

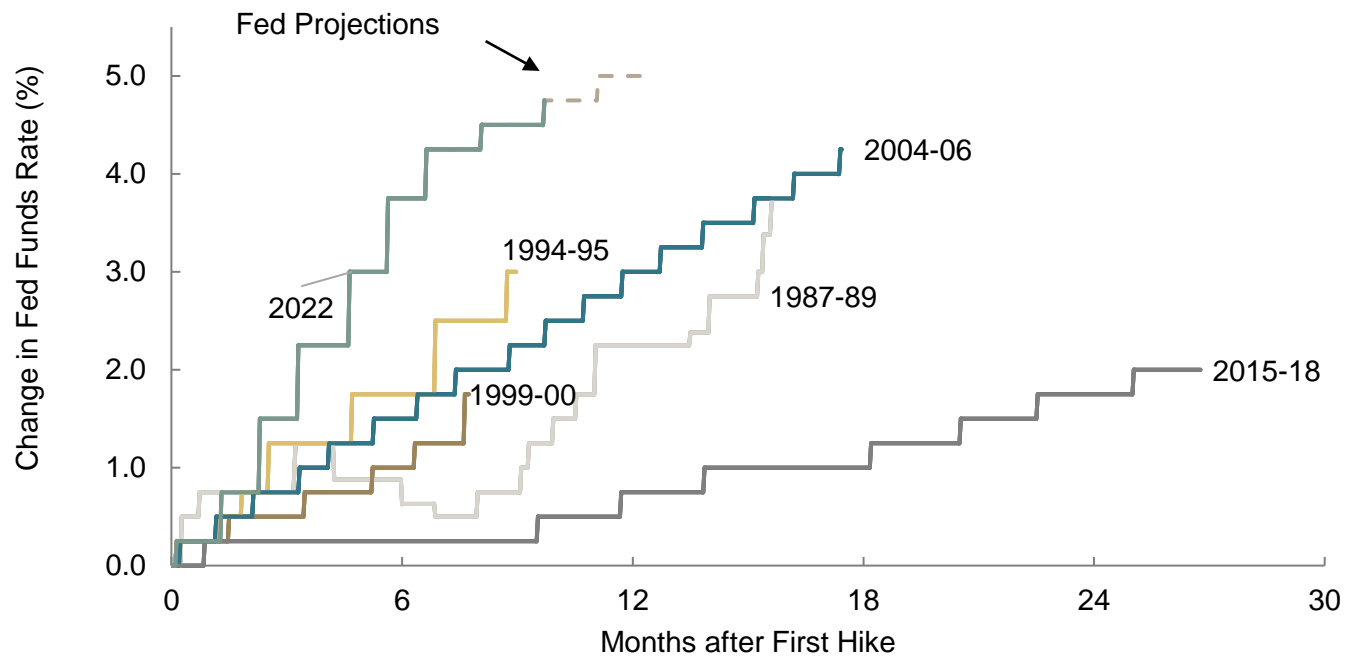
The Economy in Pictures: Recessionary Risks Rising

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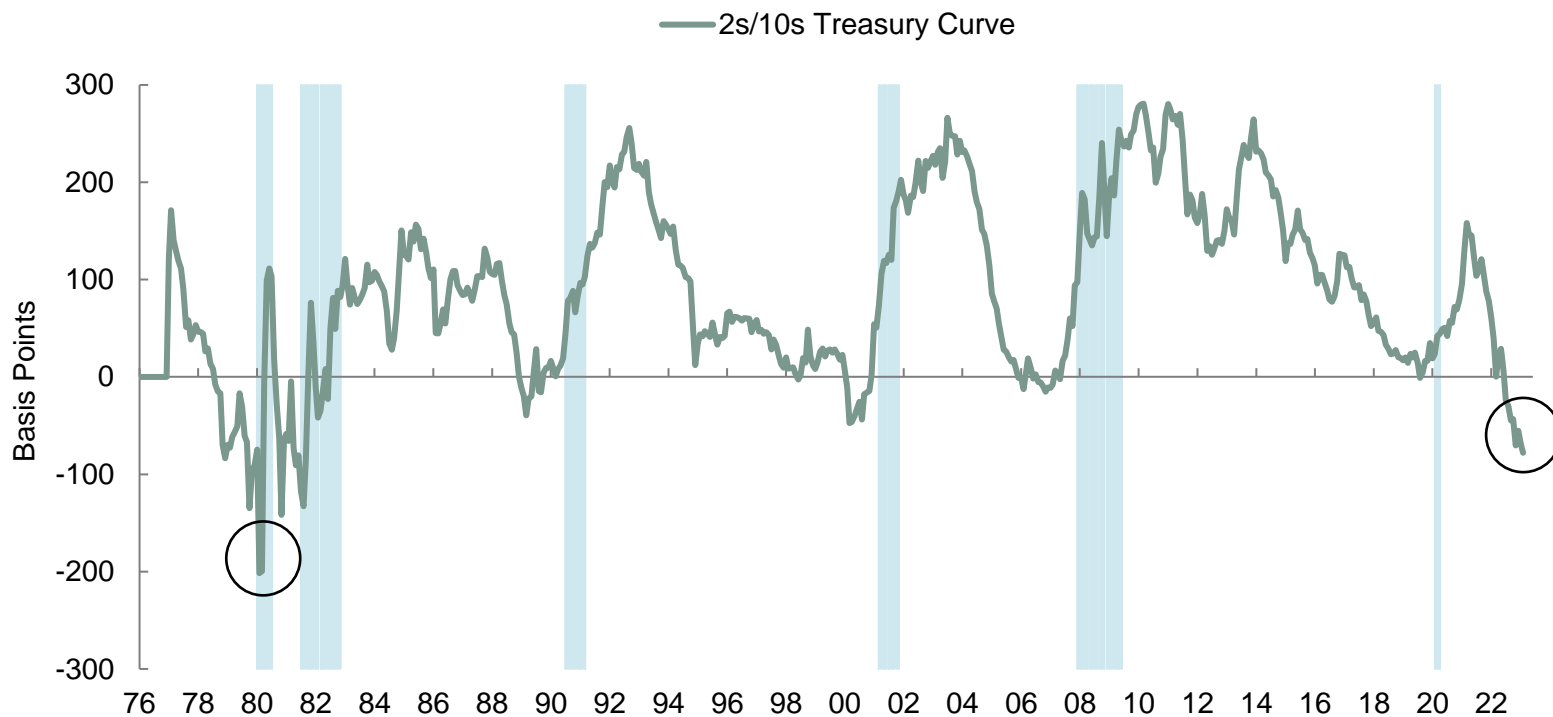
A Record Rise in Fed Funds

The Fed has raised rates at the fastest pace in more than four decades. The funds rate is in highly restrictive territory. This is evident from the slope of the yield curve and the level of real interest rates.



