MARKET OUTLOOK

Balancing Act

First Quarter 2024

You have to be working in this business more than 43 years, before 1980, to have ever seen anything other than declining interest rates and ultra-low interest rates. So it's only natural to conclude that declining and ultra-low interest rates are normal. But maybe they're not. You have to understand history and understand where the current period fits into history and understand how it's different from normal, and what it is that shaped those differences.

Howard Marks, *Co-Chairman of Oaktree Capital Management*

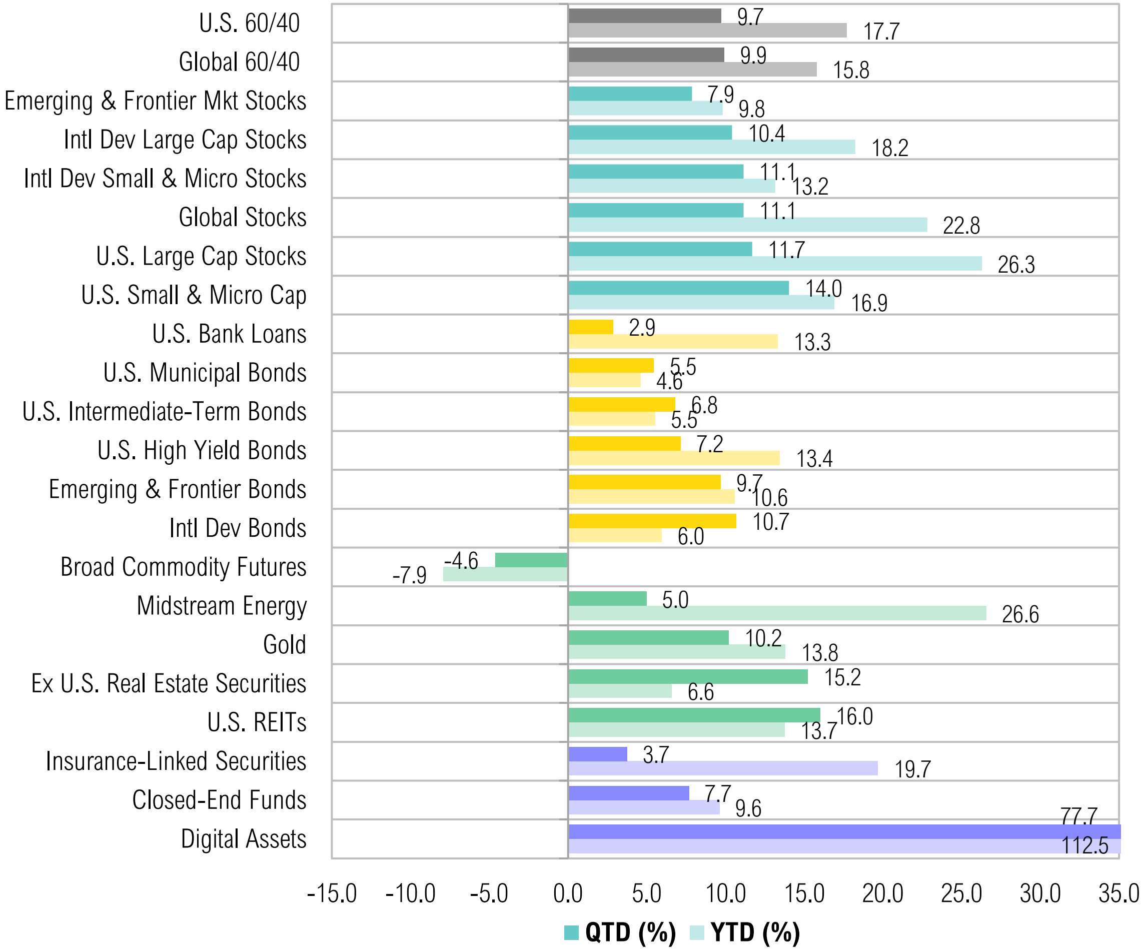
The test of a first-rate intelligence is the ability to hold two opposing ideas in mind at the same time and still retain the ability to function. One should, for example, be able to see that things are hopeless yet be determined to make them otherwise.

F. Scott Fitzgerald

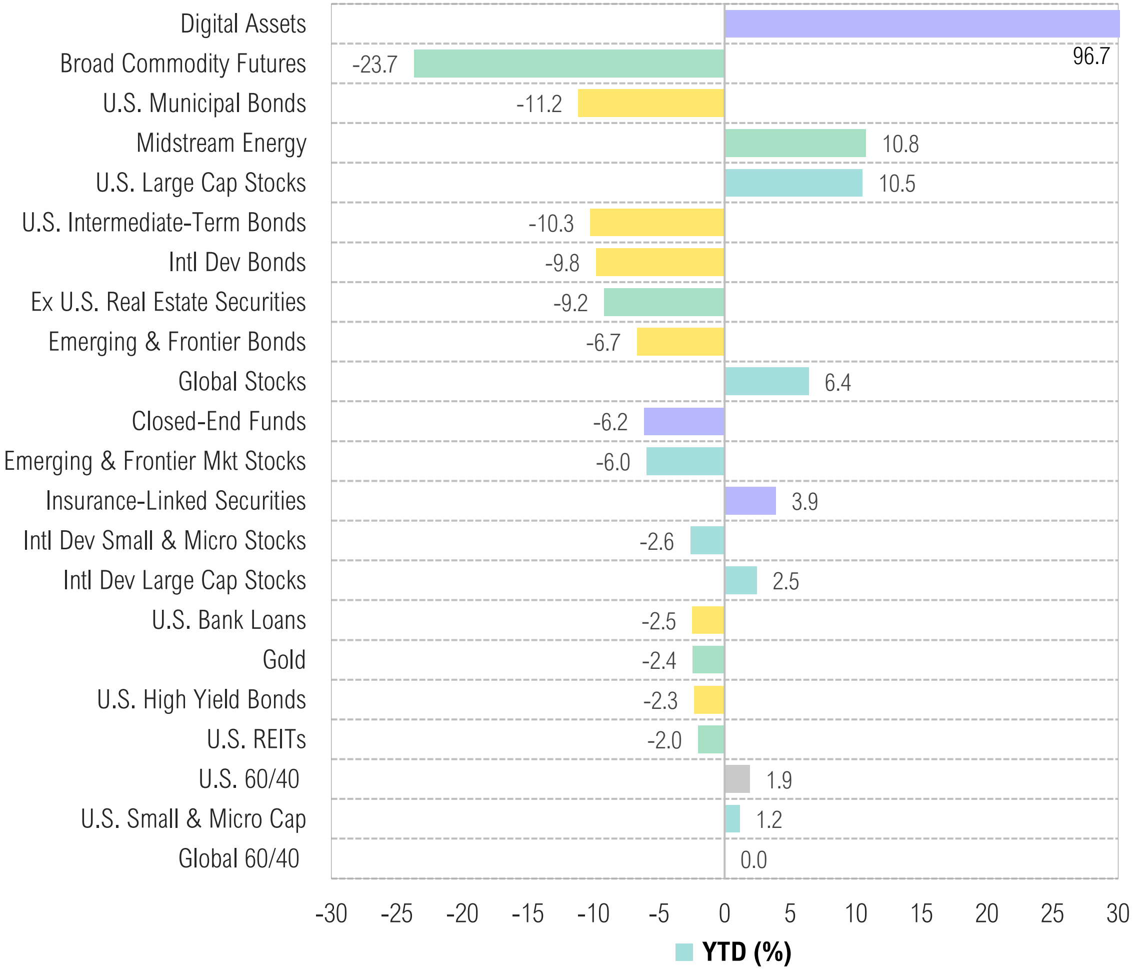

US
ECONOMY
BALLOTS
FOR SALE
KROESE '24

2023 was a 'snap-back' year with strong relative returns from midstream energy and U.S. large cap stocks, while commodities and real estate underperformed

Total Returns, %

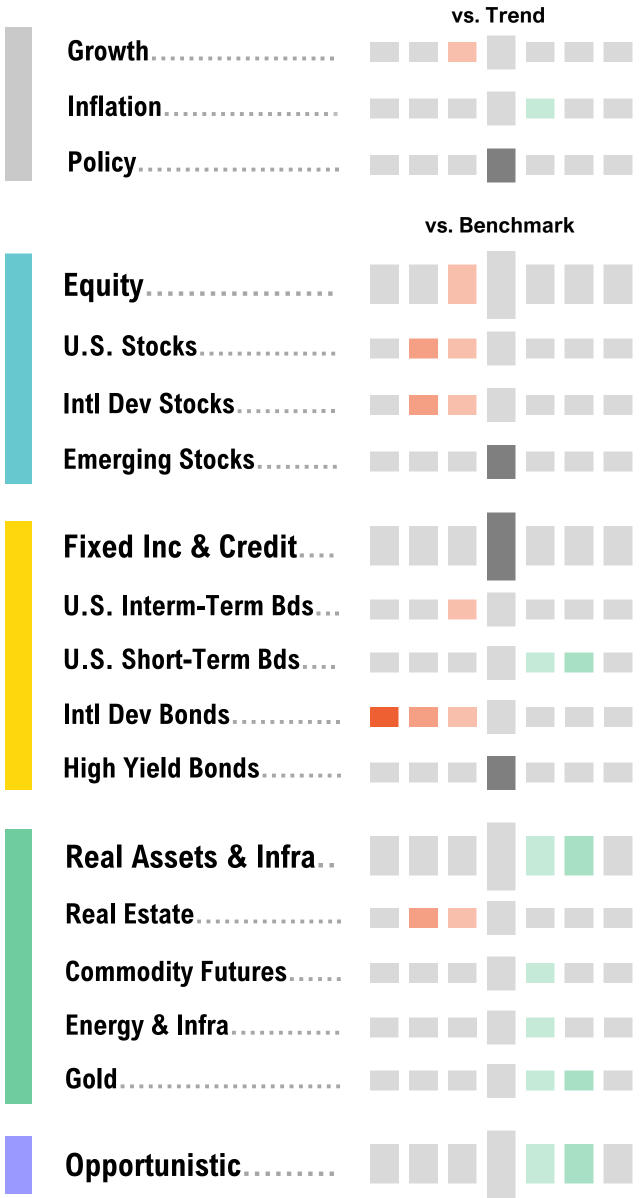


Relative Total Returns vs. Global 60/40, %



Source: Bloomberg. Returns for periods greater than 1 year are annualized.

Positioning Summary



Asset Class Themes

- U.S. remains a positive outlier amidst slow real developed world growth, underpinned by high debt loads, high deficits, and poor demographics
- U.S. consumer spending becoming much more discerning amidst high cost of credit and depleted COVID-era savings
- Stop-start, contradictory fiscal/ mon-pol creates wide-ranging possible outcomes

- Stay patient & careful; don't underestimate risks from higher cost of capital
- Tilt to quality & cash flows, but maintain exposures to high quality growth managers
- Few fat pitches for tactical region or market cap allocations, with budding exception in emerging markets; extreme underperformance and geopolitical risk in China, forcing important allocation and benchmarking decision points

- Higher short-term rates ('paid to wait') reduce the risk of wait-and-see; keep credit risk/ duration relatively low but extend out of cash if not done already
- Opportunities for first tranche in loans, high-yield bonds, other credit, etc.
- Private credit poised to outperform, but avoid legacy portfolios
- Higher-for-longer increases the risks of a CRE-related credit event

- Policy (and war) hedges should be maintained
- Watch crude oil as an indicator of potential escalation in the Middle East
- Emerging opportunities in private real estate, but avoid legacy portfolios
- Gold/bitcoin will compete for incremental safe-haven flows as rate-cutting cycle begins

- Volatility presents opportunities; consider tactical multi-asset strategies & long/short equity

Portfolio Themes

1

Negative feedback loops from policy have increased interest rates (the cost of capital)

2

Higher rates will continue to hurt risky assets with negative cash flows (& reward those with positive cash flows)

3

Policy & geopolitical backdrop suggests right-tail hedges are as important as left-tail ones

4

Opportunity set is shaping up to be one of the best in many years, but patience is key

See important disclosures at the end of this presentation

MOUNT YALE

Diversification crucial in a year where investors will need to *balance* a very wide range of potential outcomes

	1/1/2022	1/1/2023	Today*
GLOBAL GROWTH			
US GDP Growth (%, Y/Y)	5.4%	0.7%	2.9%
Eurozone Real GDP (%, Y/Y)	5.2%	1.8%	0.0%
Japan Real GDP (%, Y/Y)	1.3%	0.6%	1.6%
China Real GDP (%, Y/Y)	8.5%	3.0%	5.2%
POLICY			
Inflation (CPI, % Y/Y)	7.19%	6.44%	3.30%
Fed Funds Rate (upper) (%)	0.25%	4.50%	5.50%
Real Fed Funds Rate (%)	-6.94%	-1.94%	2.20%
Reverse Repo ($Bn)	$1,904	$2,554	$590
Treasury Issuance ($Bn, NTM)[1]	$1,215	$2,369	$2,500
Net Treasury Supply ($Bn, NTM)[2]	$2,017	$1,115	$2,602
CONSUMER HEALTH			
Average Credit Card Rate	14.51%	19.07%	21.47%
% of Consumers Stressed[3]	31%	40%	48%
Estimated Excess Savings ($Bn)	$2,000	$800	$100
Gasoline Price ($/gallon)	$3.29	$3.22	$3.09
KEY MARKET PRICES/RATES			
S&P 500 Price	$4,766	$3,840	$4,756
Equity Sentiment	58%	24%	67%
2-Year Treasury Yield	0.73%	4.43%	4.34%
10-Year Treasury Yield	1.51%	3.88%	4.13%
High Yield Bond Yield	4.34%	8.87%	7.74%
S&P 500 Earnings Per Share	$205	$218	$215
S&P 500 P/E (Fwd)	21.4	16.8	19.5
Gold Price	$1,829	$1,824	$2,020
Uranium Price	$42	$48	$106
WTI Crude Oil	$75.21	$80.26	$74.13
Bitcoin	$47,314	$16,615	$41,432

- Inflation rates have decreased dramatically
- Rates and yields are higher, especially in real terms, but potentially trending lower
- Liquidity is likely to worsen, with this largely depending on Fed policy, Treasury issuance, and how Treasury manages its cash
- Consumers are in worse shape (less savings, higher incremental debt service, and pressure from accumulated inflation), with continued wage gains a potential offset
- ***Equity valuations are still relatively high but have significantly decreased from their peak; generally, lower inflation and lower rates support higher valuations.***
- Equity sentiment largely reflects a soft-landing, but there is *still room* for sentiment to improve further

[1] Treasury, SIFMA; [2] Net supply incorporates change in Fed balance sheet and RRP; [3] U.S. Census Bureau's Household Pulse Survey including extrapolation of prior trend through today.
Source: Bloomberg, SF Federal Reserve, Various.

“

A common theme is that, while inflation is coming down, and that’s very good news, the price level is not coming down…So people are still living with high prices. And that’s not—that is something that people don’t like.

