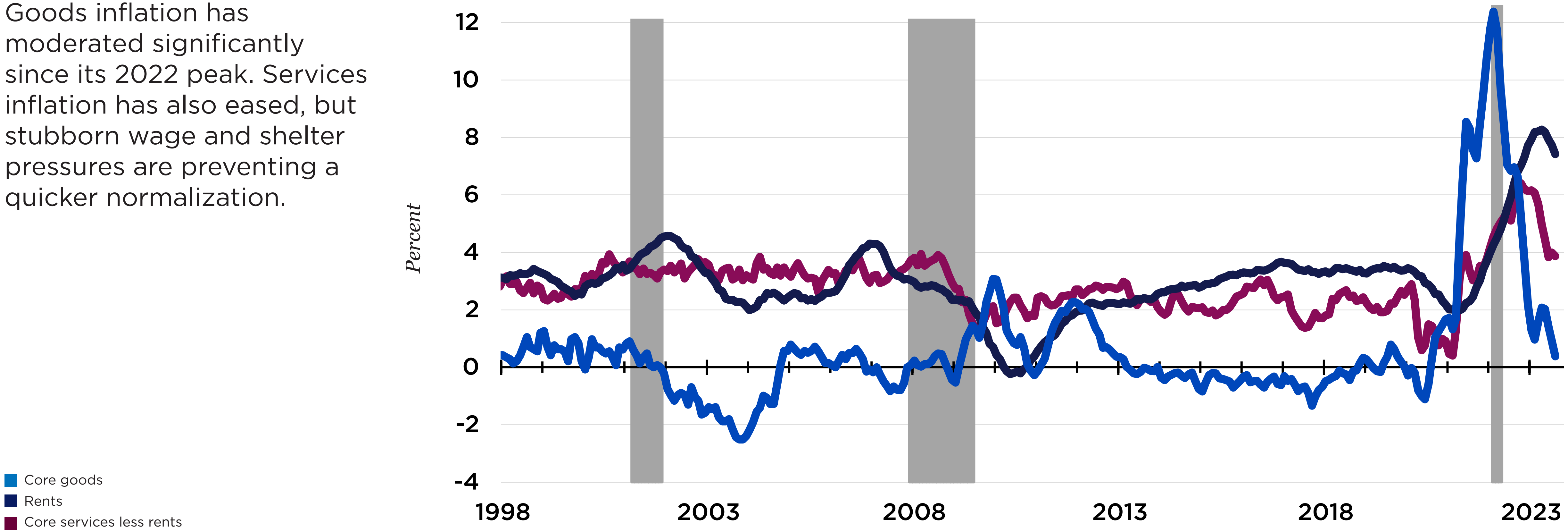


Source: Bloomberg

Inflation is easing, but remains elevated

Goods inflation has moderated significantly since its 2022 peak. Services inflation has also eased, but stubborn wage and shelter pressures are preventing a quicker normalization.