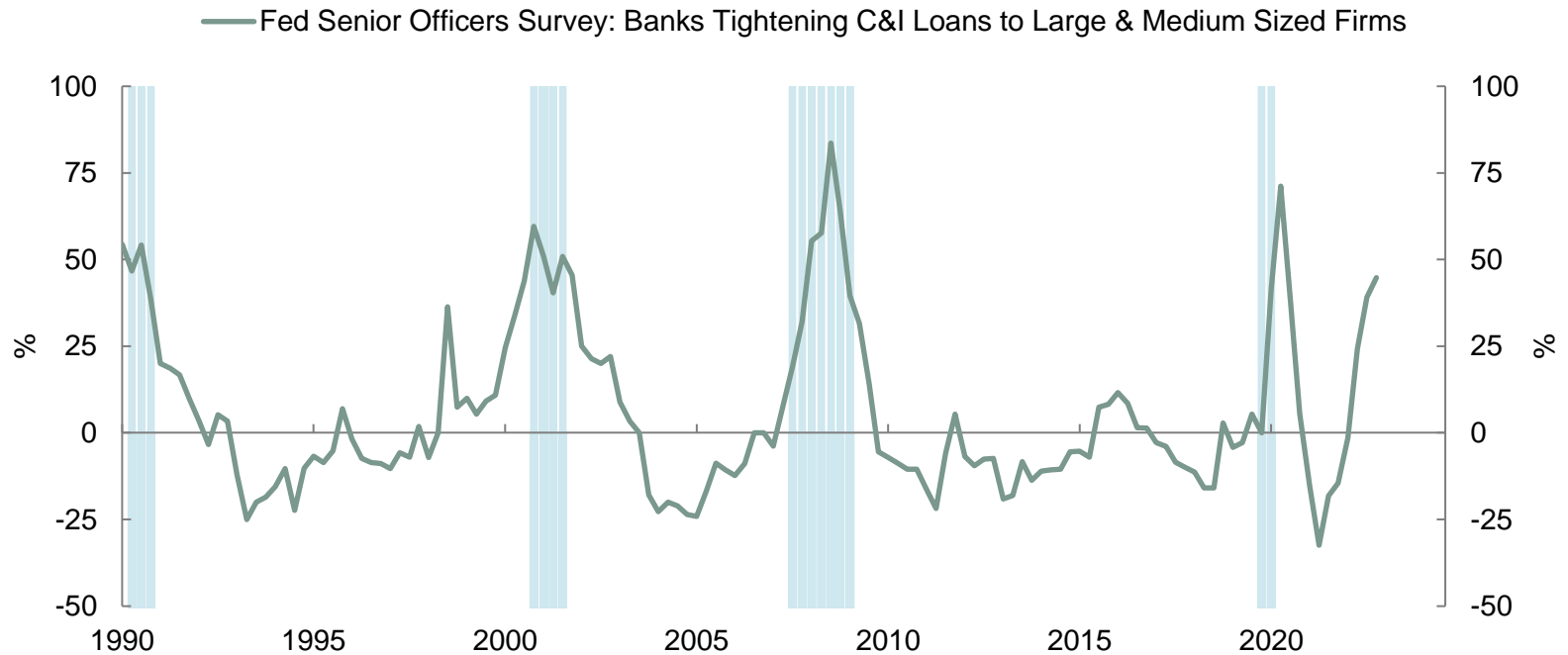
Historic Curve Inversion

The Treasury yield curve is deeply inverted, especially given the level of interest rates. The bond market is telling us that monetary policy is too restrictive. All past yield curve normalizations have been the result of Fed rate cuts.



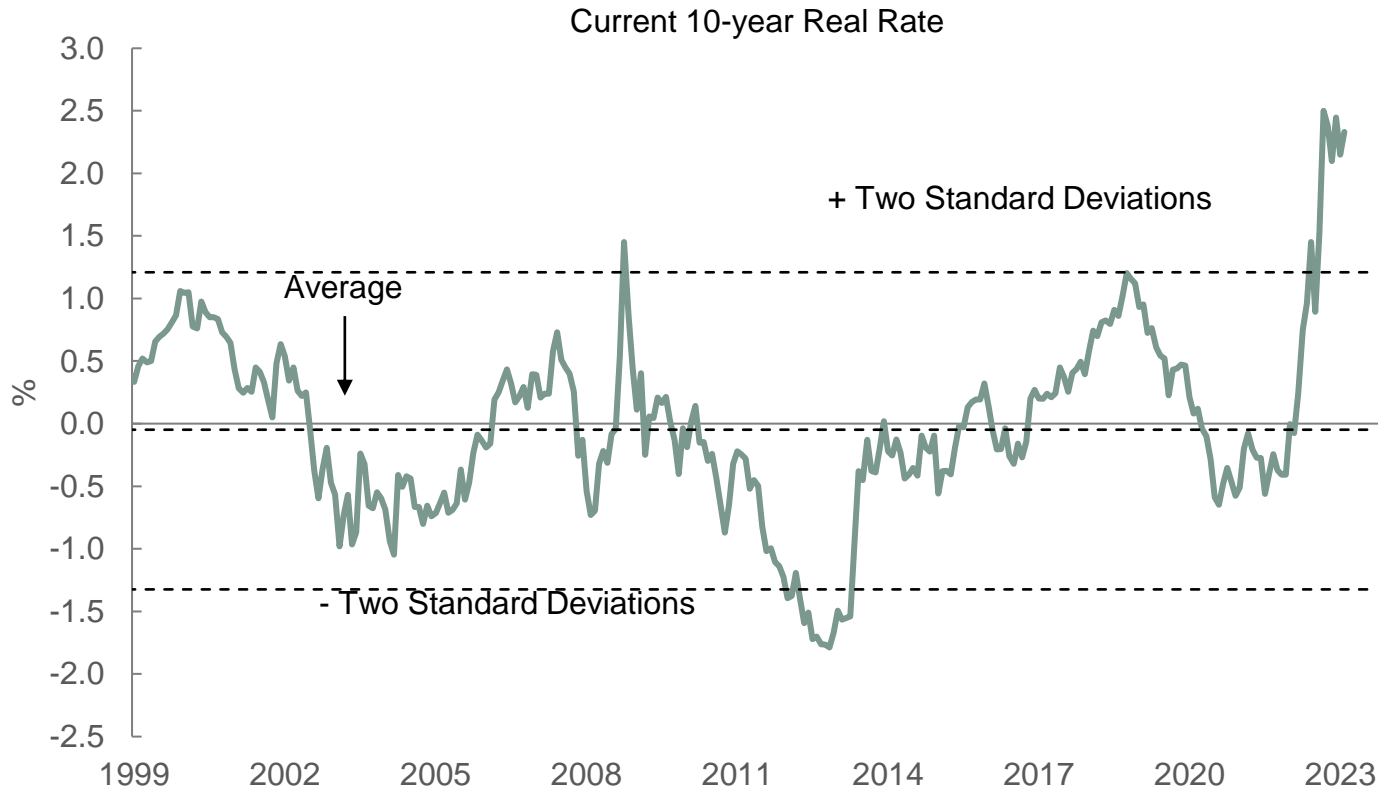
Tightening Credit Conditions

The Fed's Senior Loan Officer Survey has shown a dramatic tightening in lending standards for commercial and industrial loans. These standards have tightened to their highest non-pandemic reading since the 2008-09 financial crisis.