Jerome Powell, *Federal Reserve Chairman (December 13 FOMC press conference)*

“

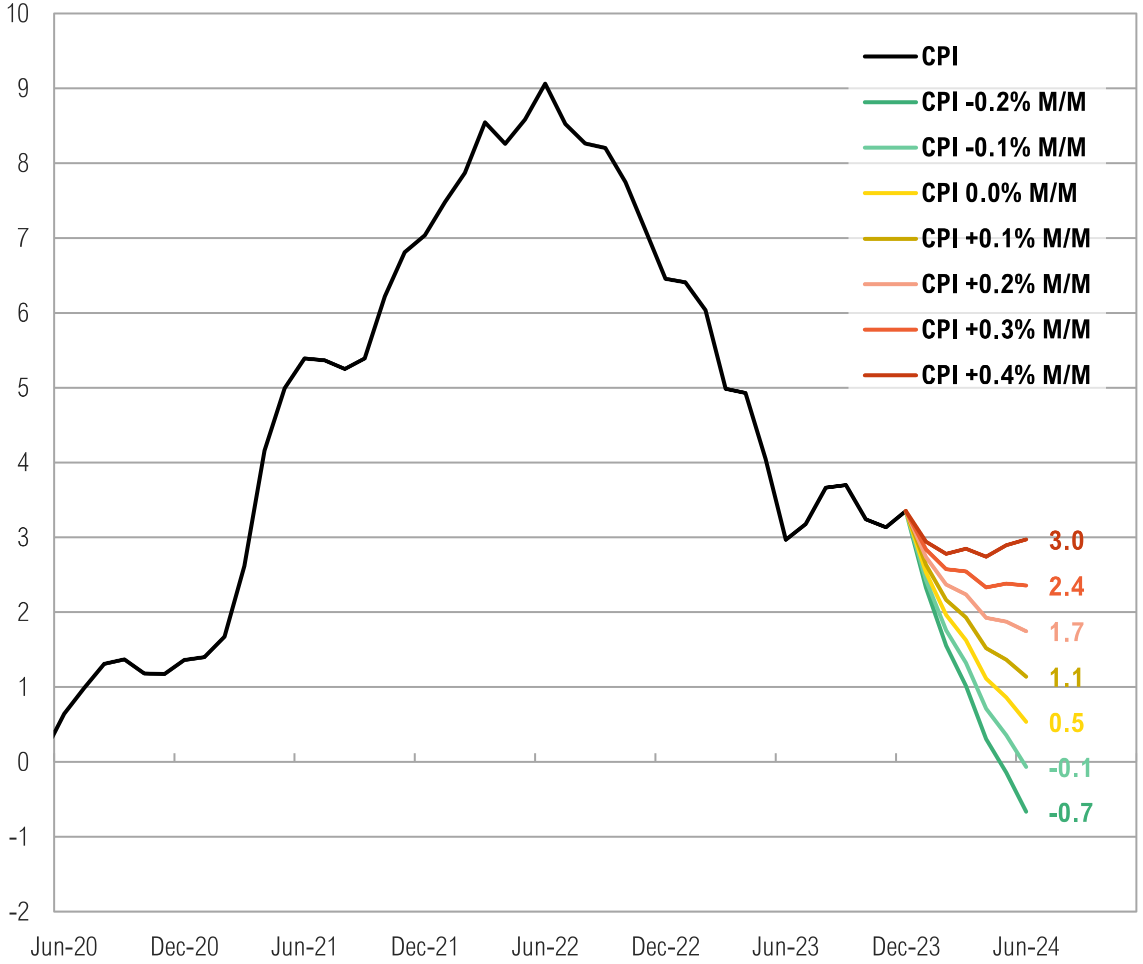
If we don’t maintain sufficiently tight financial conditions, there is a risk that inflation will pick back up and reverse the progress we’ve made. In light of the easing in financial conditions in recent months, we shouldn’t take the possibility of another rate increase off the table just yet. Restrictive financial conditions have played an important role in bringing demand into line with supply and keeping inflation expectations well-anchored…

So, given the rapid decline of the overnight RRP, I think it’s appropriate to consider the parameters that will guide a decision to slow the runoff of our assets. In my view, we should slow the pace of runoff as overnight RRP balances approach a low level.

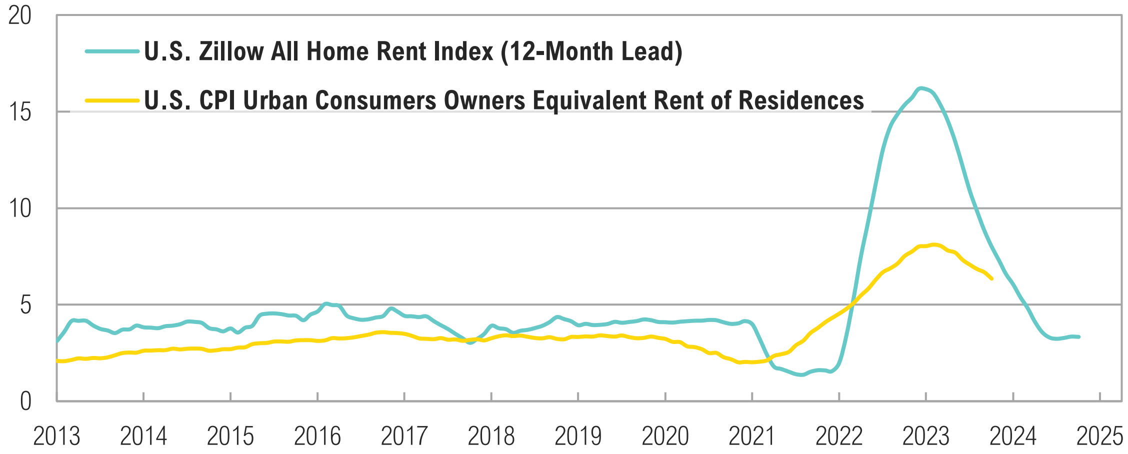
Lorie Logan, *President of the Federal Reserve Bank of Dallas*

The consensus view that inflation will be back at the Fed's 2% target by June is reasonable; however, there are upside and downside risks

Projected Headline CPI, Y/Y %

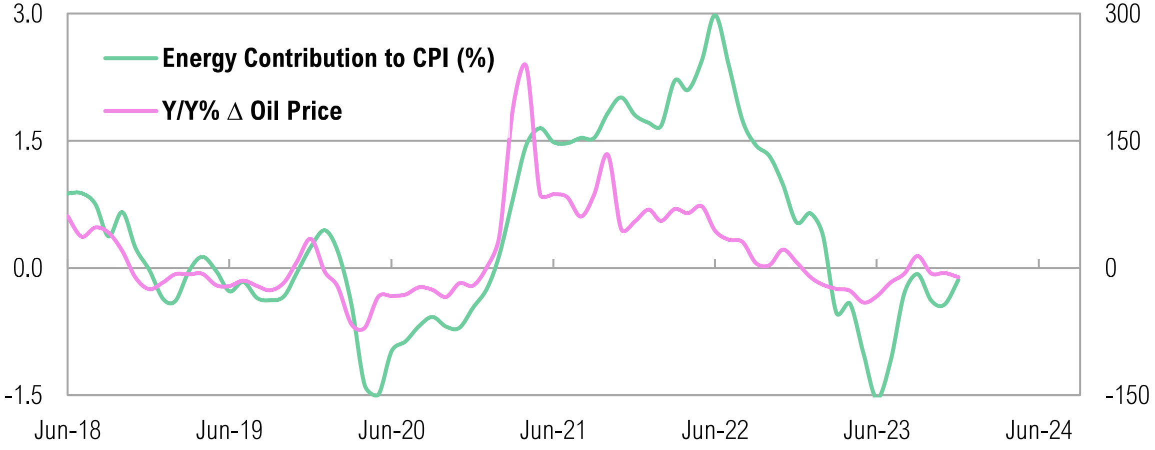


CPI Owners Equivalent of Rent Component vs Zillow Rent Index (12-Month Lead), Y/Y %



CPI: Energy Contribution, Y/Y %

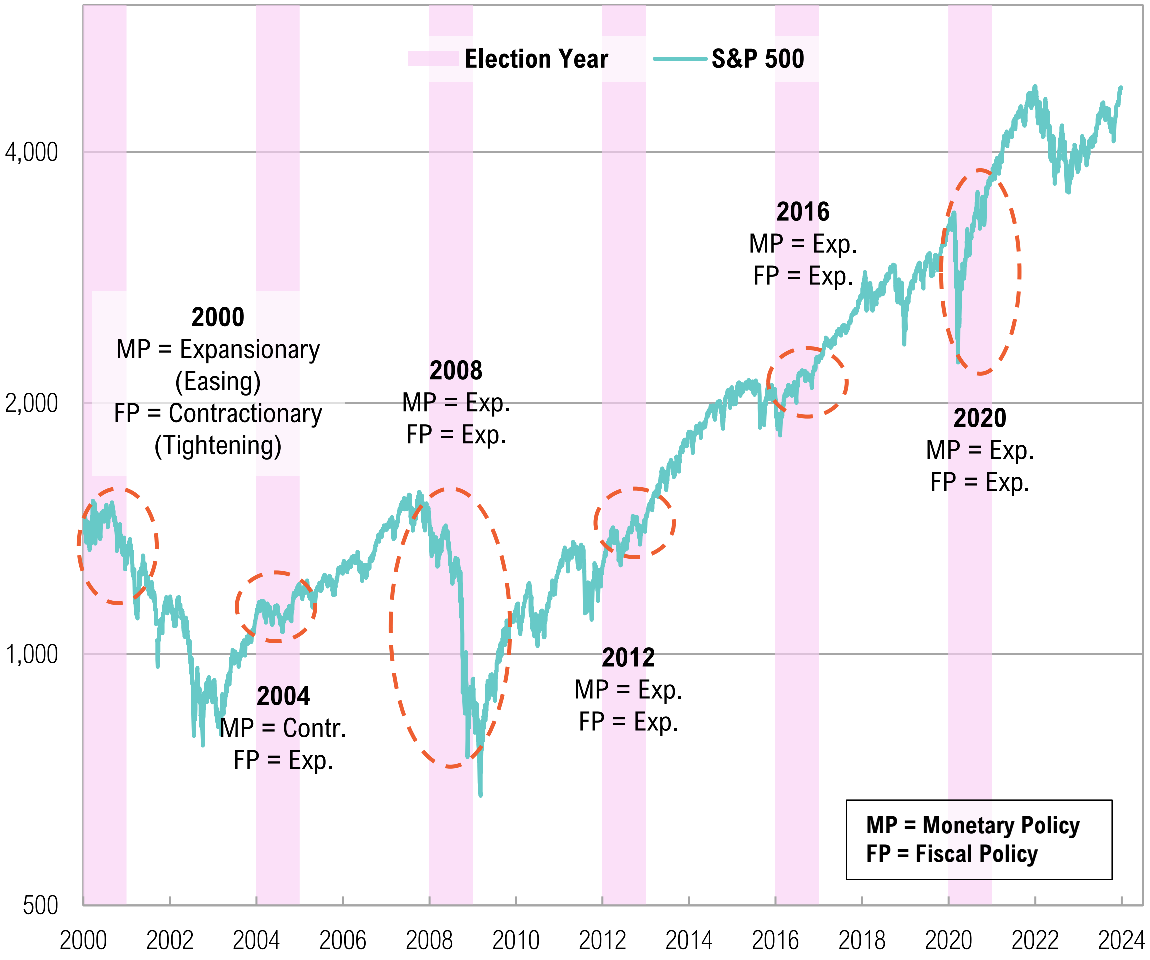
Change in WTI Crude Oil Price, Y/Y %



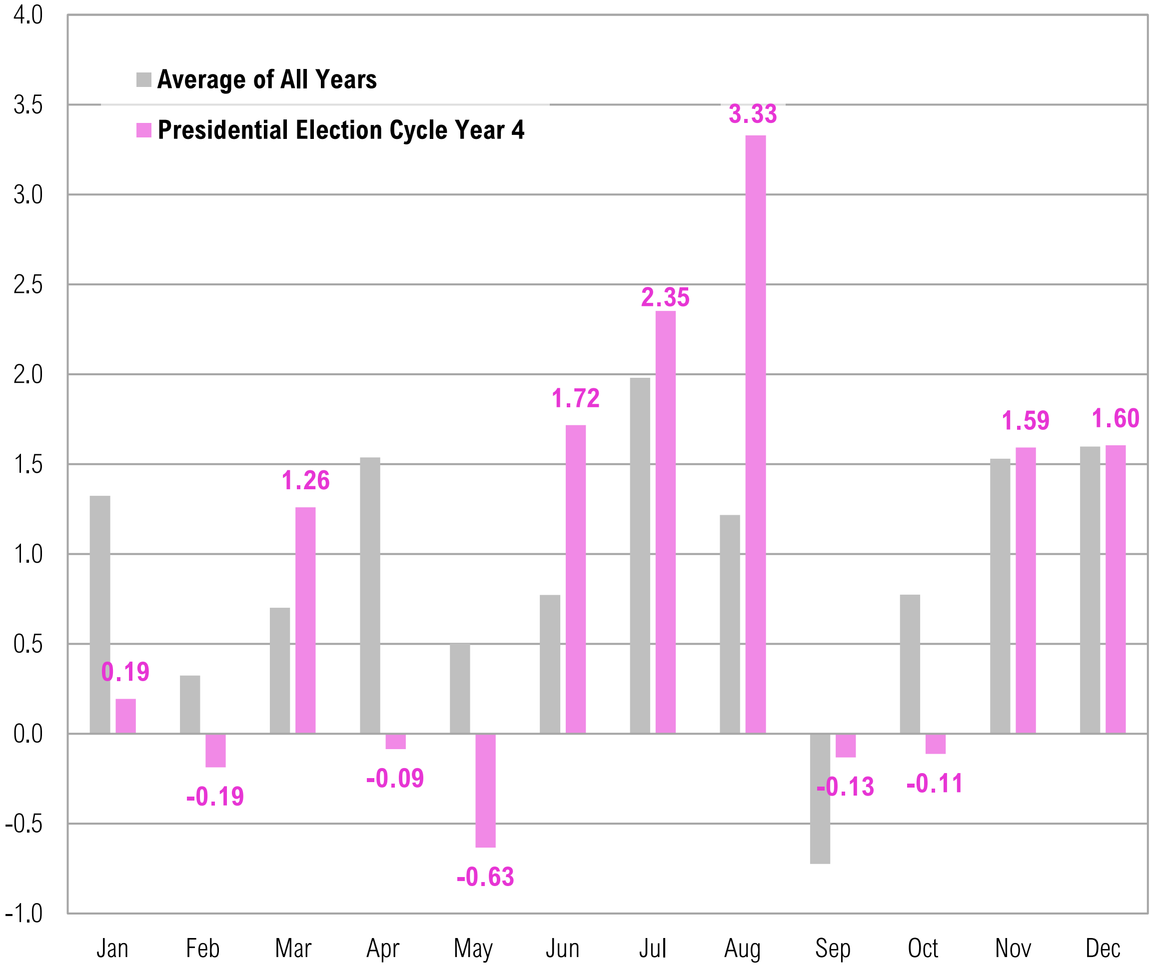
Source: Bloomberg

While election years are known for easy monetary and fiscal policy, markets aren't immune to stress during these years

S&P 500 Index (Log Scale)



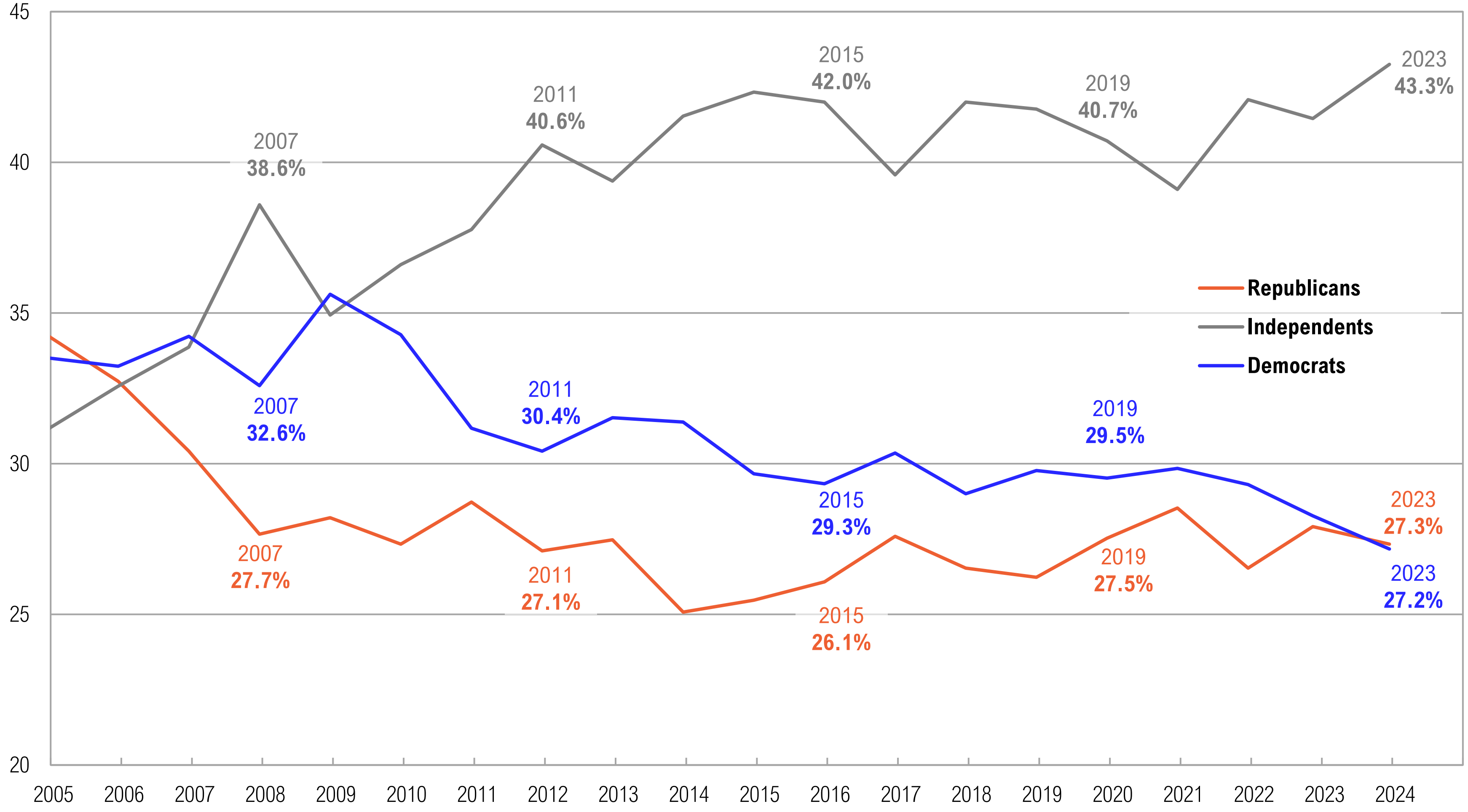
U.S. Large Cap Average Monthly Return, %



Source: Bloomberg. Average monthly return since 1/31/1920.