Year-over-year change in core service less shelter and shelter inflation

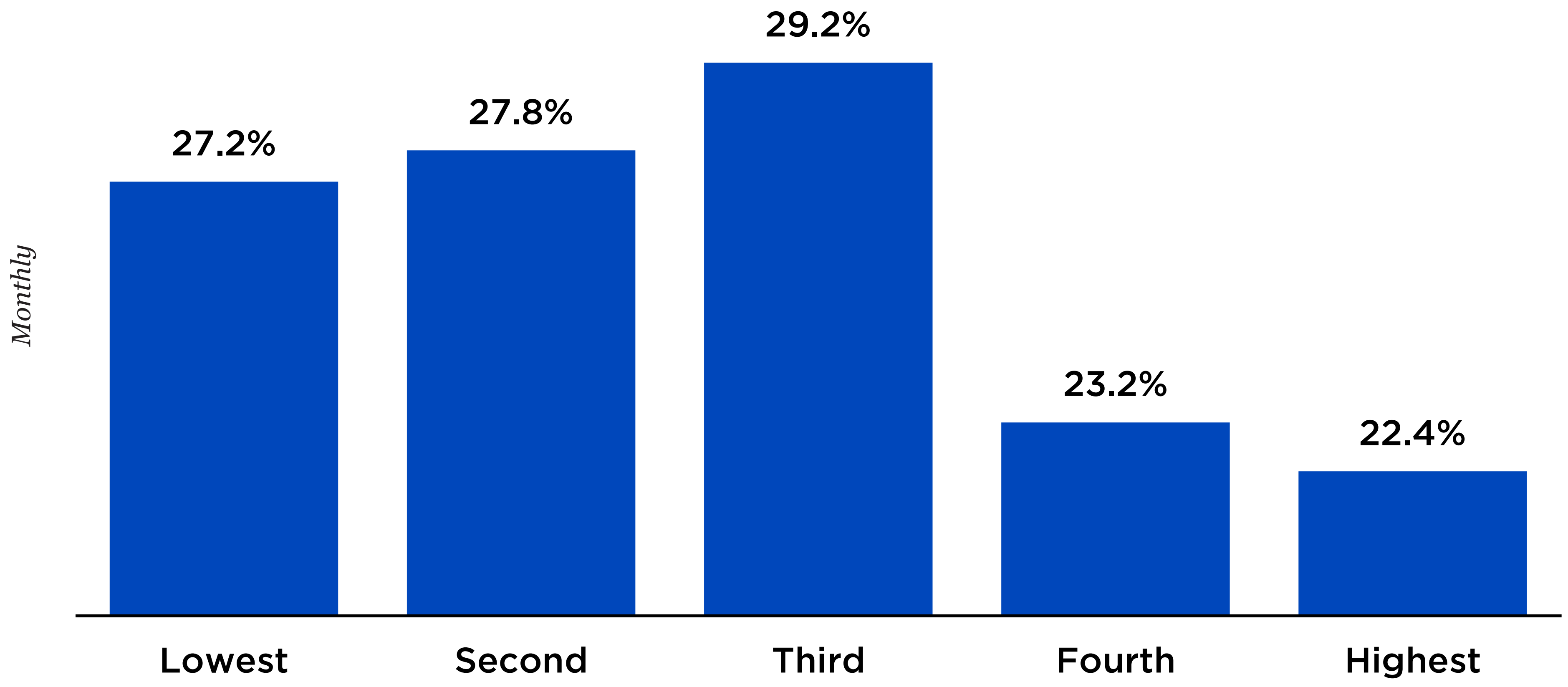


Shaded area depicts recessionary periods.
Sources: Bloomberg, Nationwide Economics

Lower quintile bear the brunt of higher housing costs

The housing affordability crisis has hit the lower income groups the hardest. Meanwhile, the top two quintile groups have been less hard hit, paying closer to 20 percent of their expenses toward housing.

Percentage of housing cost growth from 2020 to 2022 to total expenses by quintile

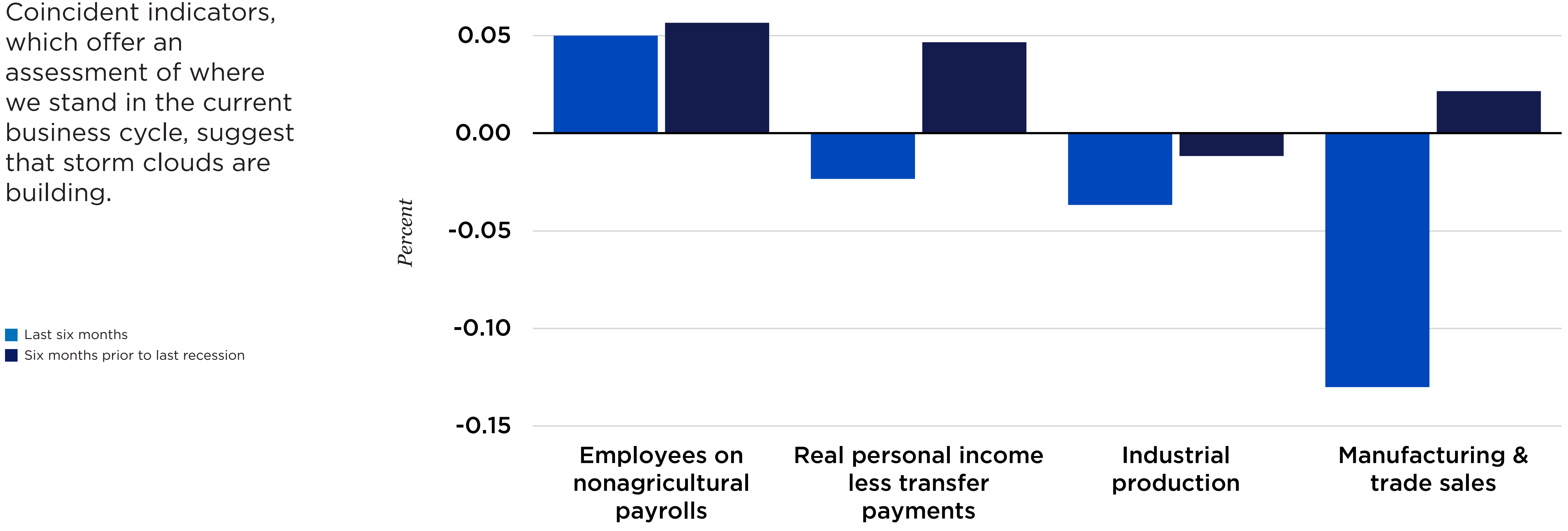


Sources: Bureau of Labor Statistics

Coincident indicators signal moderating momentum

Coincident indicators, which offer an assessment of where we stand in the current business cycle, suggest that storm clouds are building.