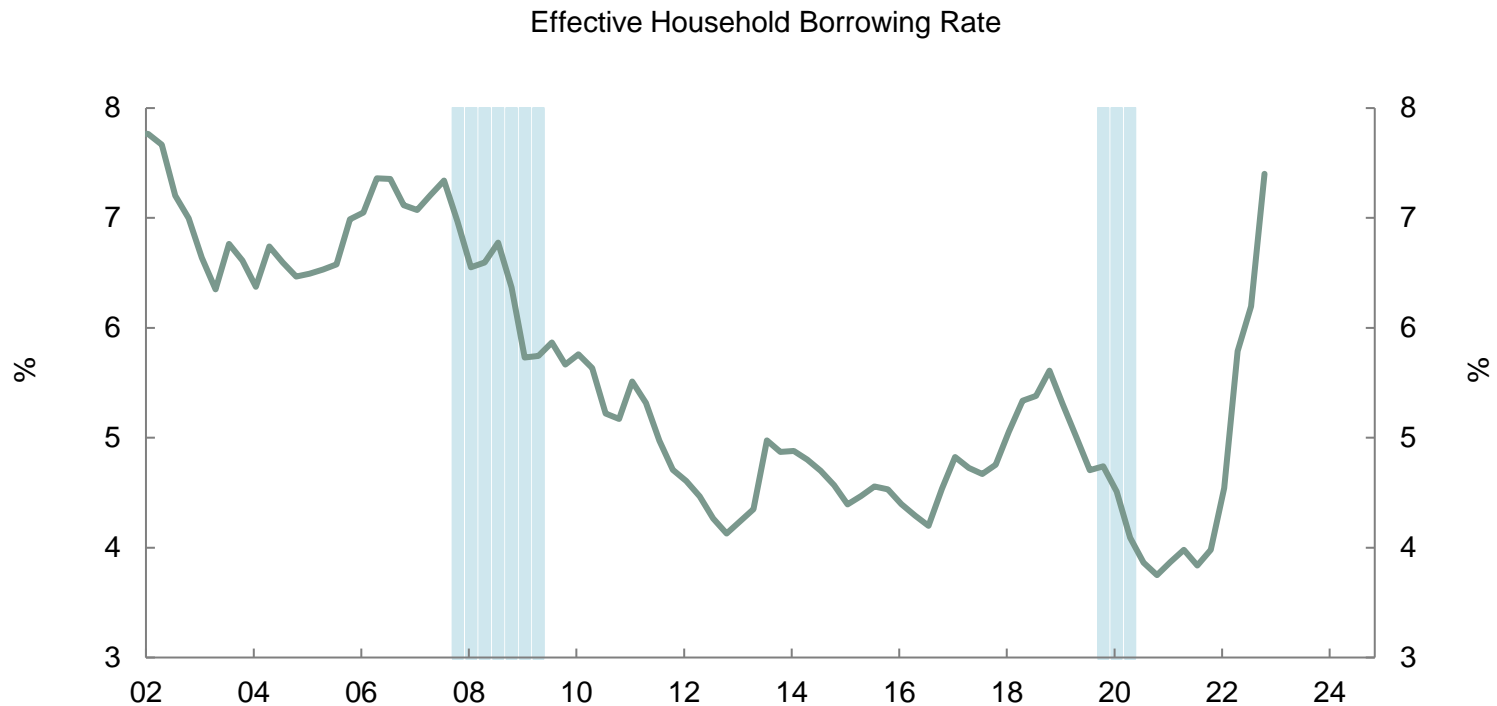
A Surging Real Rate

According to our calculations, the real rate is well above its equilibrium level. Interest rates are in highly restrictive territory.



Soaring Household Borrowing Costs

The interest rates that households are paying on mortgages, auto loans, credit cards and personal loans are effectively at their highest rates in 20 years. Borrowing costs are likely to remain elevated until the Fed reverses course.



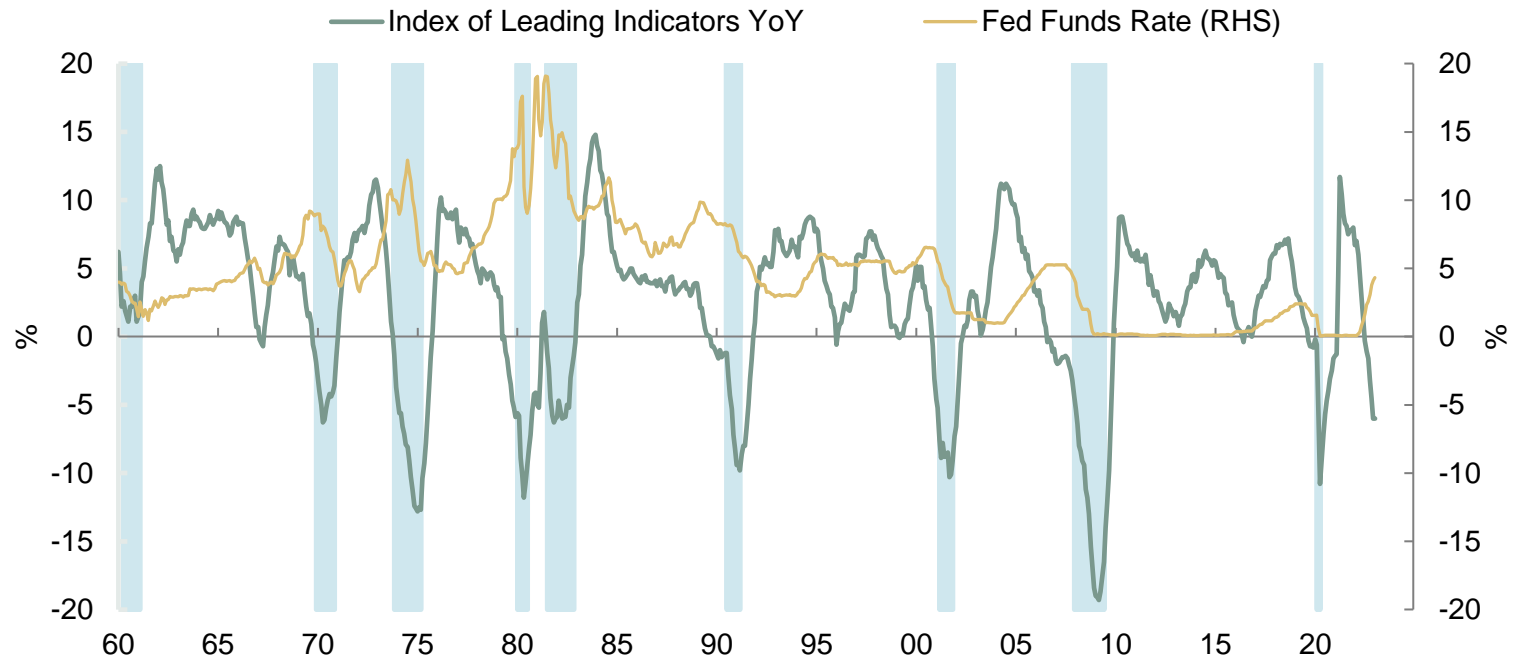
Reining in Consumer Lending

Standards are also tightening for households as commercial banks are showing less willingness to extend consumer credit. This should weigh on consumption going forward.



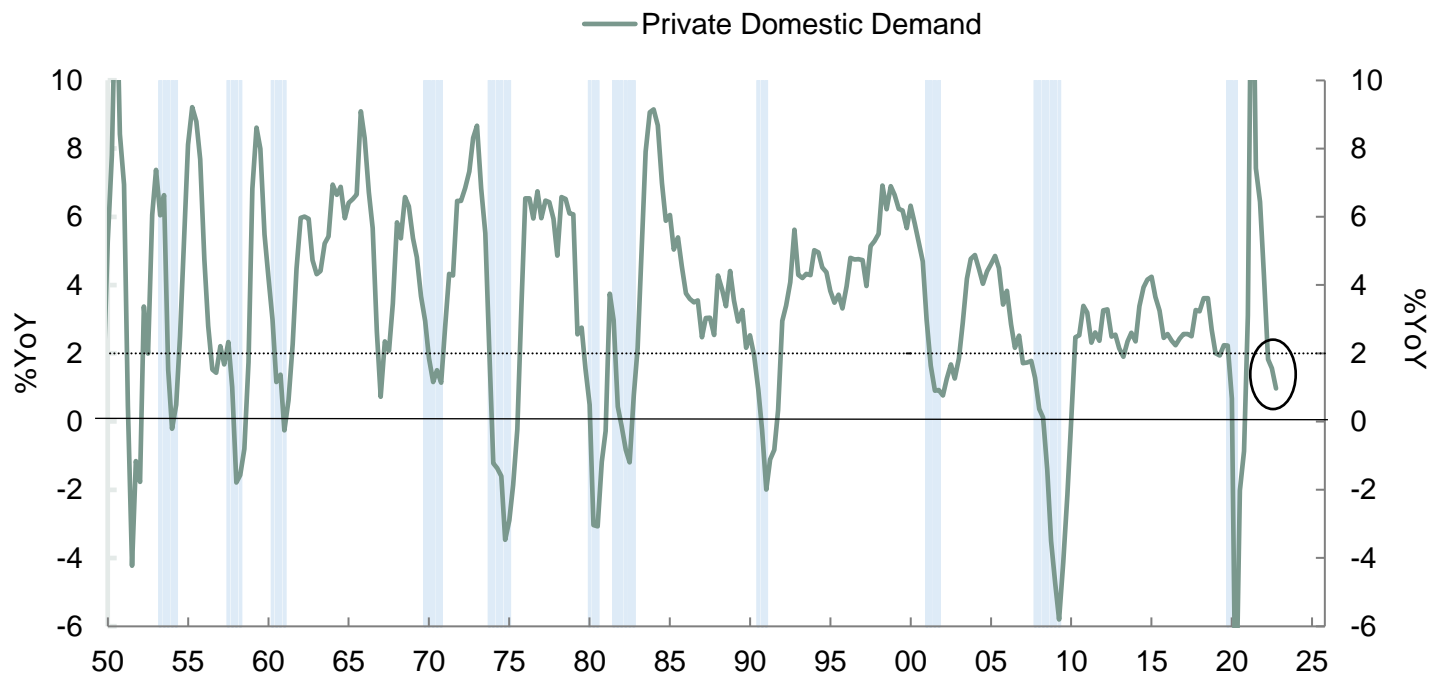
Tightening Into a Downturn

The Index of Leading Economic Indicators has declined sharply over the past year. Historically, the economy has always entered recession when this happened.