Heading into an election year, the percentage of Americans identifying as traditional partisan voters is at its lowest in at least 20 years

Political Party Identification, %



43.3% **of Americans are identifying as independent voters (the highest in at least 20 years).**

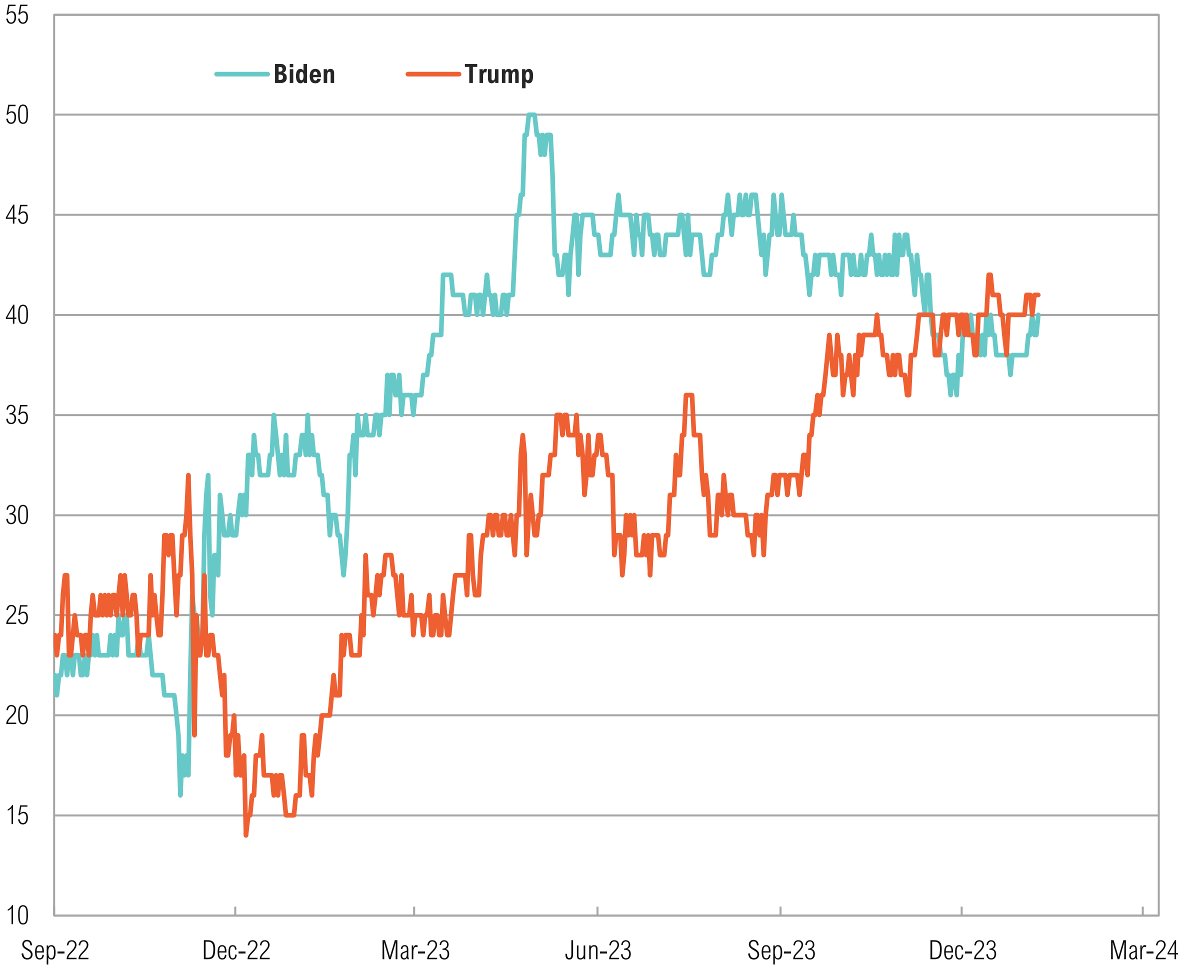
27.3% **of Americans are identifying as Republican voters.**

27.2% **of Americans are identifying as Democrat voters (the lowest in at least 20 years).**

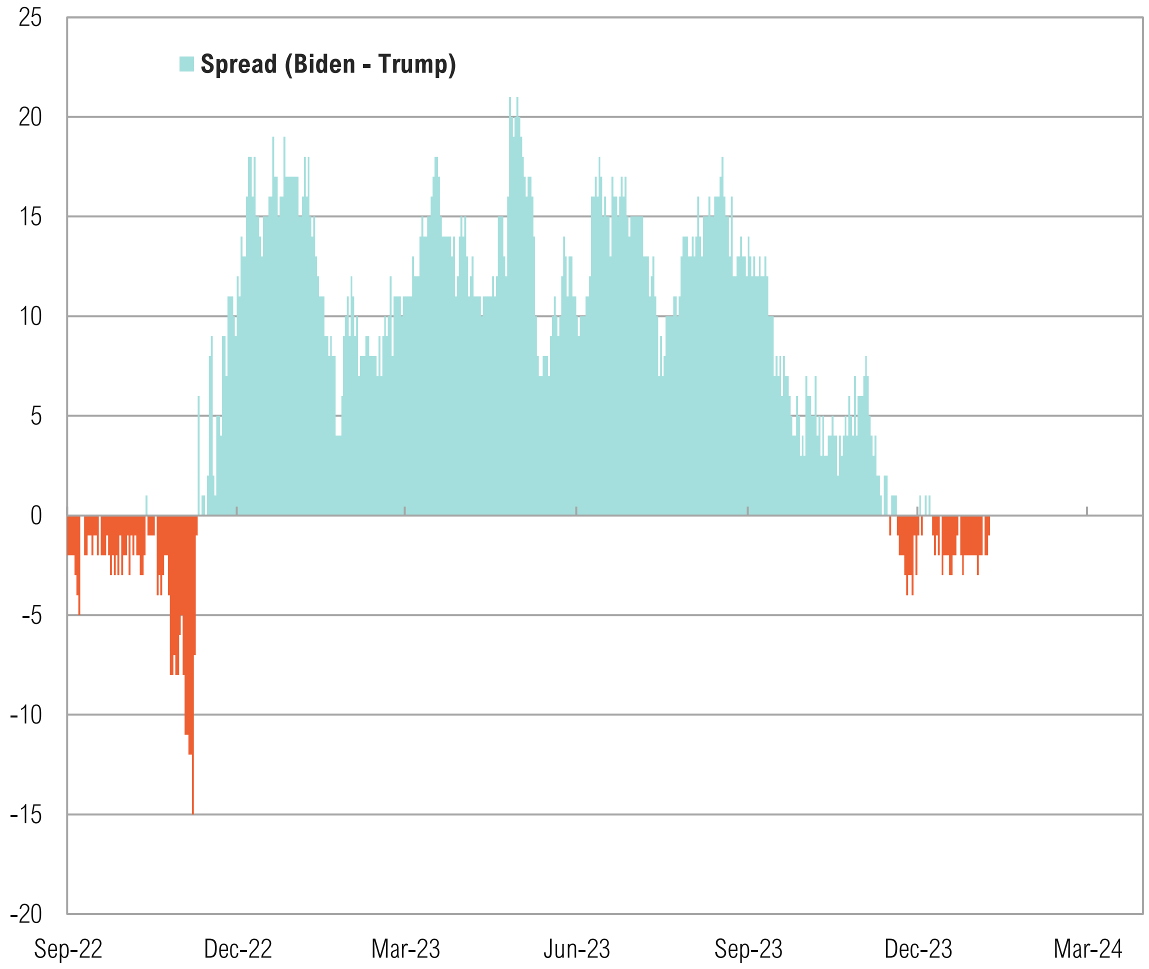
Source: Gallup. 2004 – 2023 annual average of surveys of more than 12,000 U.S. adults. As of 12/31/2023.

In a potential rematch, betting markets now favor Trump over Biden for the first time since late 2022; consensus seems to be building that Democrats must field another candidate

Implied Probability of Winning the Election, %

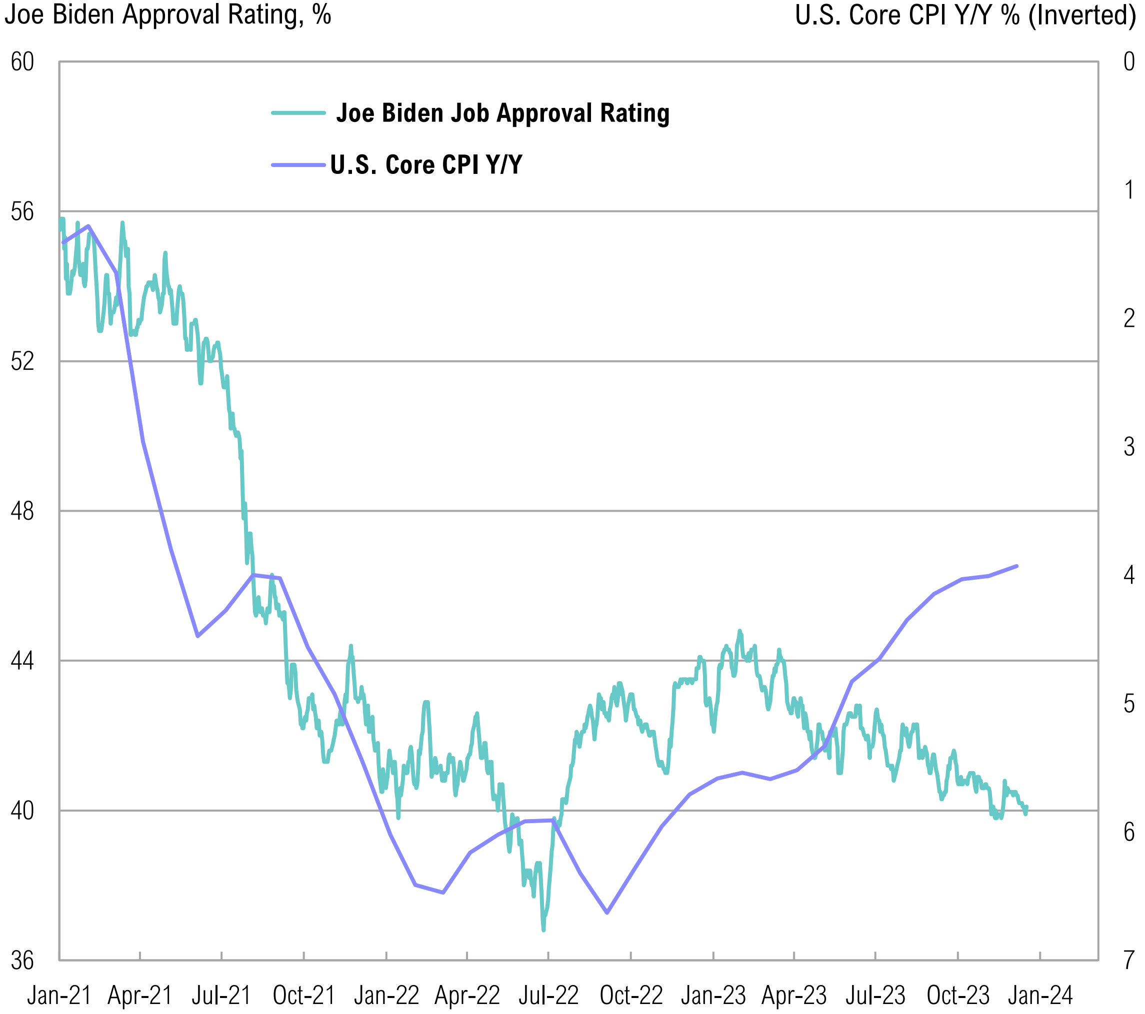


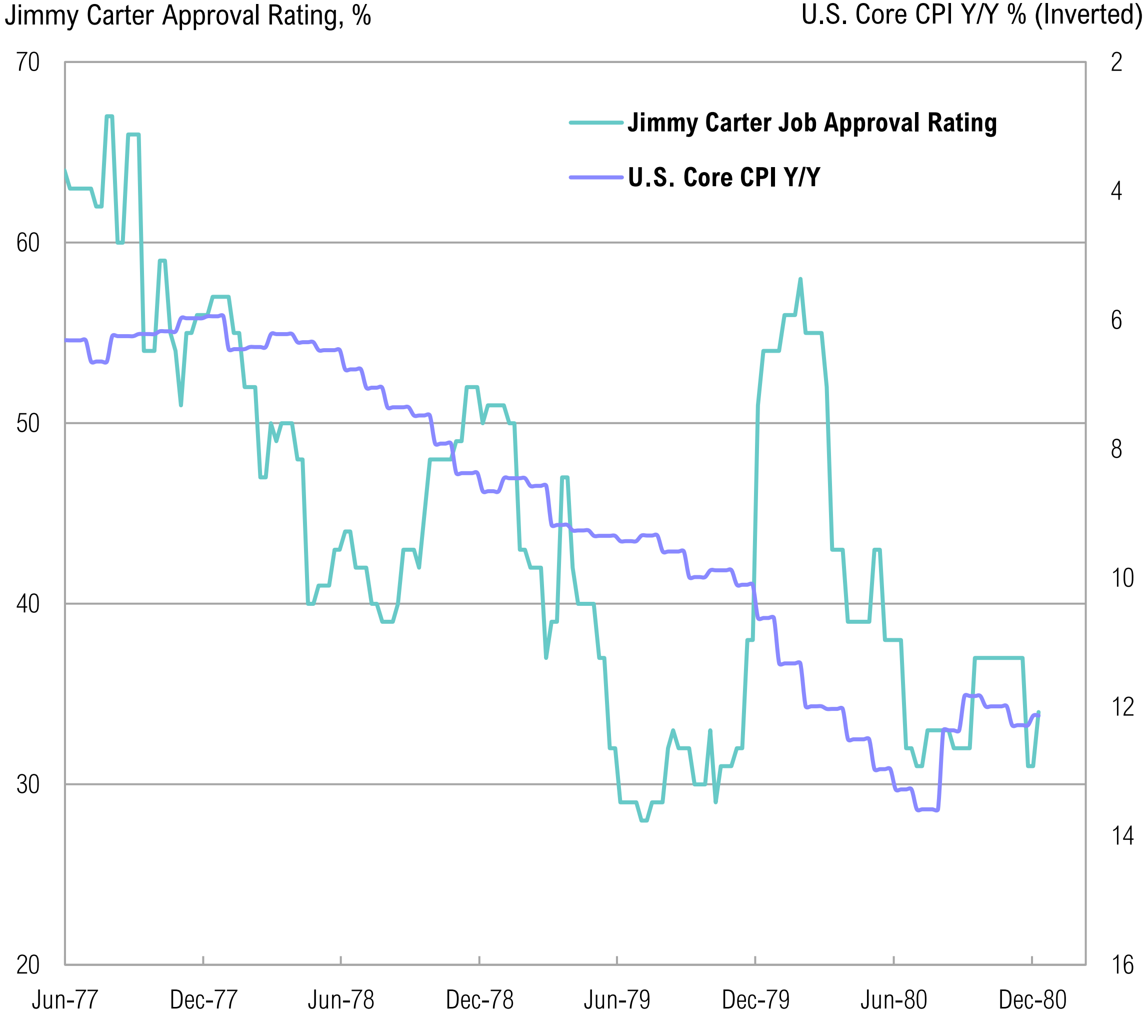
Spread: Biden less Trump, %



Source: Bloomberg, PredictIt. As of 1/11/2024.