Average monthly changes in the key coincident economic indicators prior to recession

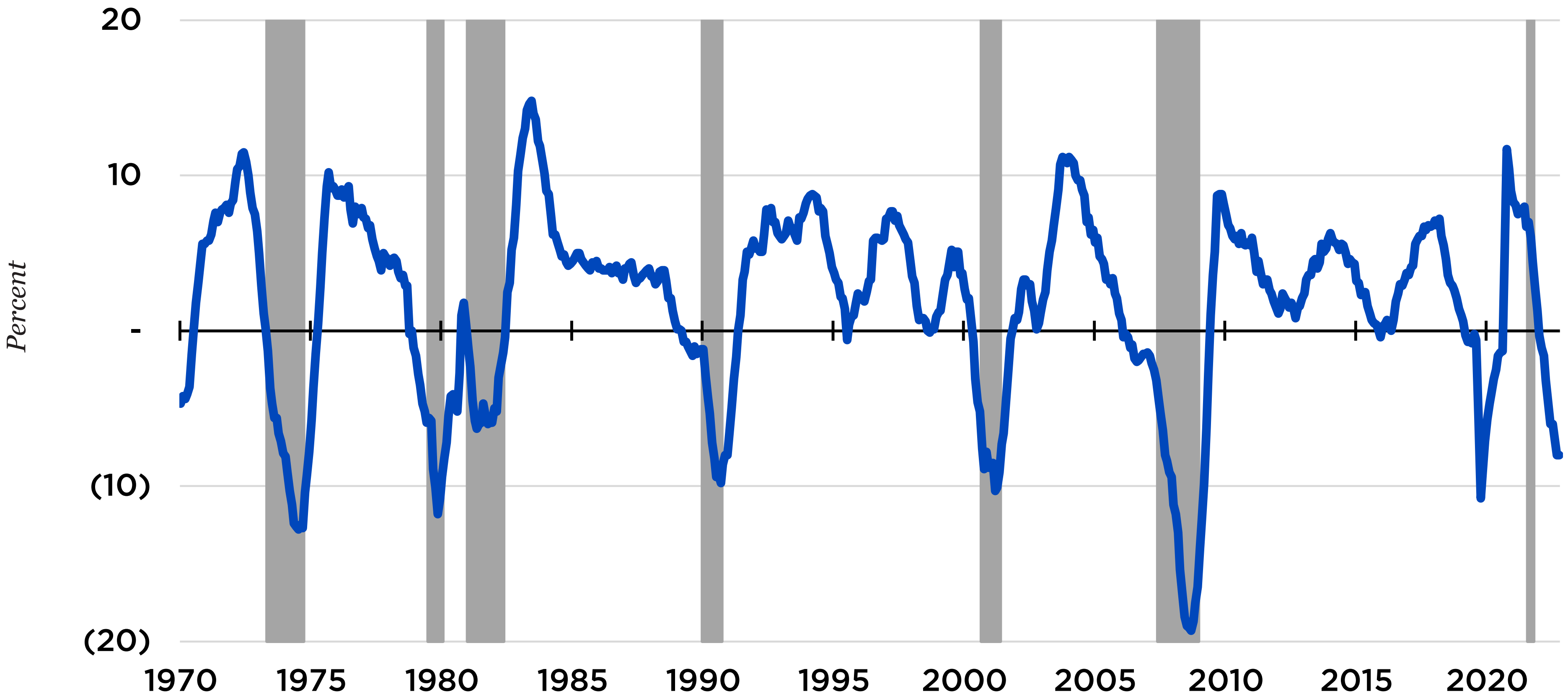


Source: Conference Board

Leading indicators are flashing warning signs

The Conference Board's Leading Index, which has tended to be a good predictor of recessions, continues to suggest that a downturn is imminent.

Year-over-year change in LEI



Shaded area depicts recessionary periods.
Source: Conference Board

Where are we in the business cycle

Expansions and recessions are amplified through the labor market before being ended via changes in inflation and interest rates. The inversion in the yield curve late last year is an indication that this cycle may be nearing its conclusion.

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