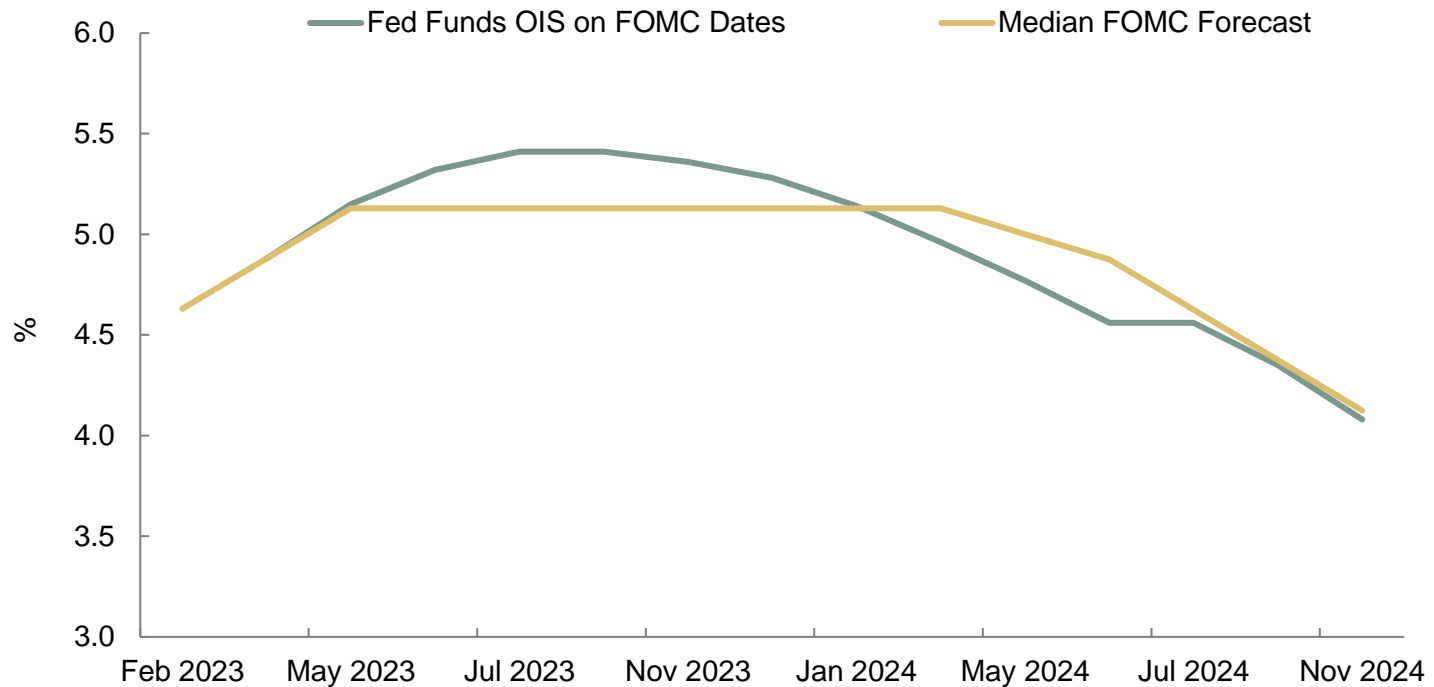
Rapidly Slowing Momentum

Private domestic demand, defined as real GDP less inventories, net exports and government spending slowed markedly last year. When its growth rate has fallen below 2%, recession has generally ensued.



The Bond Market vs. The Fed

The bond market expects the Fed to begin cutting rates in December. However, the Fed is projecting “higher for longer” with rate cuts not occurring until sometime in 2024.



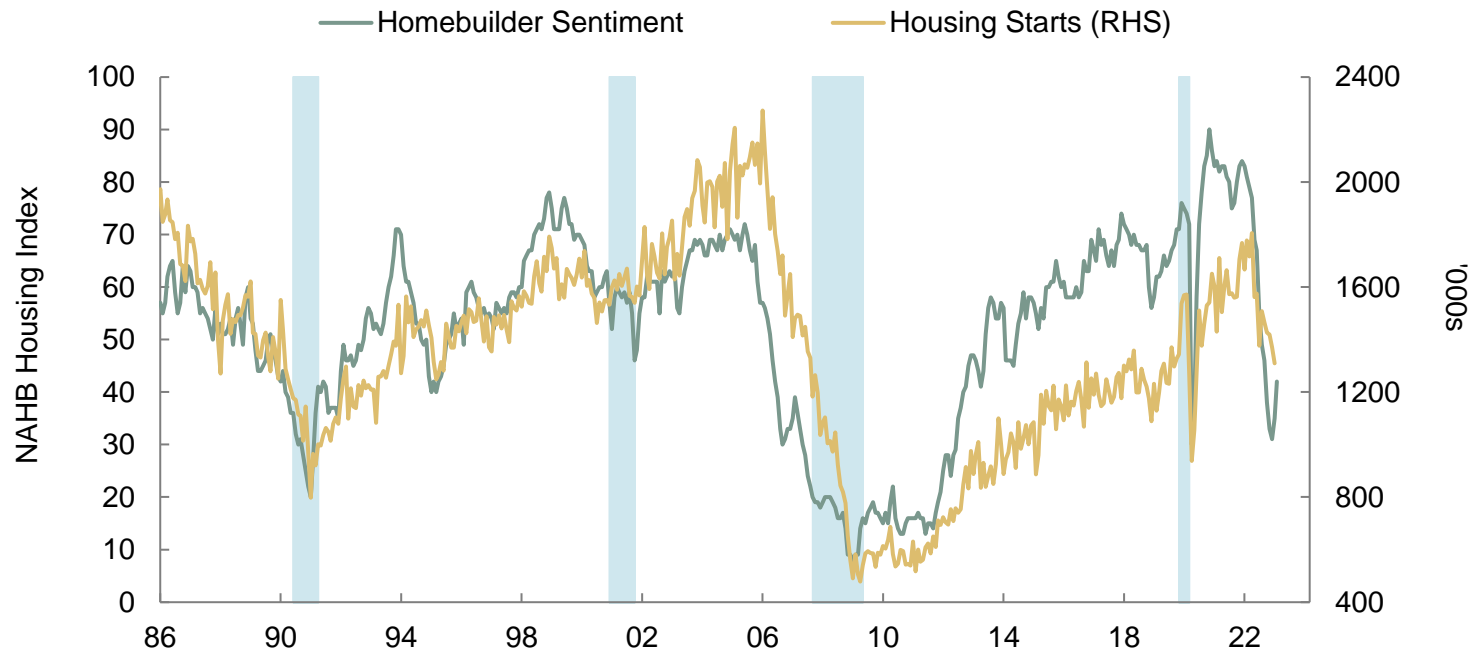
Timing The Pivot

Historically, the amount of time from the last Fed rate hike to the first Fed rate cut has been short. Given how quickly the Fed has raised rates, past may be prologue.