Biden's approval rating has dropped to new lows even as inflation has eased

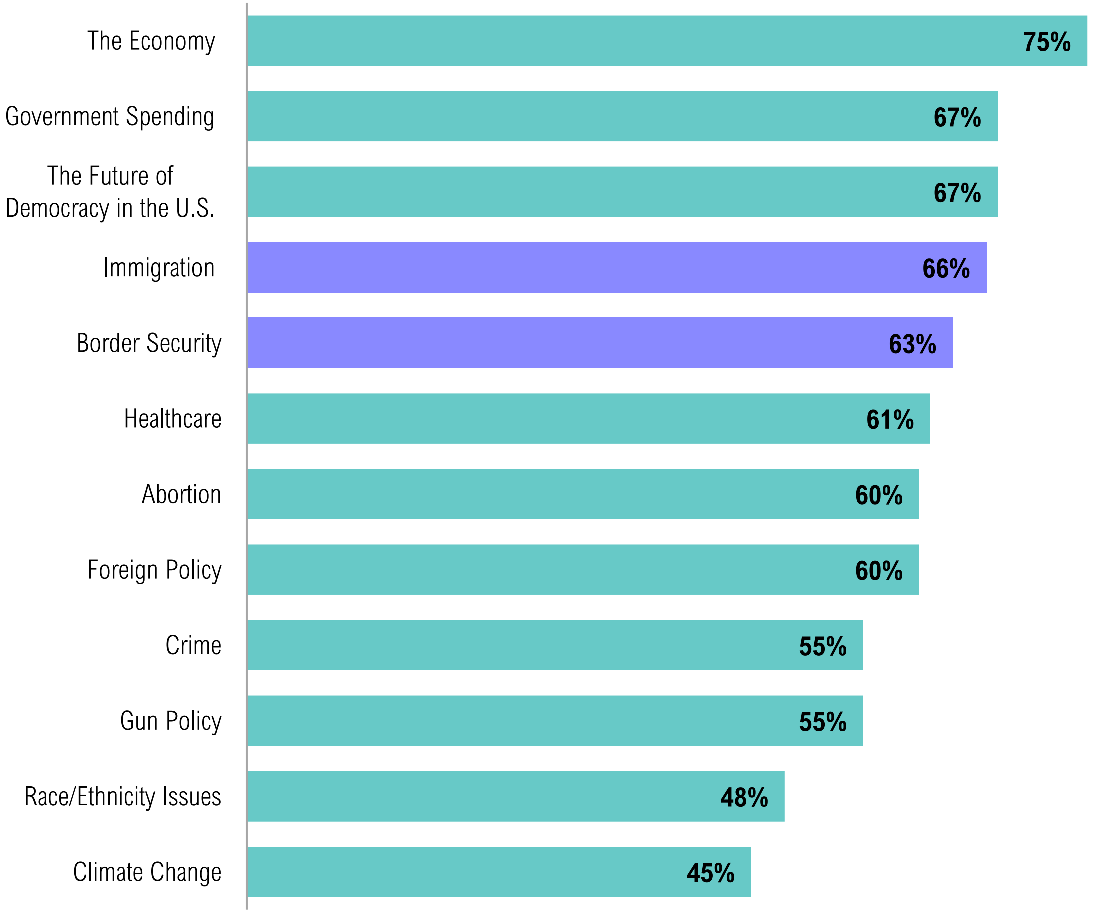




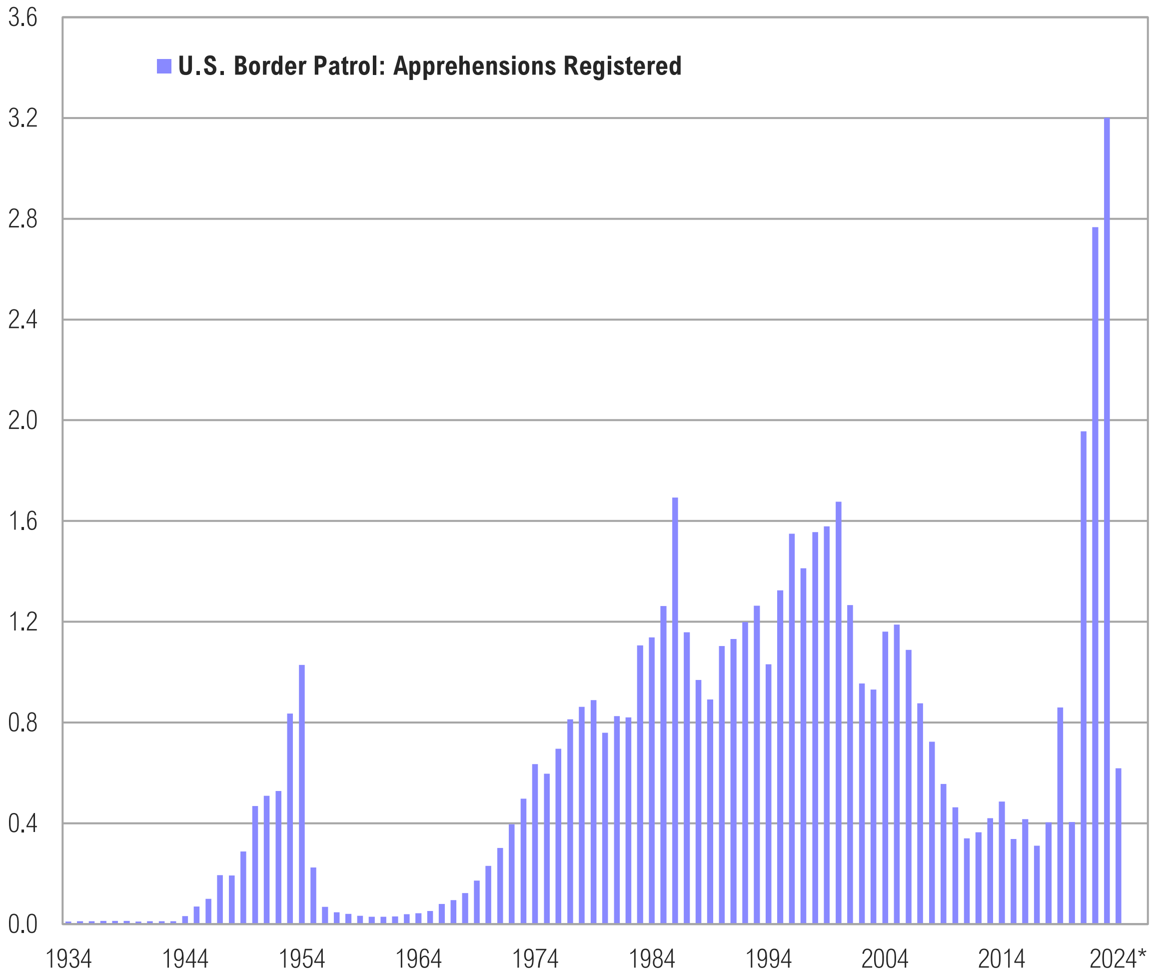
Source: FiveThirtyEight, Bloomberg. As of 1/11/2024.

Key issues voters consider highly important for the 2024 presidential election include the economy, government spending, and border security

Poll: % of U.S. adults who say the following issues are extremely/very important…



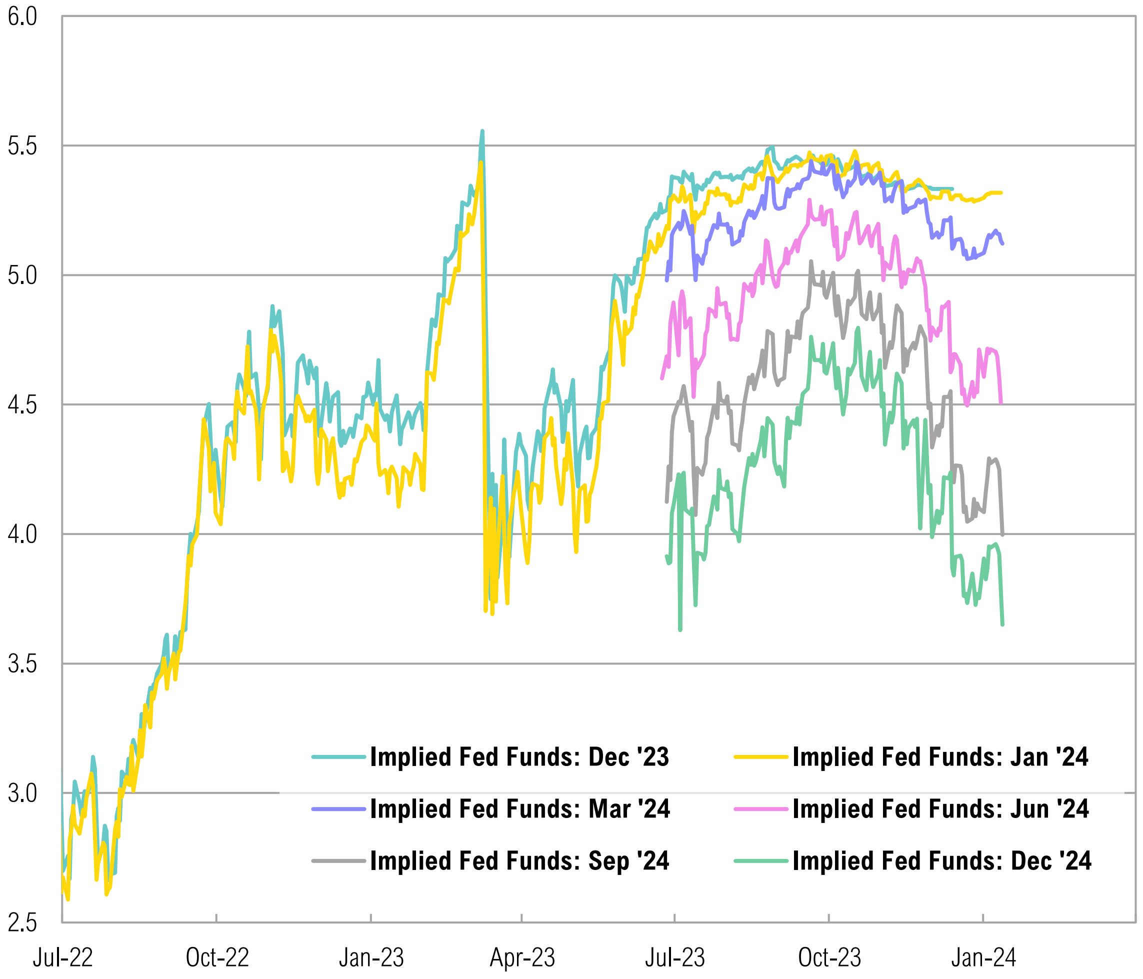
U.S. Border Patrol: Apprehensions Registered per Fiscal Year, Millions



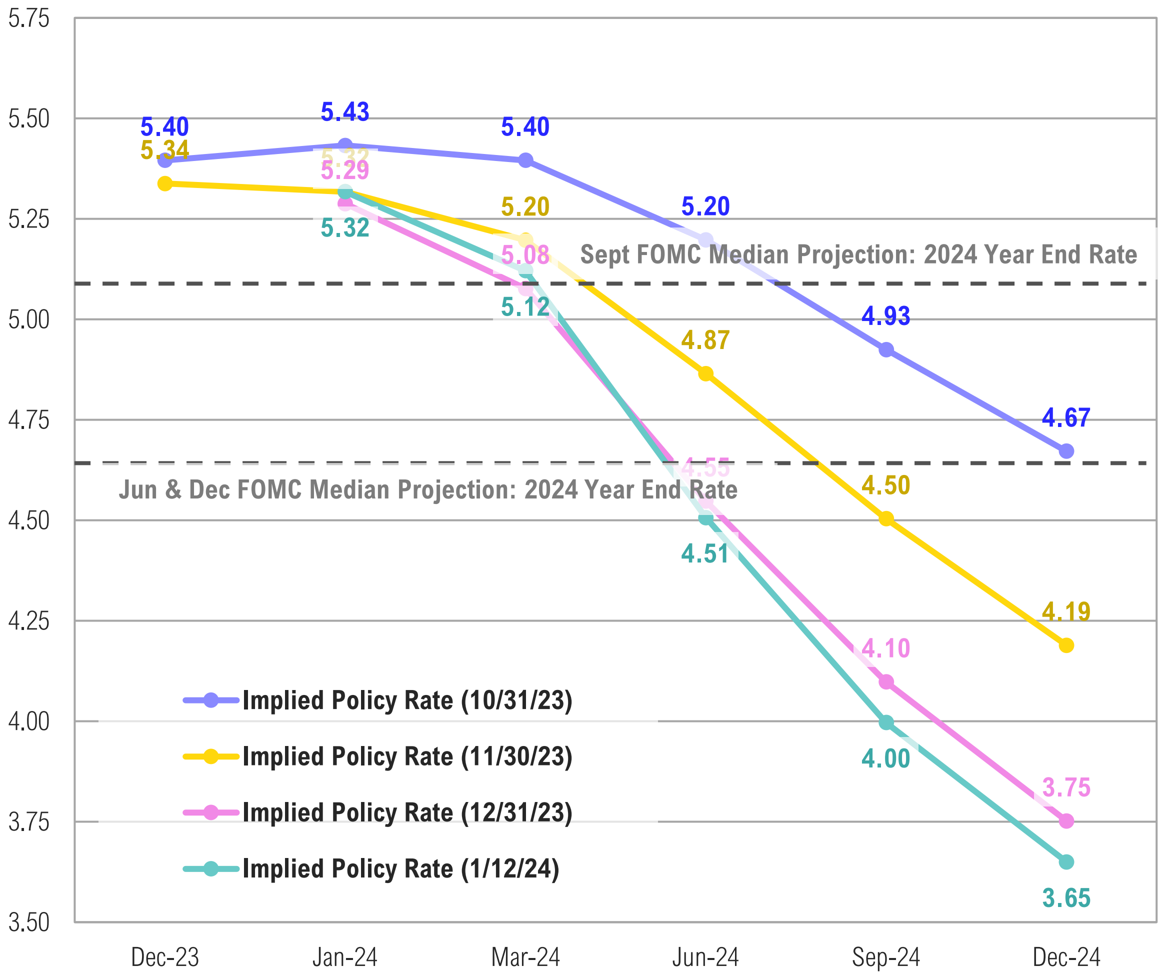
Source: AP-NORC poll conducted 11/30/2023-12/4/2023 with 1,074 U.S. adults. U.S. Customs and Border Protection. *2024 fiscal year through 11/30/2023.

In response to Powell's pivot comments on Dec. 13, speculation about rate cuts swelled; markets were pricing in the equivalent of seven cuts in 2024…

Implied Fed Funds Rate, %



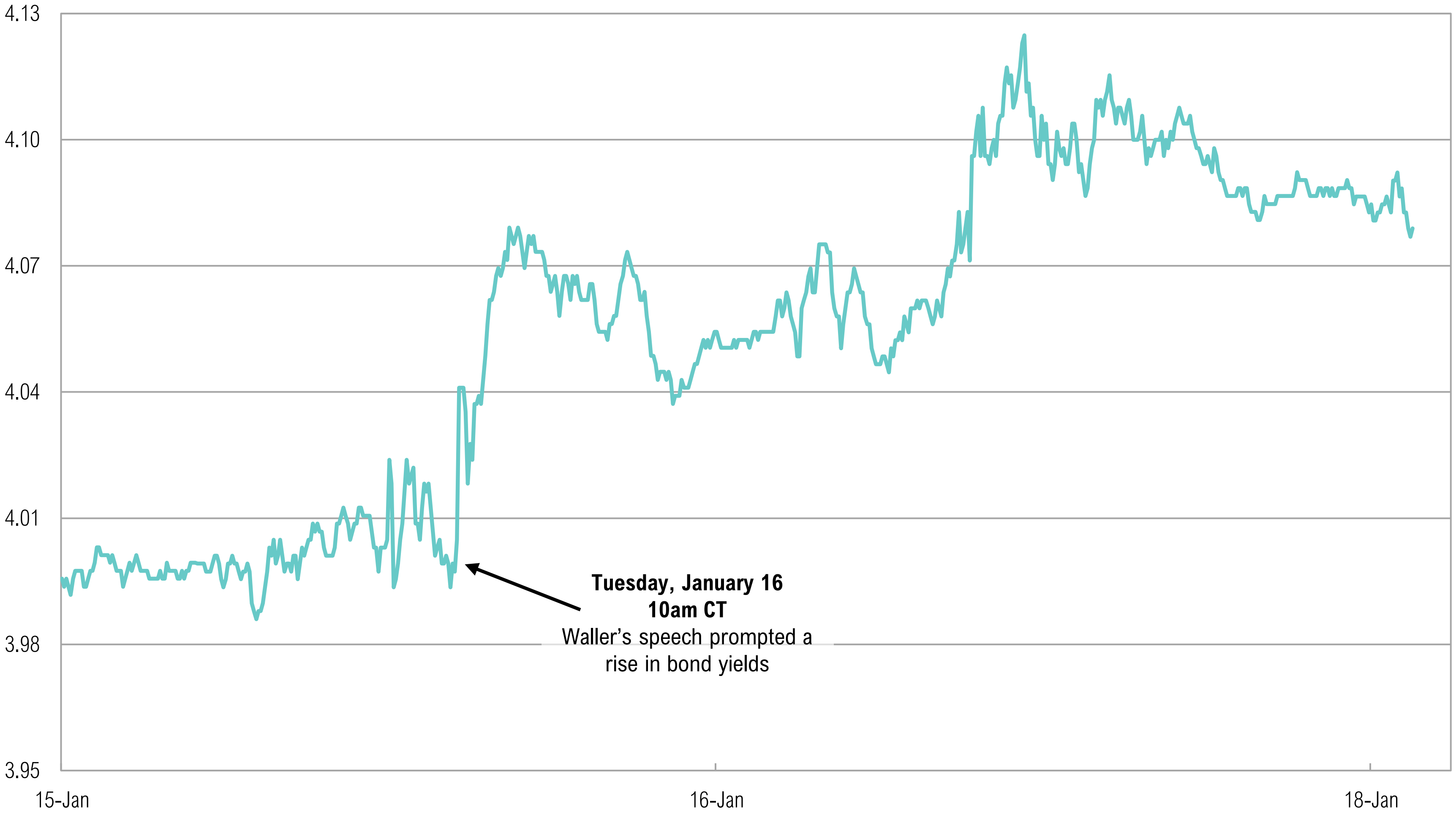
Implied Fed Funds Rate, %



Source: Bloomberg

…Until Christopher Waller's Brookings Institution speech on Tuesday (the probability of a 25bps cut in March dropped to a 50/50 coin toss on Wednesday)