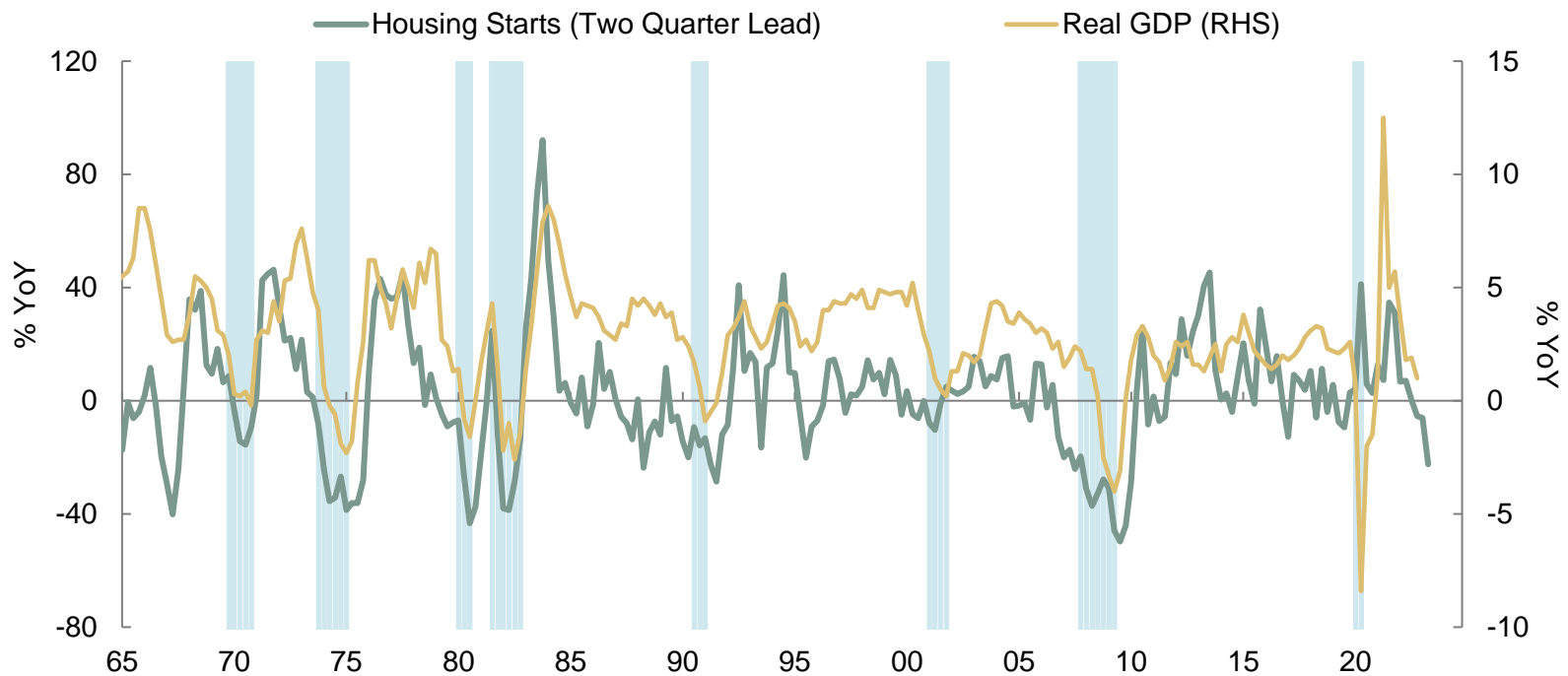
Onset of Housing Downturn

Homebuilders' sentiment has collapsed, and housing starts continue to decline. The housing sector is in recession.



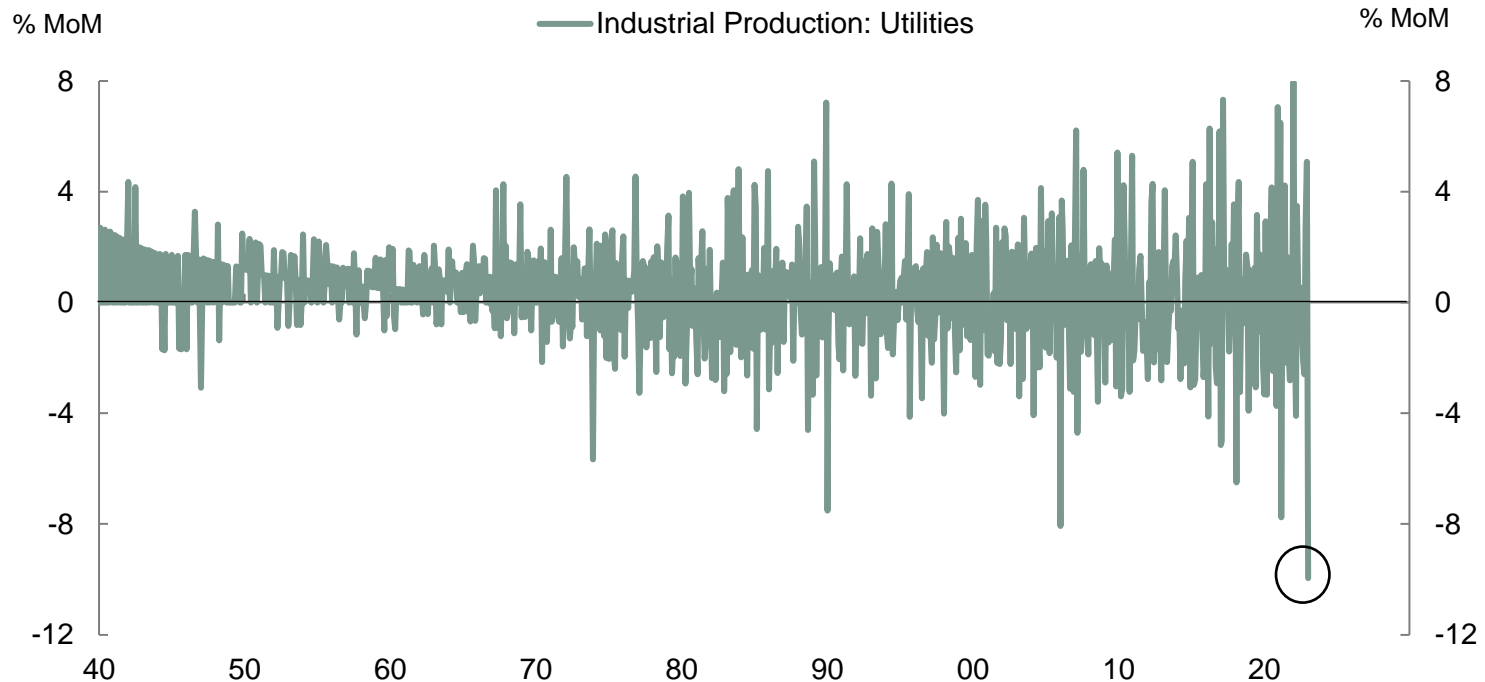
Housing Leads Economy

Housing starts lead real GDP growth by a couple of quarters. With starts poised to fall further, overall economic activity should follow.



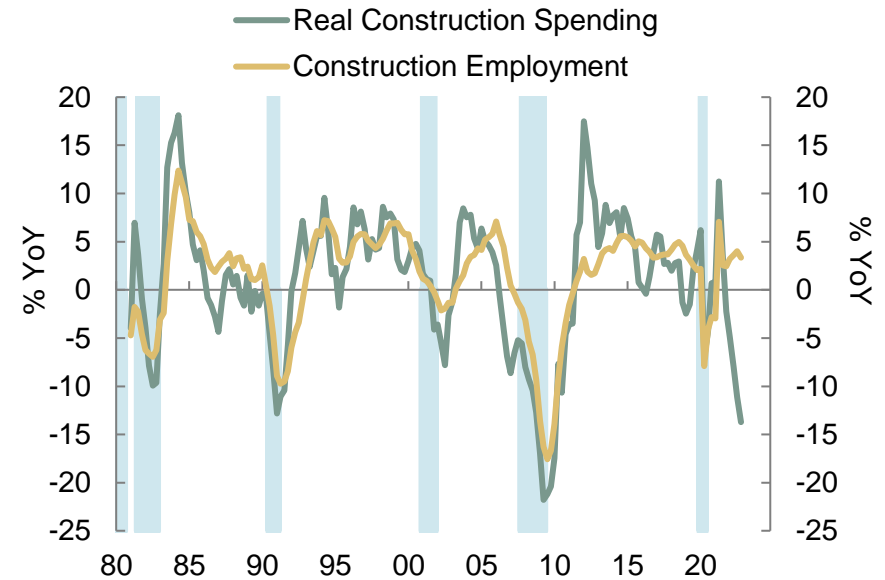
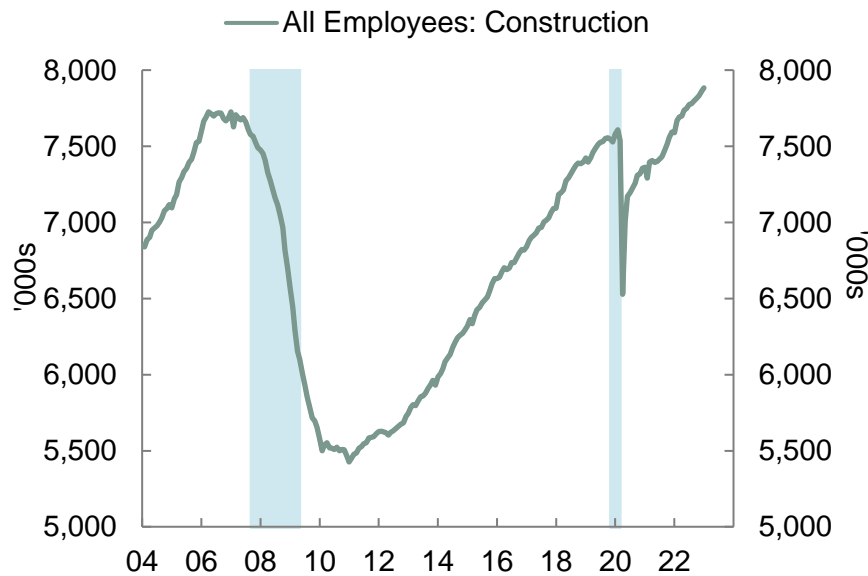
Unseasonably Warm Weather

Electricity and natural gas production showed a record decline in January. Since activity is normally weak in the month, the weather may have given the economy a temporary boost.



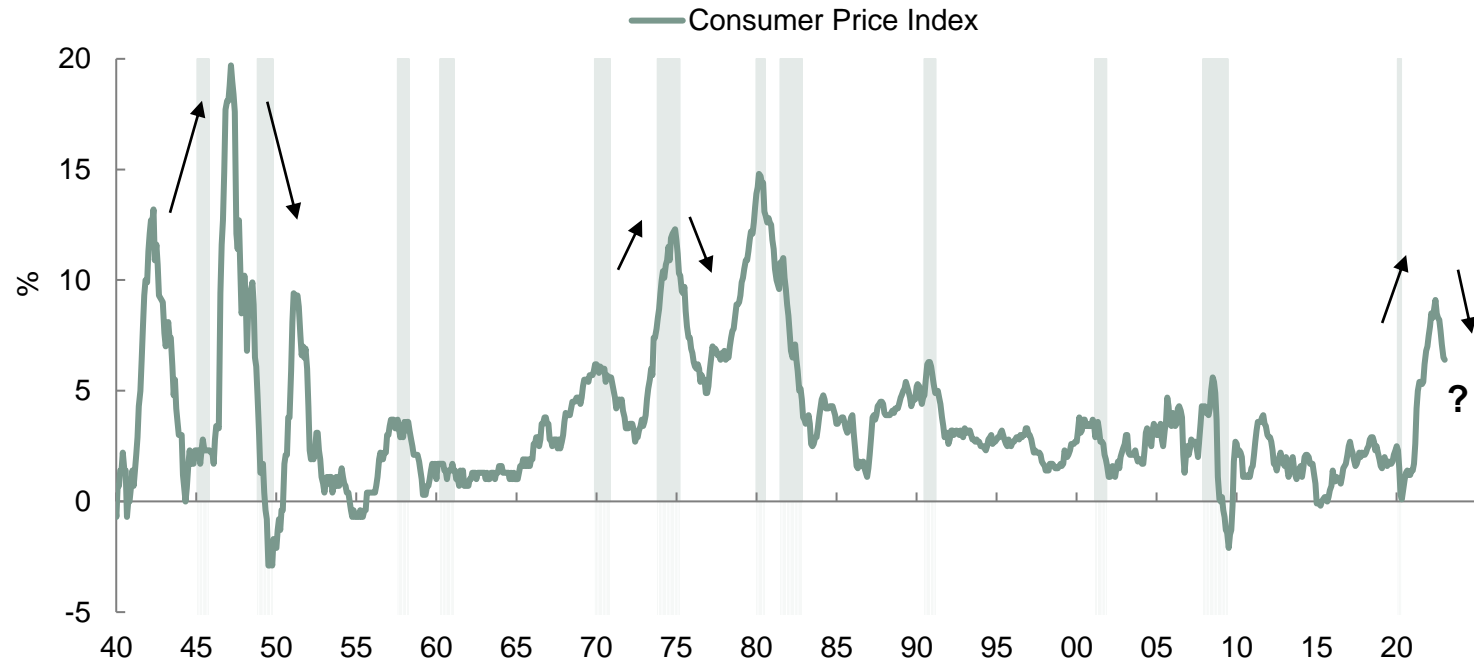
Construction Down, Employment High

Residential Construction has declined for seven consecutive quarters. However, overall construction employment is close to a record high.



What Goes Up Quickly, Comes Down Quickly

Historically, inflation does not plateau at an elevated reading. The latest data suggests the economy is past peak inflation.



Symmetry in Prices

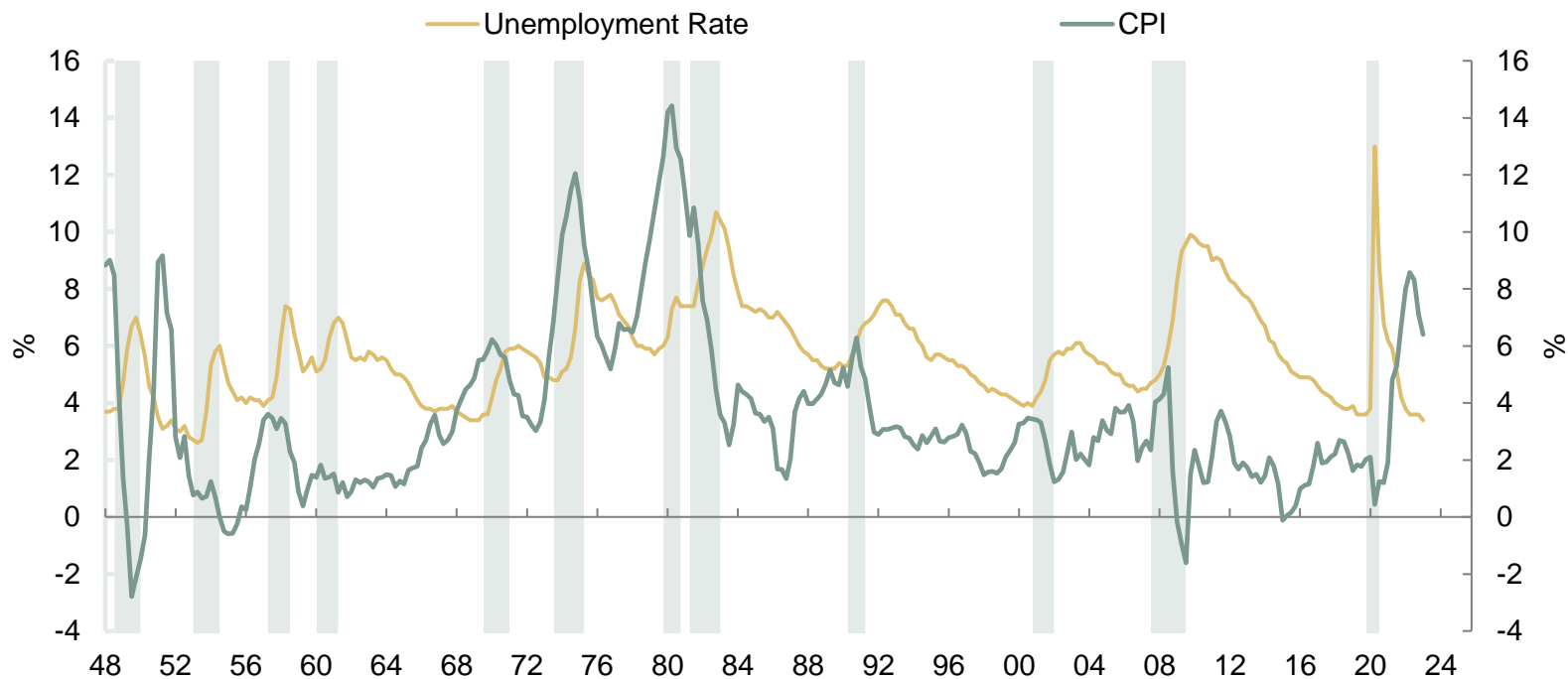
The rise in the inflation rate is often offset by a similar pace of decline. Indeed, the average slopes are a mirror image of one another.