10-Year Treasury Yield



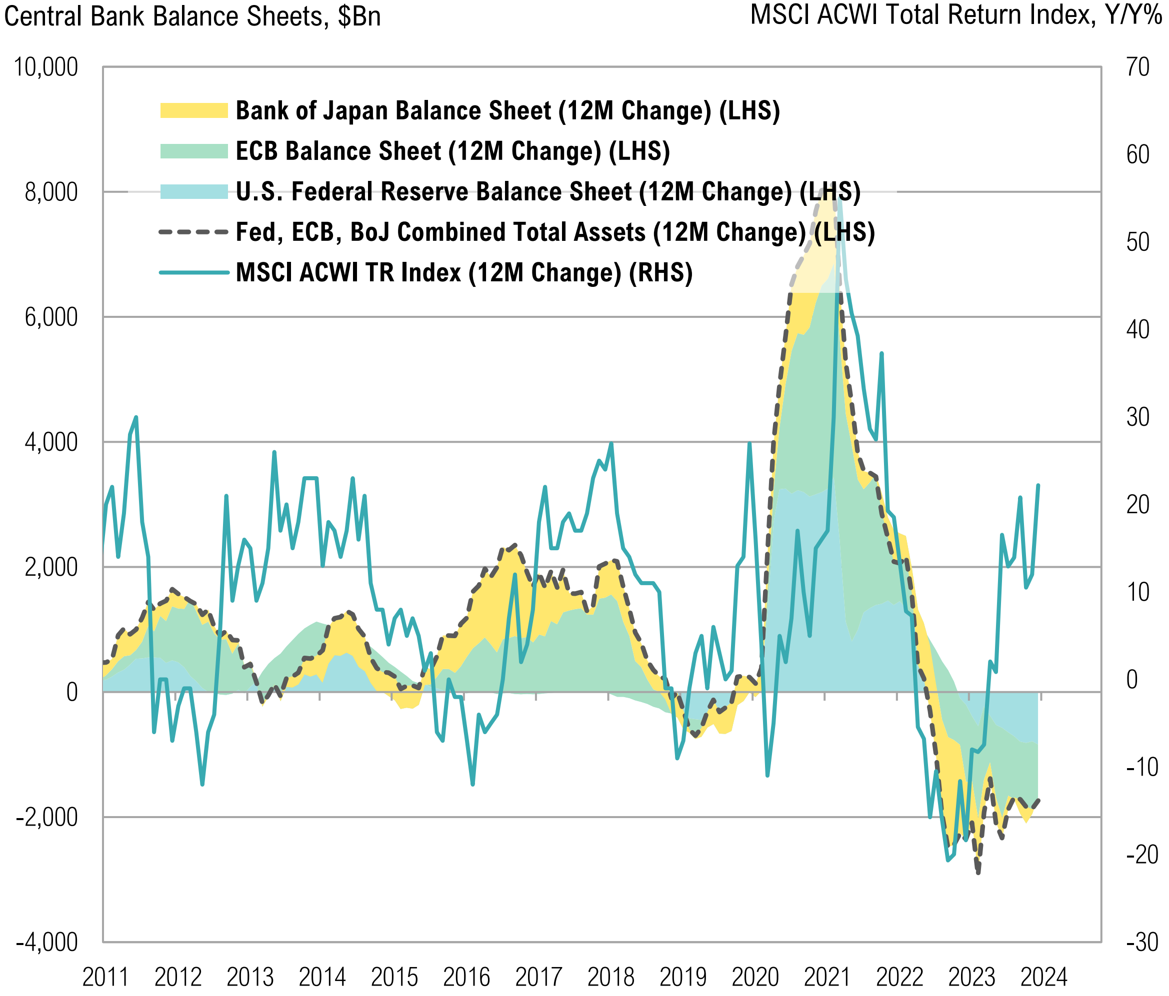
"When the time is right to begin lowering rates, I believe it can and should be lowered *methodically and carefully*. In many previous cycles, which began after shocks to the economy either threatened or caused a recession, the FOMC cut rates reactively and did so quickly and often by large amounts.

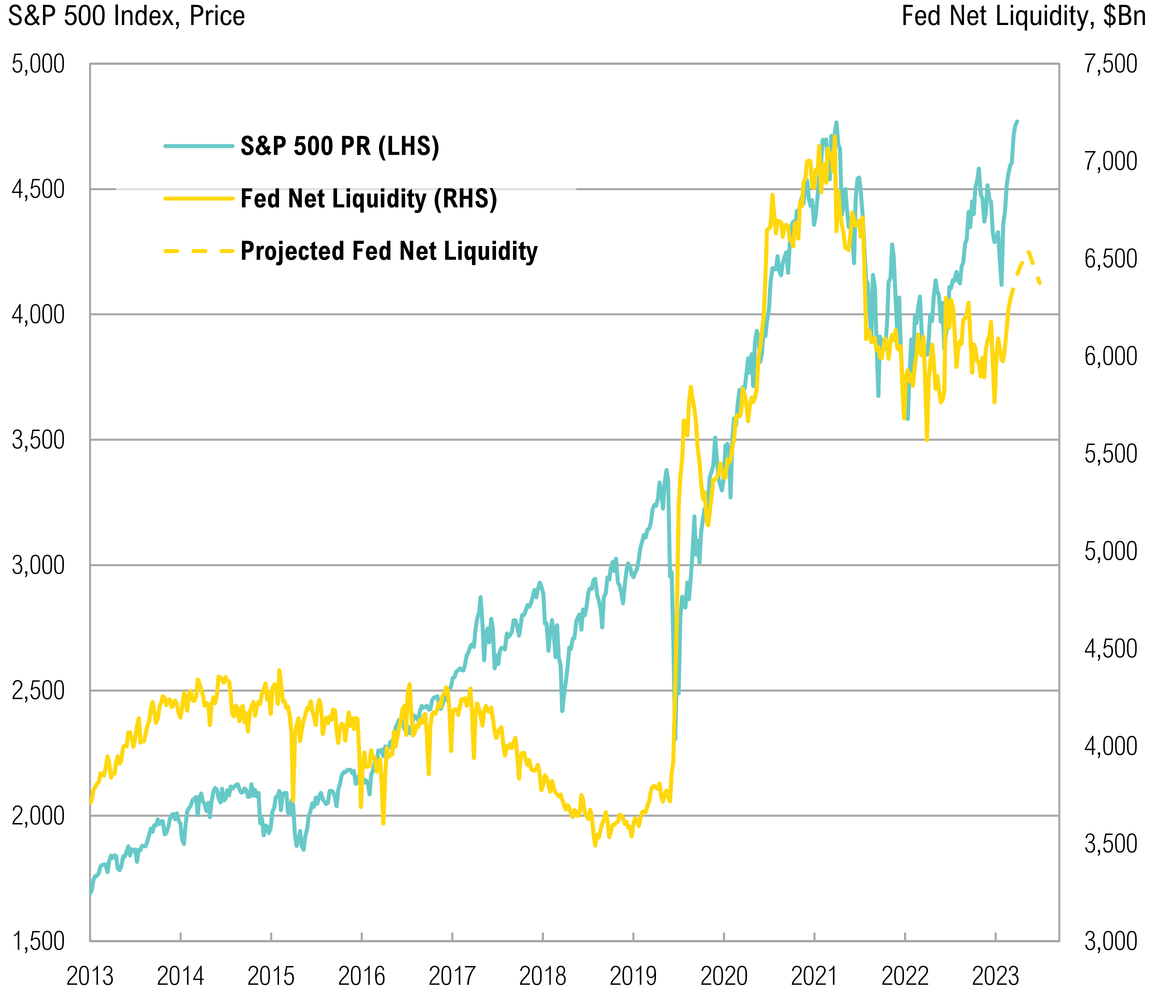
This cycle, however, with economic activity and labor markets in good shape and inflation coming down gradually to 2 percent, *I see no reason to move as quickly or cut as rapidly as in the past*."

- Fed Governor Waller

Source: Bloomberg, Federal Reserve.

Divergence between central bank balance sheets and stocks potentially due to RRP liquidity stopgap; if the Fed continues with QT, liquidity will dry up as the year progresses

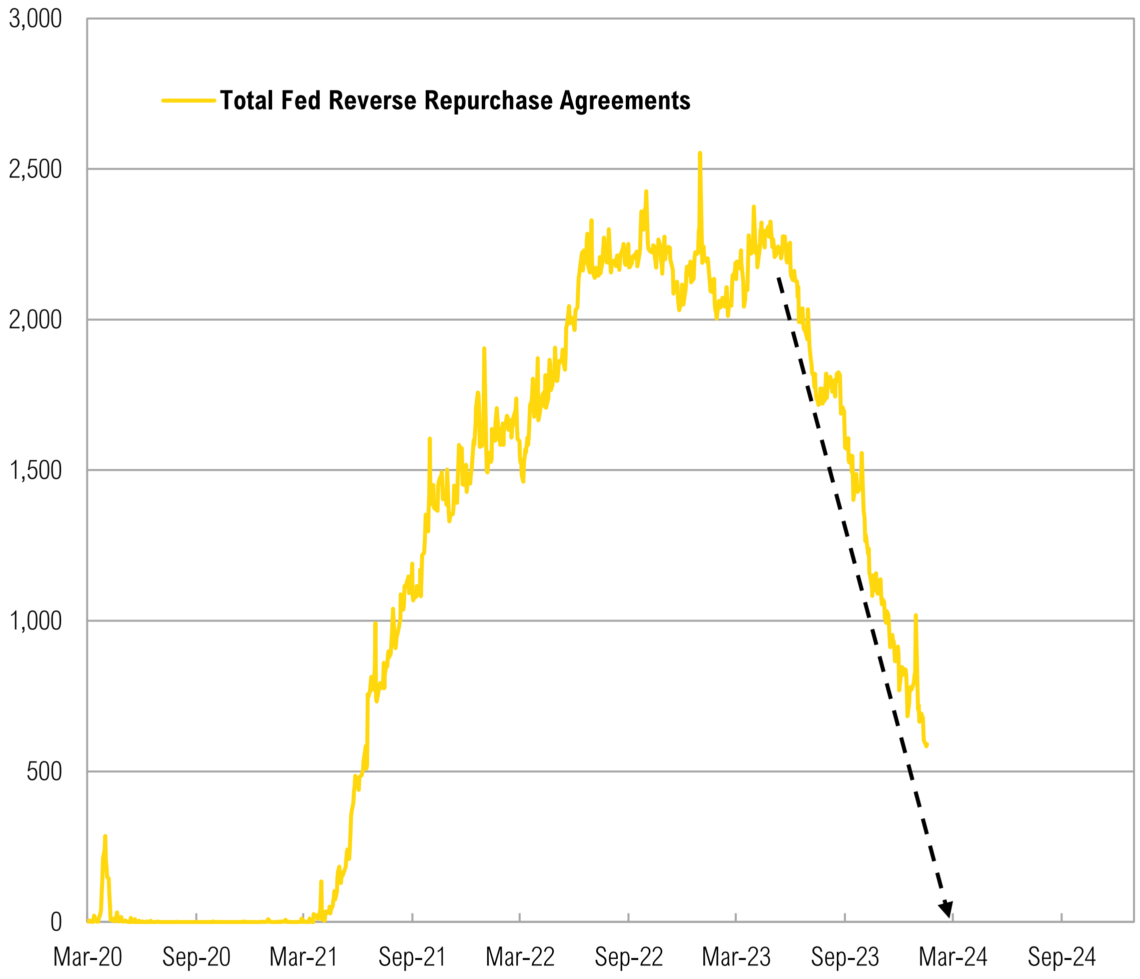




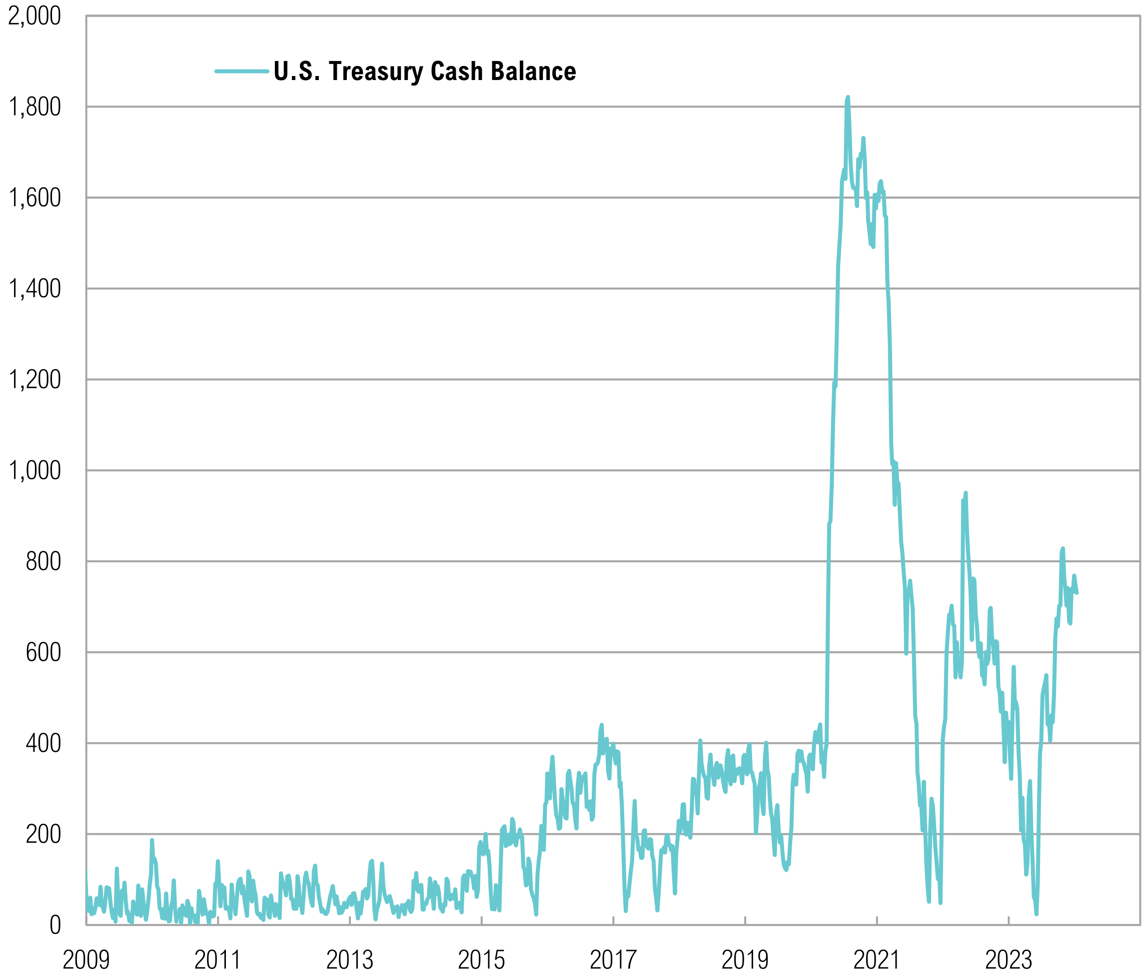
Source: Bloomberg. Fed net liquidity is calculated by taking the Fed balance sheet and deducting reverse repo and TGA deposits. Assumptions for projected Fed net liquidity are that the balance sheet will run off at the same pace as it has done YTD, reverse repo will decline by $50Bn per month through the end of 2023 and TGA deposits is replaced with $750bn in net issuance through 2023, with $650Bn in Q3 and $100Bn in Q4.

The Fed’s reverse repo facility (which has dampened the effects of QT) may run out by March; Treasury cash balance is currently at $750bn but may be worked down depending on policy and growth

Overnight Reverse Repo Agreements, $Bn



U.S. Treasury Cash Balance, $Bn

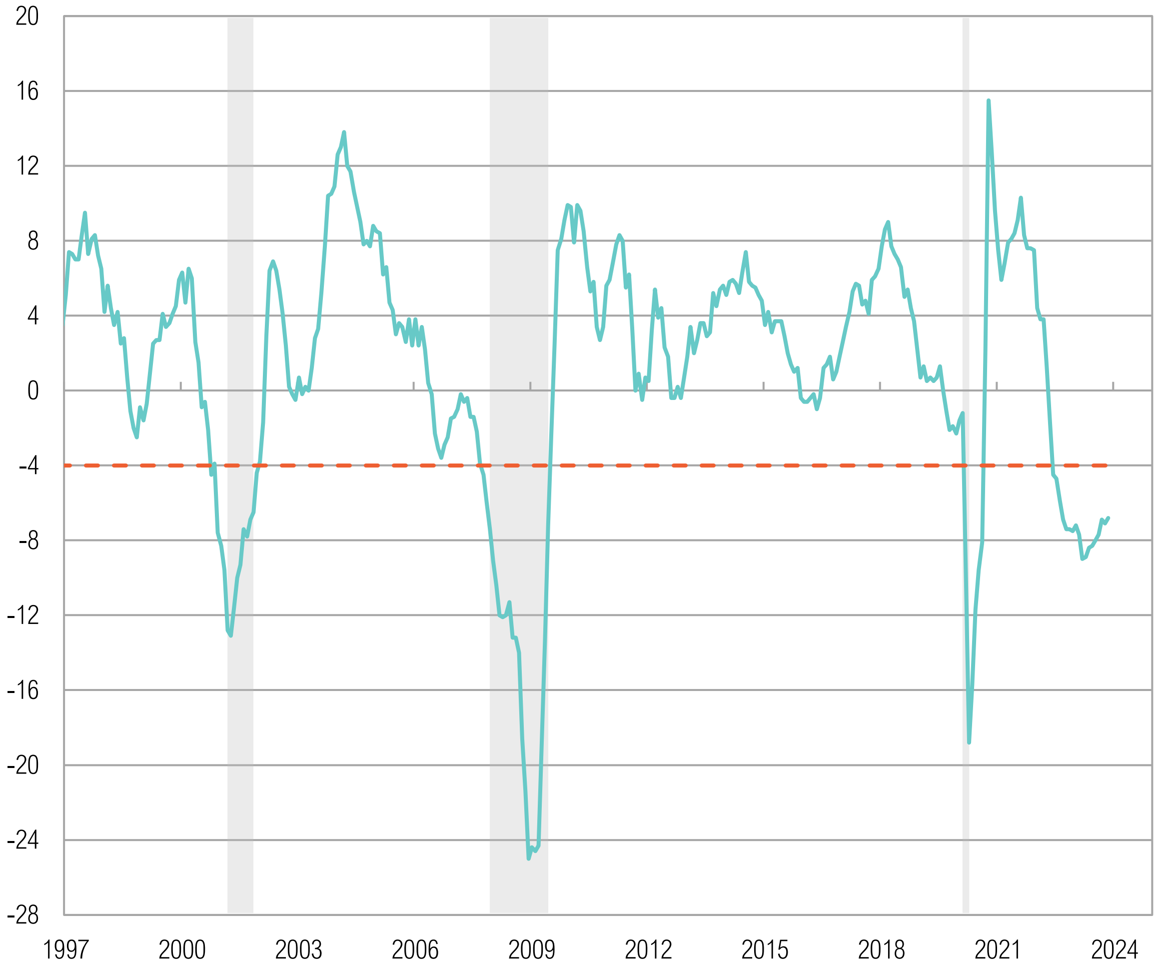


Source: Bloomberg. As of 1/12/2024.

See important disclosures at the end of this presentation

Downside risks if the Fed doesn't cut: Conference Board LEI still signals "short and shallow" recession in 1H24 and weaker future economic activity, creating a volatile backdrop for stocks

Conference Board U.S. Leading Economic Indicator, 6-Month Growth Rate (Annualized), %

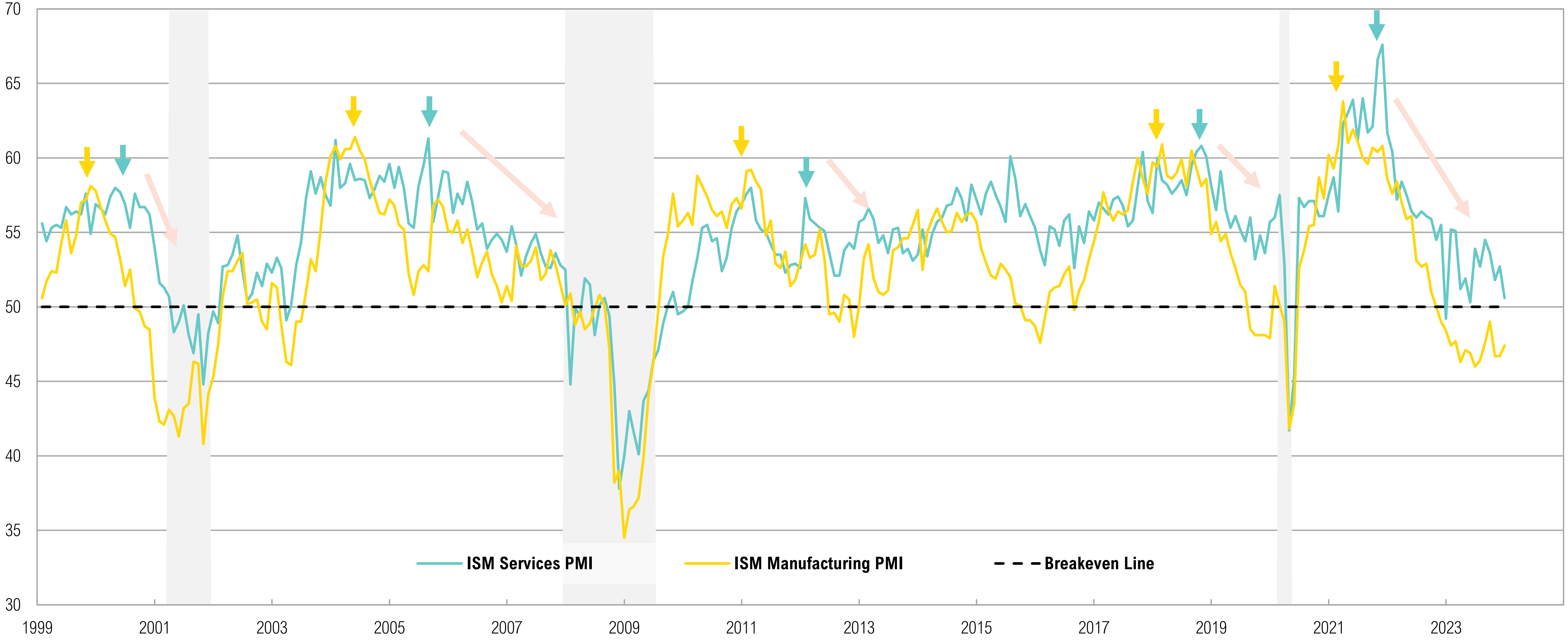


S&P 500 12-Month Forward Return vs. Conference Board U.S. Leading Economic Indicator

Source: Bloomberg, Conference Board. As of 11/30/2023.

Downside risks: ISM Manufacturing contracting for 14 consecutive months (surpassing GFC downturn) and services sector activity, which tends to lag manufacturing in downturns, has also softened

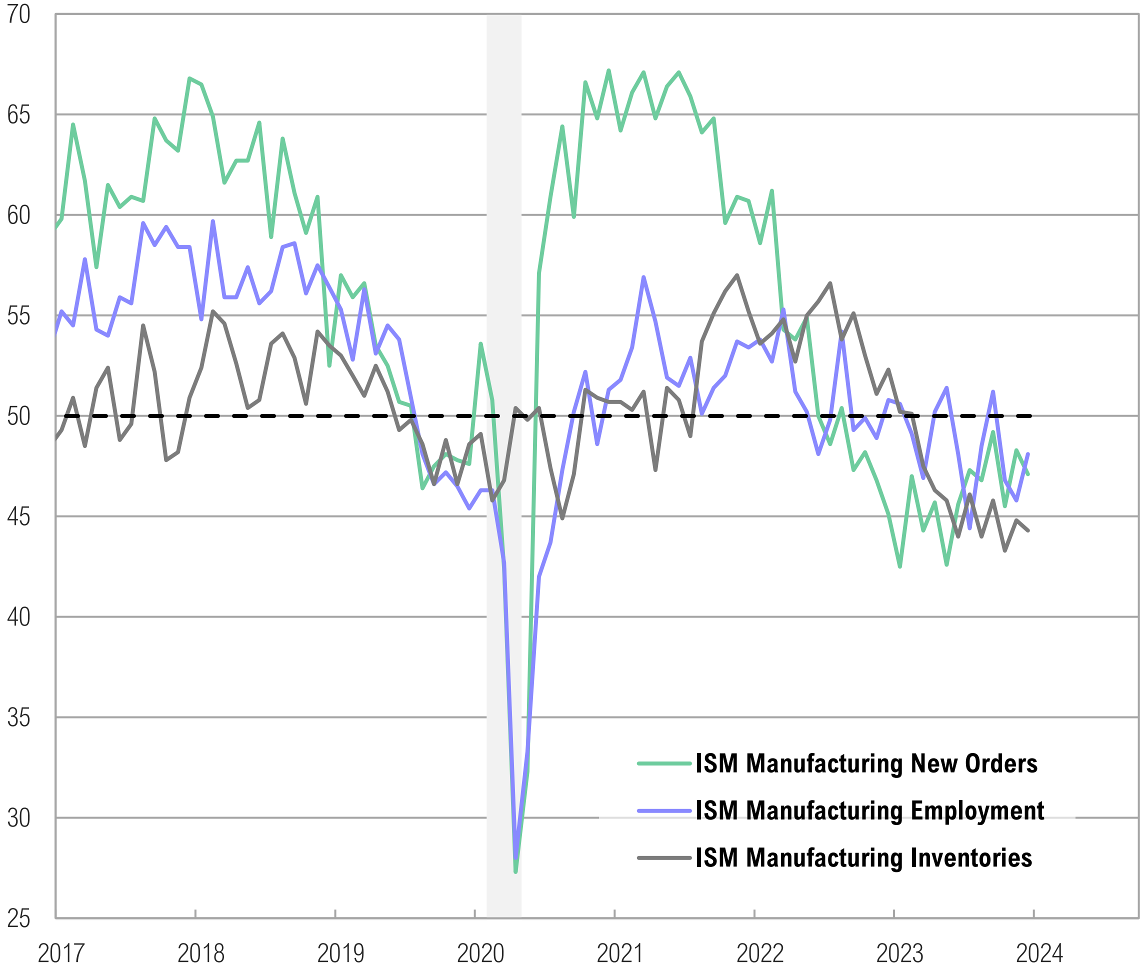
ISM Services & Manufacturing PMIs



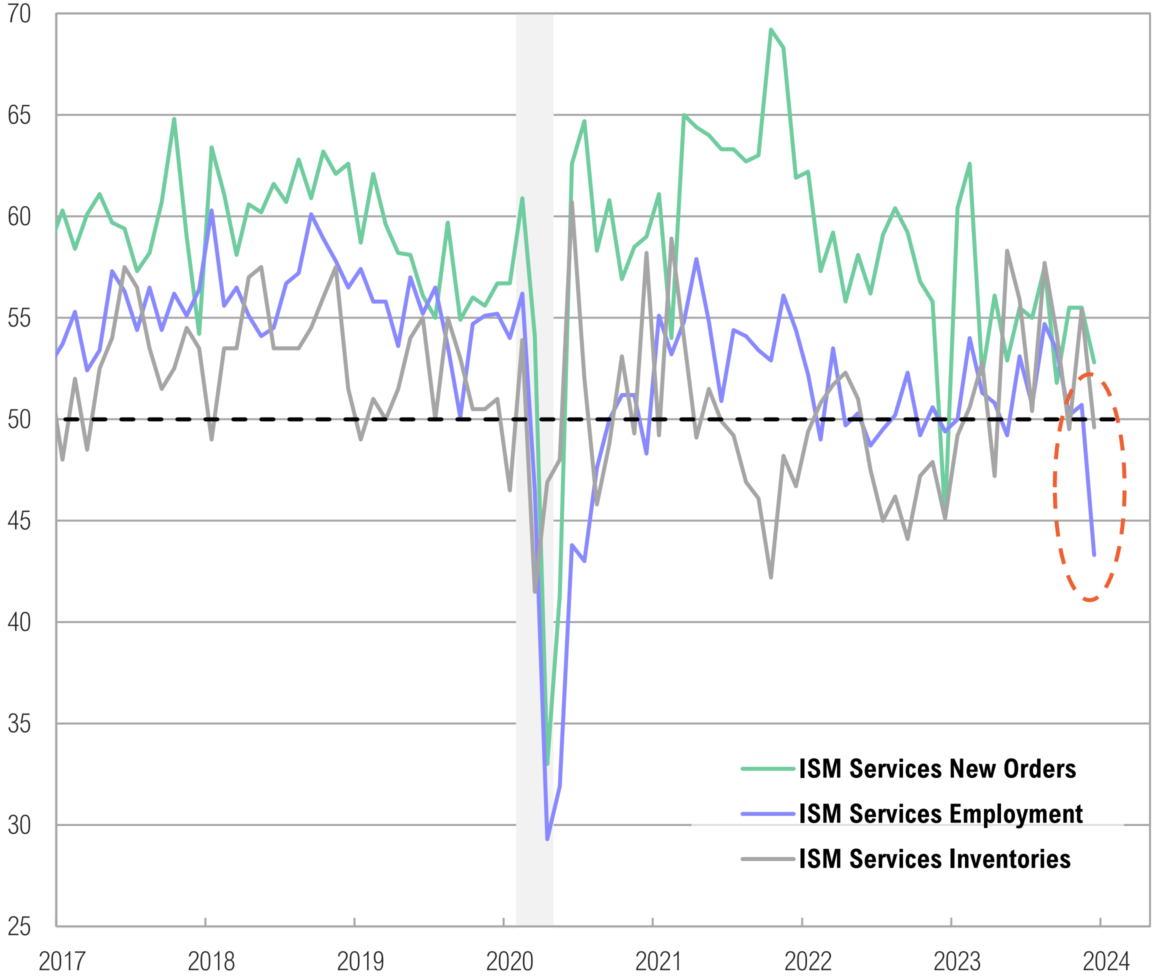
Source: Bloomberg, ISM. As of 12/31/2023.