Consumer Price Index

Inflation Upwing	Slope	Inflation Downwing	Slope
Sep 1940 to May 1942	0.35	May 1942 to May 1944	-0.47
Feb 1946 - Mar 1947	1.61	Mar 1947 to Apr 1949	-0.66
Jul 1949 - Feb 1951	0.58	Feb 1951 to Oct 1954	-0.21
May 1967 - Dec 1969	0.12	Dec 1969 - Jun 1972	-0.12
Jun 1972 to Dec 1974	0.37	Dec 1974 to Nov 1976	-0.31
Nov 1976 to Mar 1980	0.22	Mar 1980 to Jun 1983	-0.31
Jun 1986 to Sep 1990	0.07	Sep 1990 to Jan 1992	-0.25
Aug 2007 to Jul 2008	0.22	July 2008 to Dec 2008	-1.19
May 2020 to Jun 2022	0.38	Jun 2022 to ?	
Average 1940-2008	0.44	Average 1940-2008	-0.44

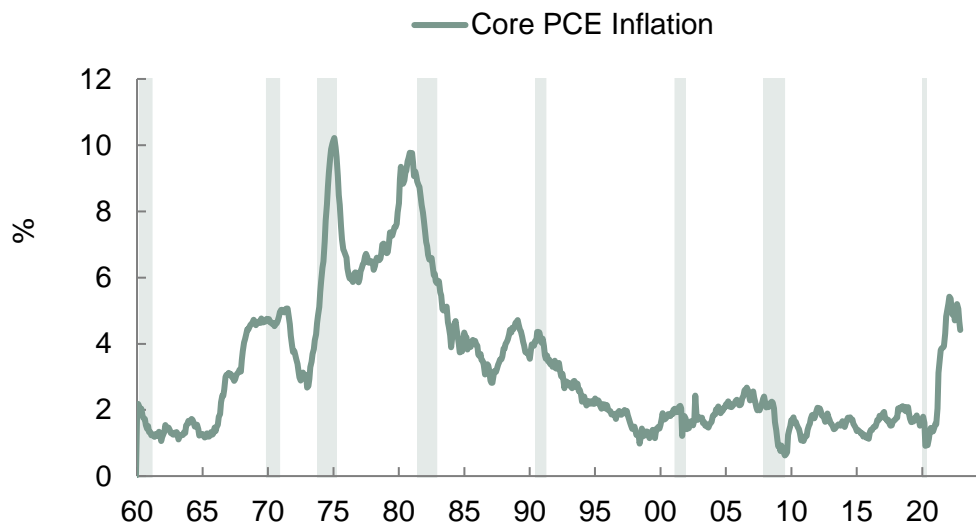
Leading And Lagging Indicators

The unemployment rate spikes quickly ahead of recession. Meanwhile, inflation peaks after the recession has begun.



Core PCE and Inflation Cycles

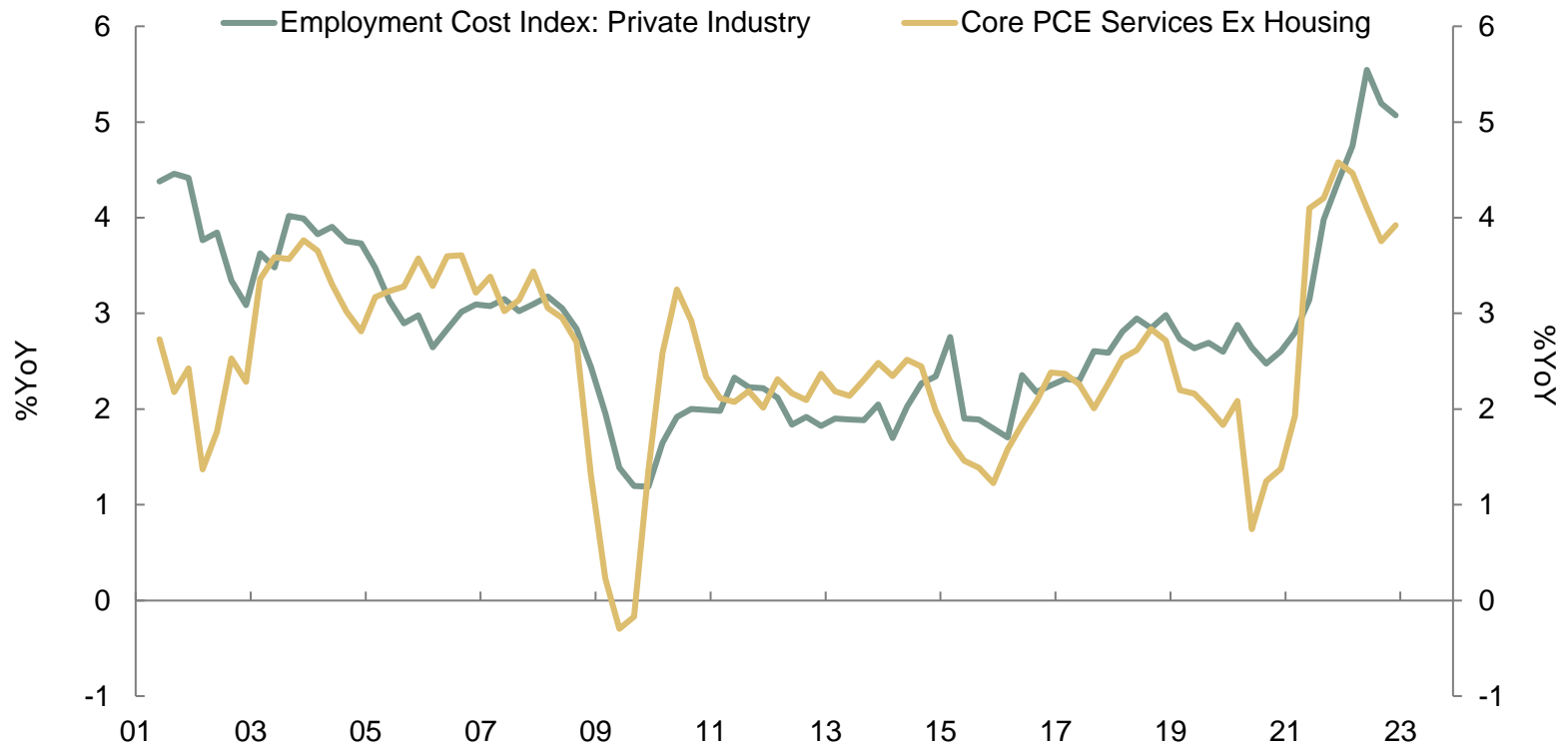
The core personal consumption expenditures (PCE) deflator is the Fed's preferred inflation series. In the past, the peak to trough decline in core PCE has been nearly 60%.



Inflation Cycles			
Peak	Trough	Bps	Percentage
Feb-60	Nov-61	-110	-50%
Dec-69	Jan-73	-210	-44%
Feb-75	Jul-76	-430	-42%
Jan-81	Mar-87	-700	-71%
Aug-90	Jun-98	-340	-77%
Jul-01	Jan-02	-70	-33%
Dec-07	Jul-09	-180	-75%
Average >		-291	-56%

The Super Core

The Fed has recently narrowed its focus to core PCE services excluding housing. This subsection of the core PCE deflator has closely tracked the trend in employment costs.