Downside risks if they don't cut: December saw a notable downturn in services sector employment

ISM Manufacturing New Orders, Employment, and Inventories Indices



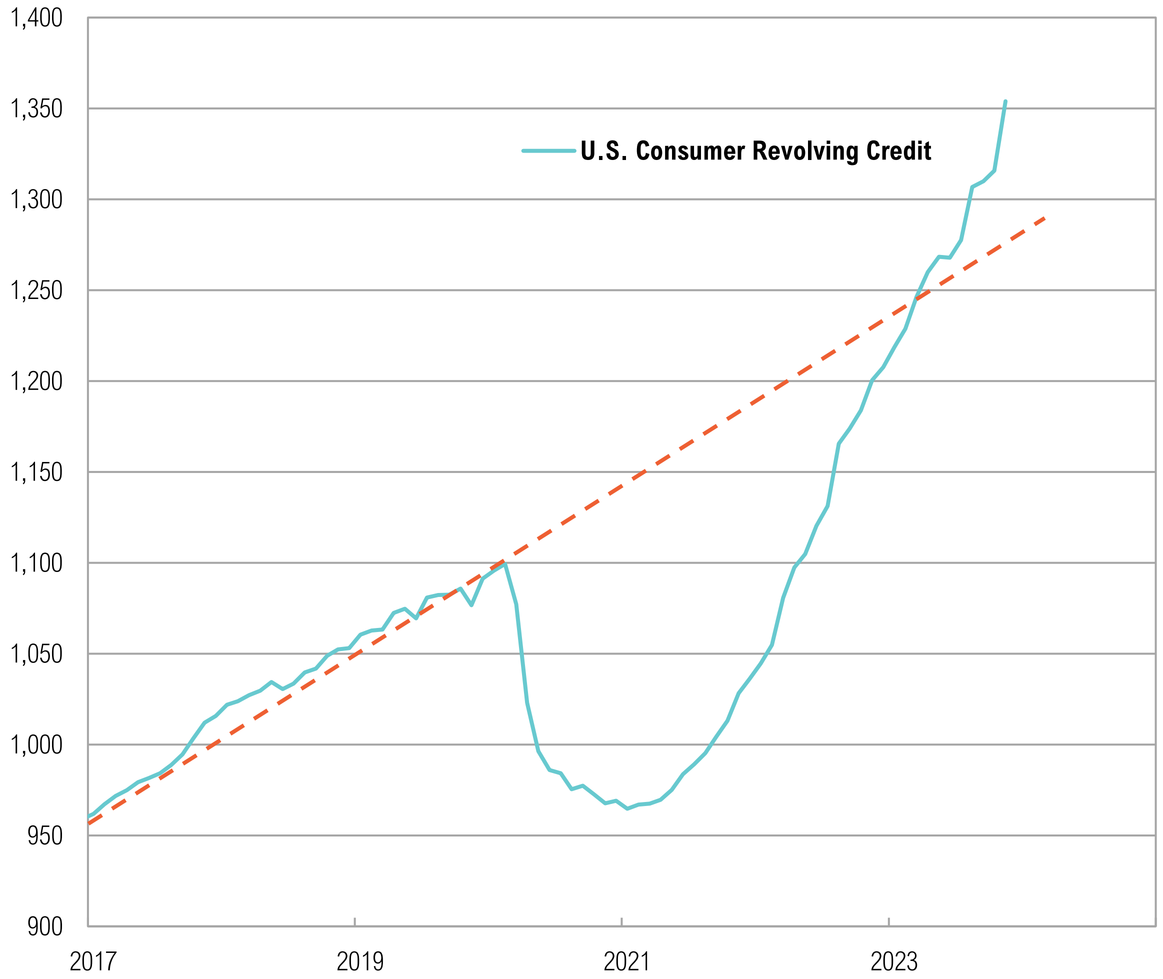
ISM Services New Orders, Employment, and Inventories Indices



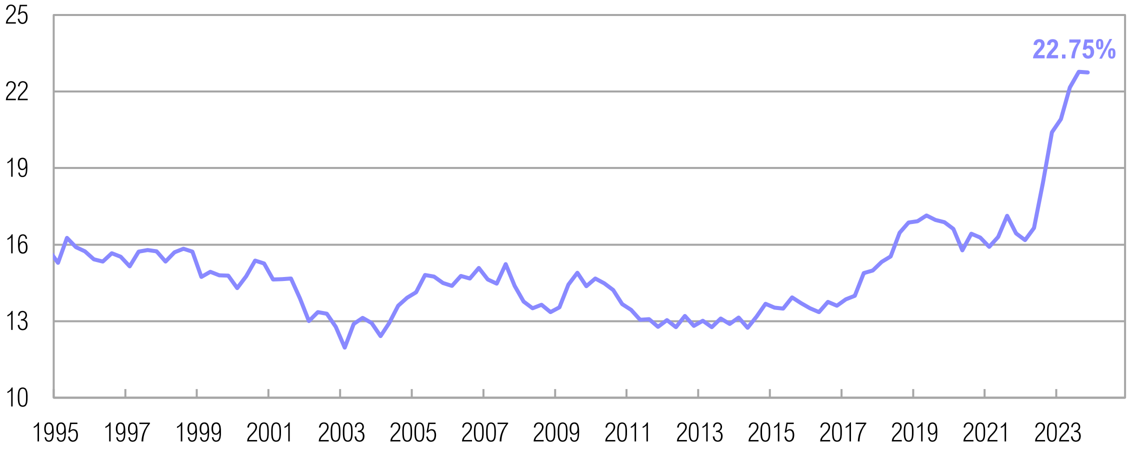
Source: Bloomberg, ISM. As of 12/31/2023.

Downside risks: revolving credit balances continue to climb even with credit card rates at an all-time high; delinquency rates across all banks are starting to tick up

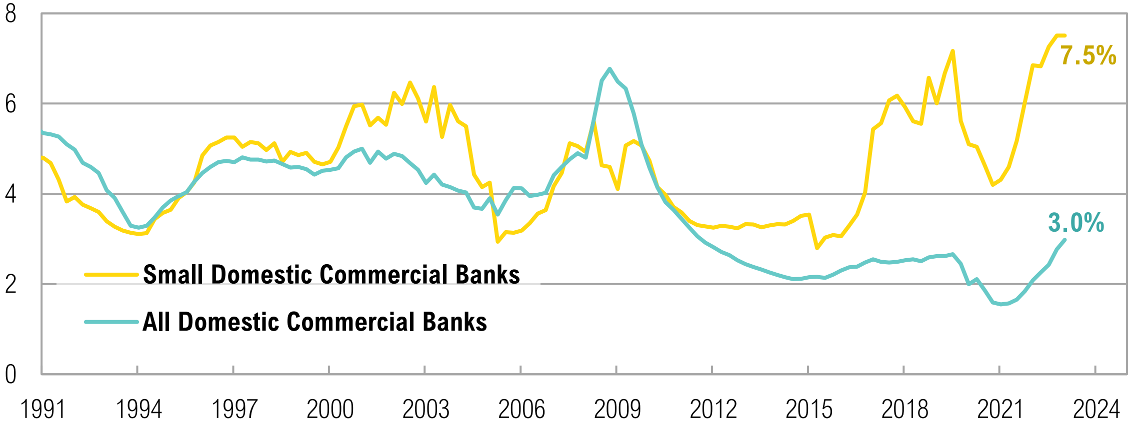
U.S. Revolving Consumer Credit, $Bn



Average Credit Card Interest Rate on Accounts with Assessed Interest*, %



Credit Card Loan Delinquency Rate, %



Source: Bloomberg, FRED. *Credit card accounts with assessed interest refers to accounts with a balance that carries over from one billing cycle to the next without paying it off in full.

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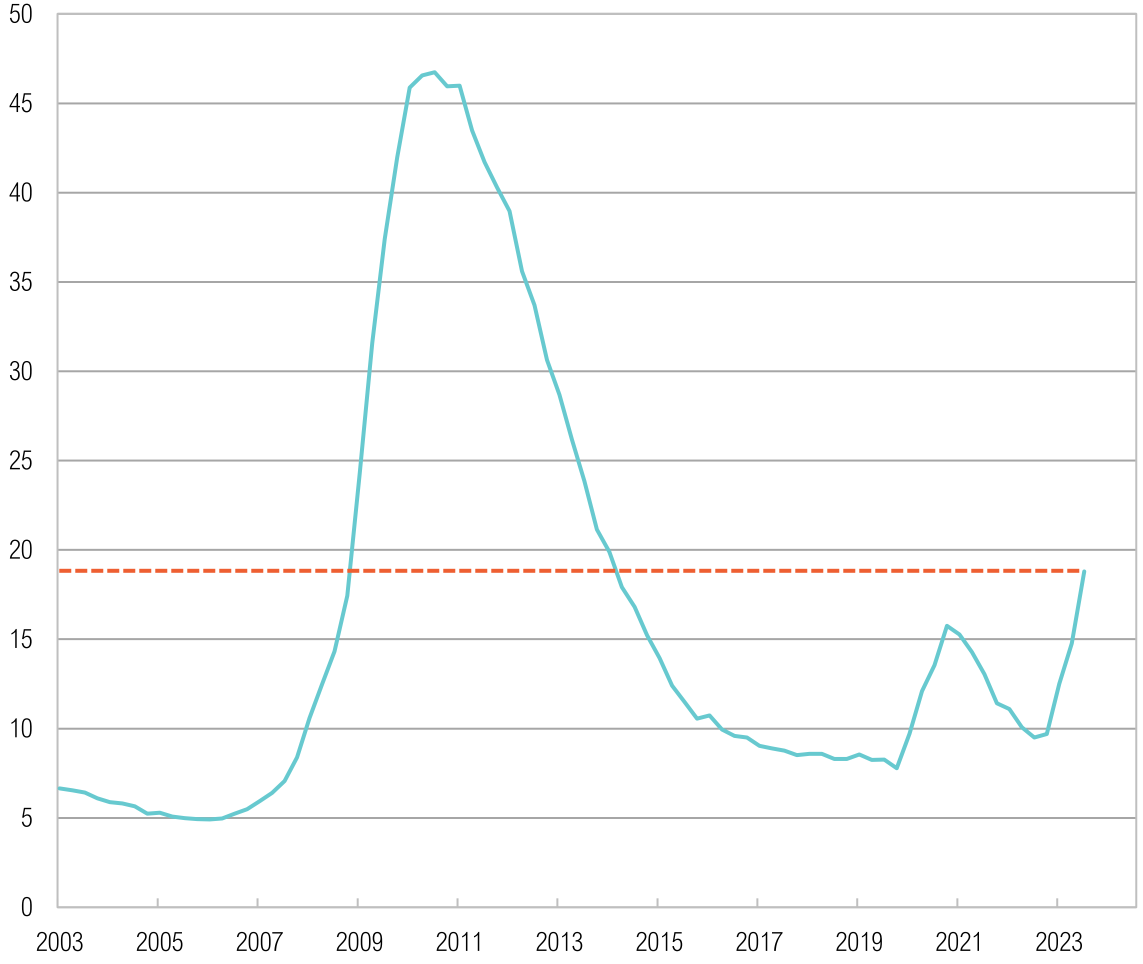
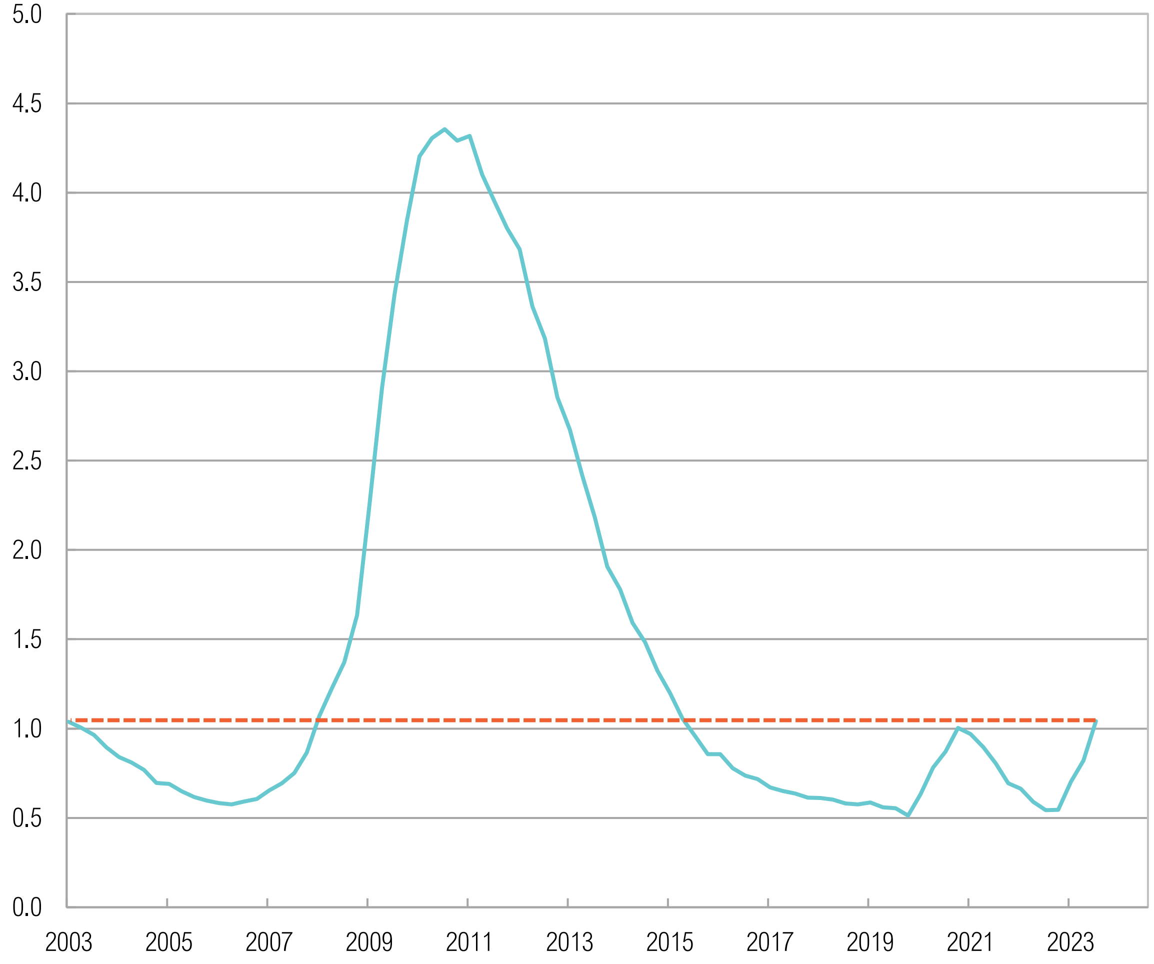
Downside risks for small banks: non-performing commercial real estate loans are approaching troubling levels

Commercial Real Estate Nonperforming Loans, $Bn



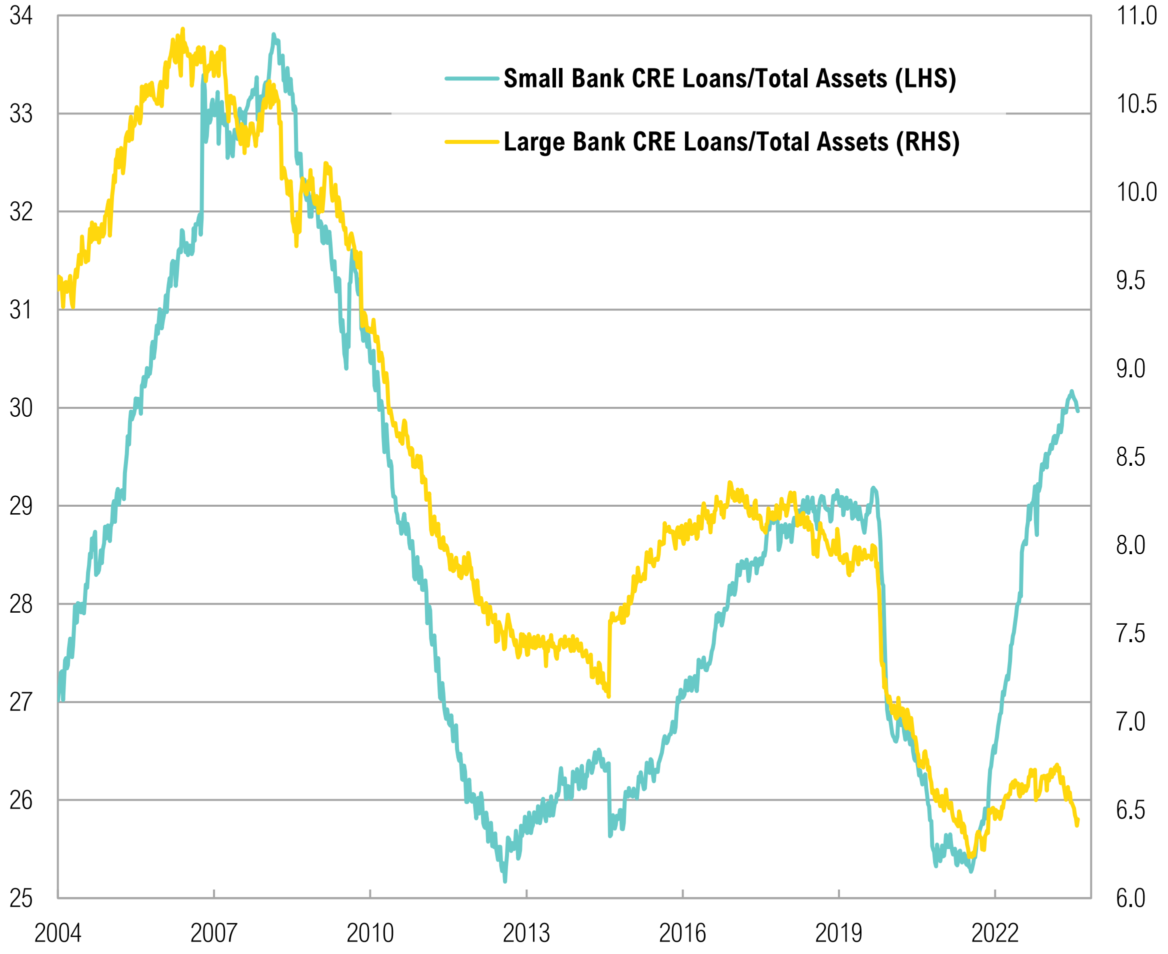
Commercial Real Estate Nonperforming Loans, %