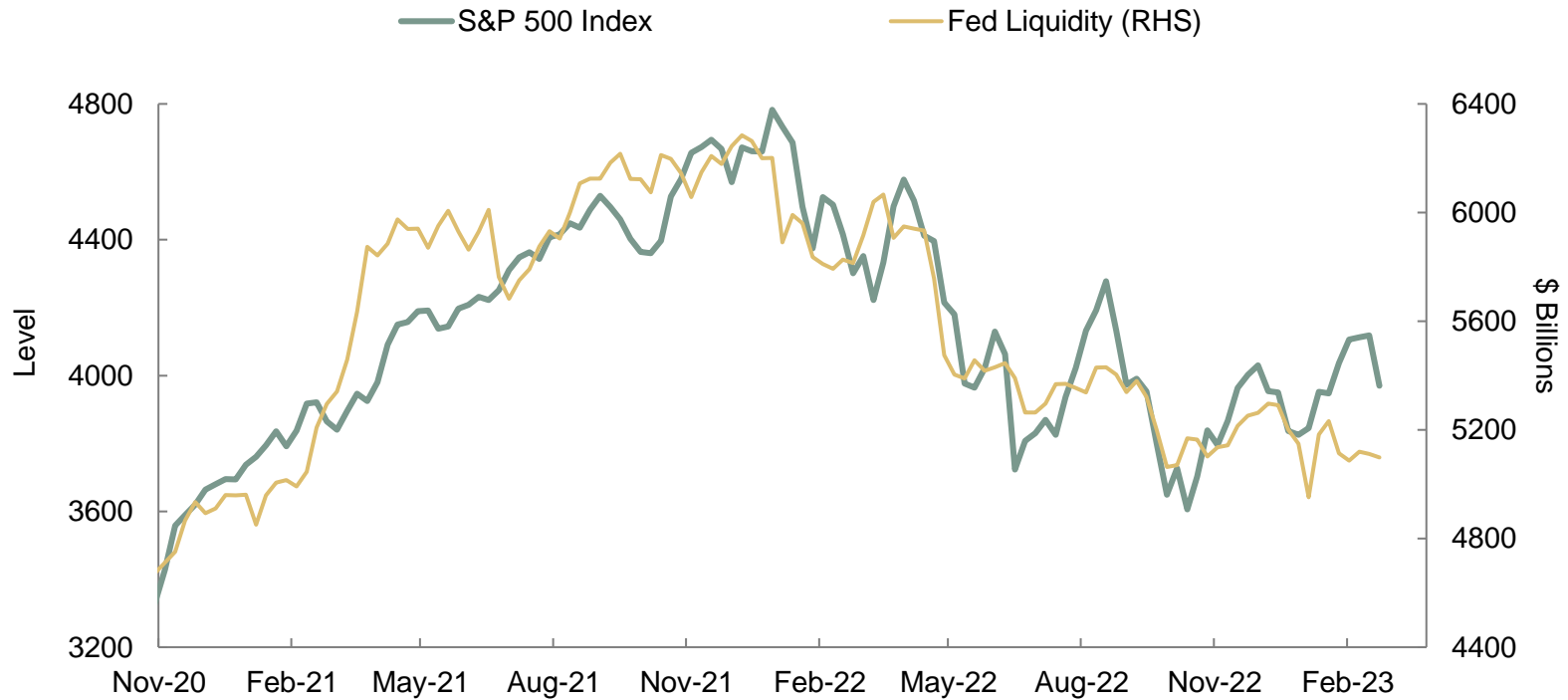
Stable Inflation Expectations

Despite record high inflation readings, the bond market remains sanguine on the inflation outlook. This is confirmed by consumer-based surveys of long-term inflation expectations and the forward inflation swaps market.



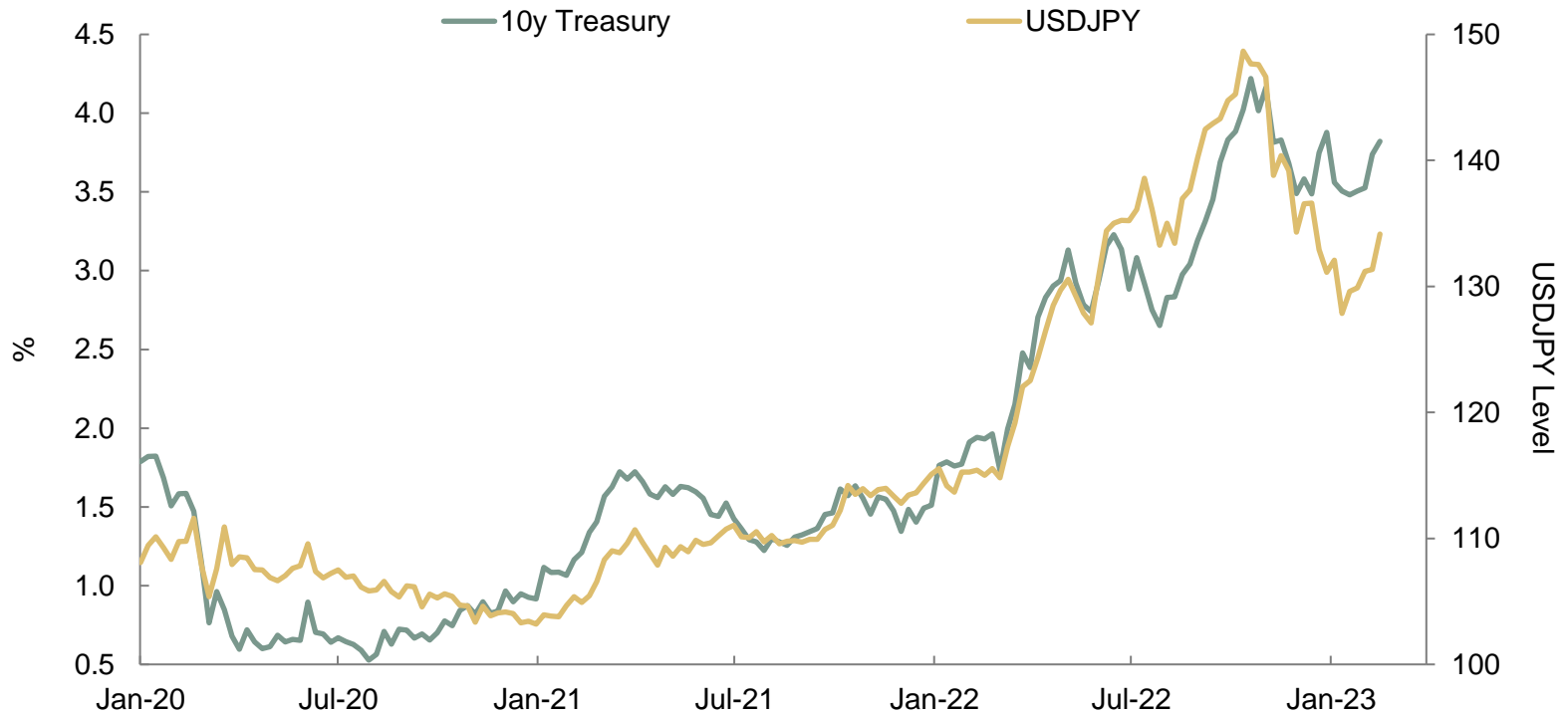
Fellow Travelers: Fed Liquidity and Stock Prices

Over the past few years, the equity market has closely tracked Fed-provided liquidity which is defined as the Fed's securities holdings less the Treasury General Account less the Reverse Repo Facility. Hence, quantitative tightening should be an ongoing headwind to stocks.



Exogenous Factors

Over the past couple of years, the 10-year Treasury yield and the Dollar/Yen exchange rate moved in tandem. However, there has been a noticeable breakdown in the relationship as of late.



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