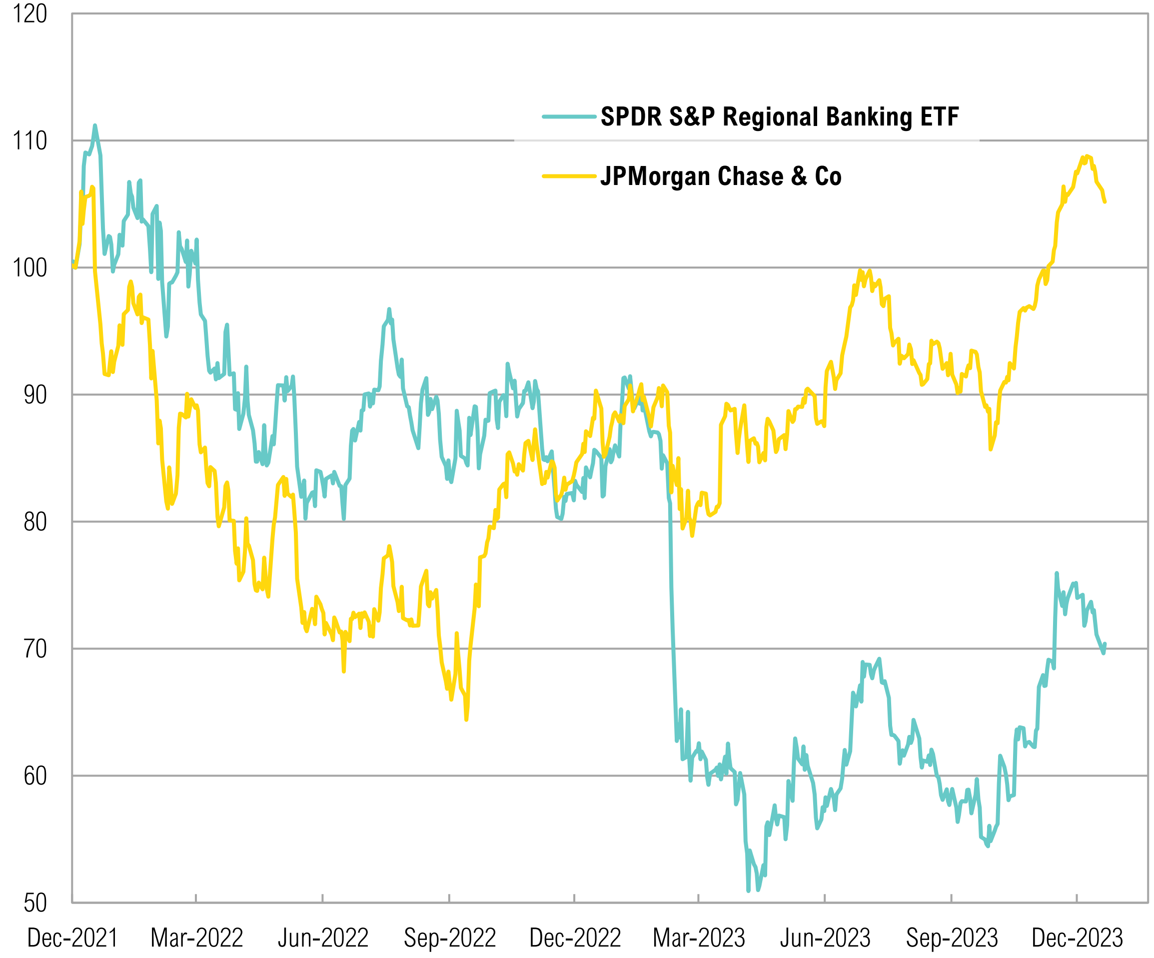
Source: BankRegData. As of 9/30/2023.

Downside risks for small banks: CRE loans account for 30% of small bank assets and only 6% of large bank assets; big bank performance since Jan 2022 emphasizes their strength

Small Bank CRE Loans as a % of Total Assets — Large Bank CRE Loans as a % of Total Assets

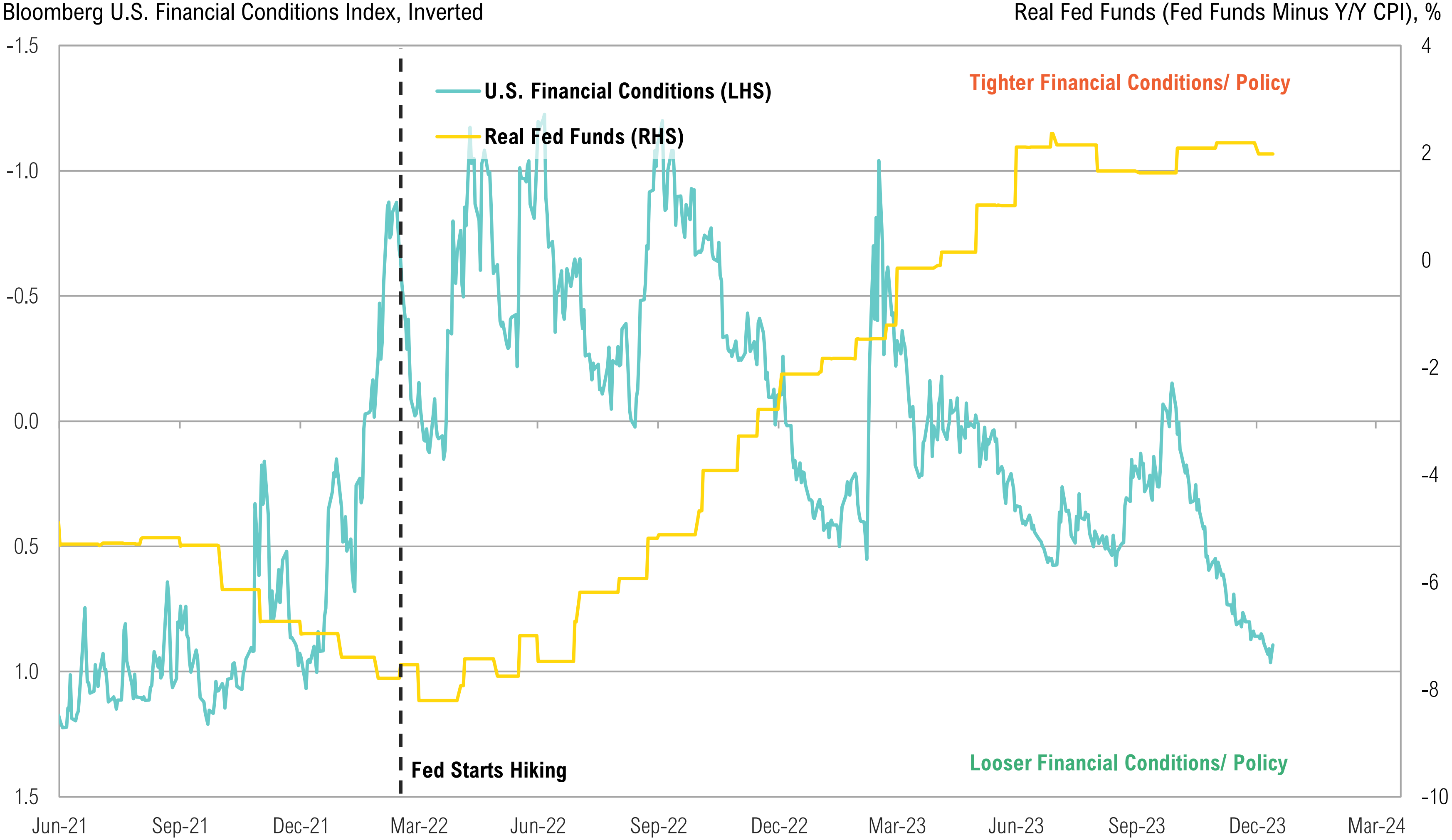


Growth of 100, 12/31/2021 – Present



Source: Bloomberg, FRB.

Upside risks: ease too much and you risk a reacceleration in the economy; not unlike what has happened since December 12; asset markets pricing in dramatic future easing and potential reacceleration



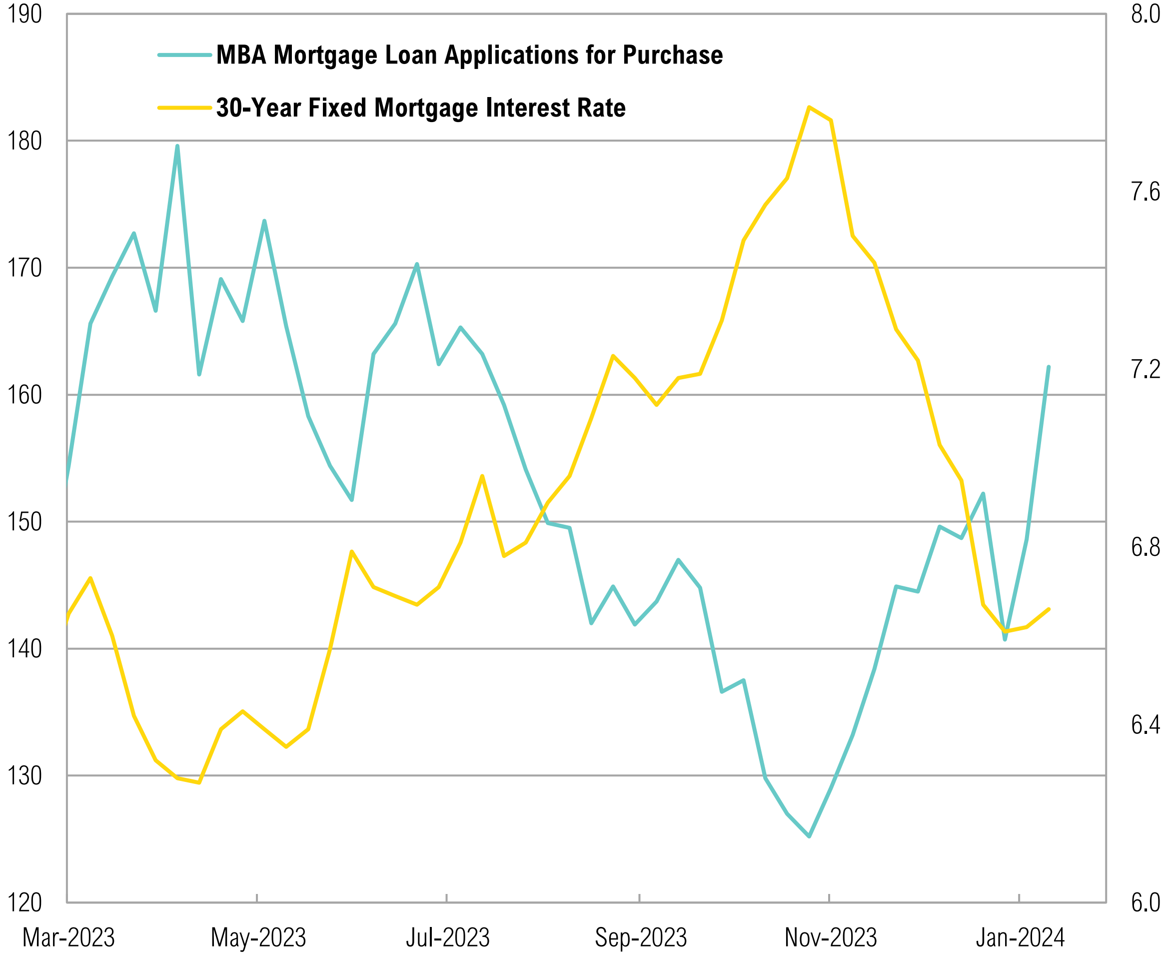
Returns, *12/12/2023 – 1/17/2024*, %

Asset Class	12/12/23 (Powell Pivot)
Cryptocurrencies	9.6
US REITs	3.3
US Micro Cap Stocks	3.2
Closed-End Funds	3.0
Midstream Energy	2.8
US Large Cap Stocks	2.7
US High Yield Bonds	2.3
U.S. 60/40	2.2
Global Real Estate Sec's	2.0
US Small Cap Stocks	1.7
Emerging Market Bonds	1.7
US Leveraged Loans	1.6
Global 60/40	1.6
US Interm-Term Bonds	1.5
Bitcoin	1.3
Gold	1.3
Intl Dev Ex-US Stocks	1.2
Municipal High Yield Bonds	1.2
Short-Term Bonds	1.0
Developed Ex-US Bonds	1.0
Intl Dev Ex-US Real Est.	0.6
US Interm-Term Muni Bonds	0.6
Cash	0.5
Commodity Futures	-0.1
Emerging Market Stocks	-1.3

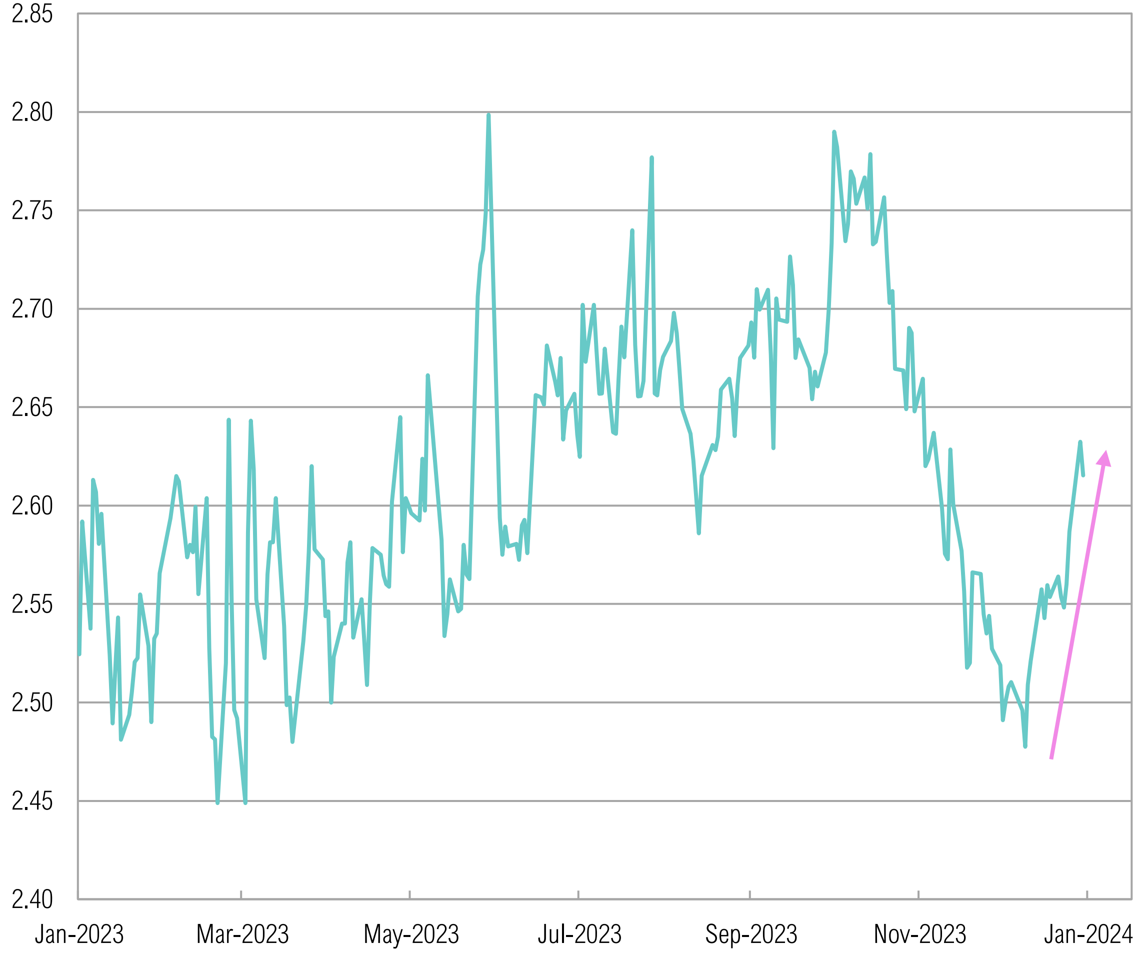
Source: Bloomberg. See appendix for asset class benchmark & index definitions. As of 1/17/2024.

Upside risks: ease too much and you risk a reacceleration in the economy, not unlike what has happened since December 13; mortgage applications and inflation expectations are picking up

MBA Mortgage Loan Applications for Purchase Volume Index 30 Year Fixed Mortgage Interest Rate, %



5-Year, 5-Year Forward Inflation Expectations, %



Source: Bloomberg

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When the time is right to begin lowering rates, I believe it can and should be lowered methodically and carefully. In many previous cycles, which began after shocks to the economy either threatened or caused a recession, the FOMC cut rates reactively and did so quickly and often by large amounts.

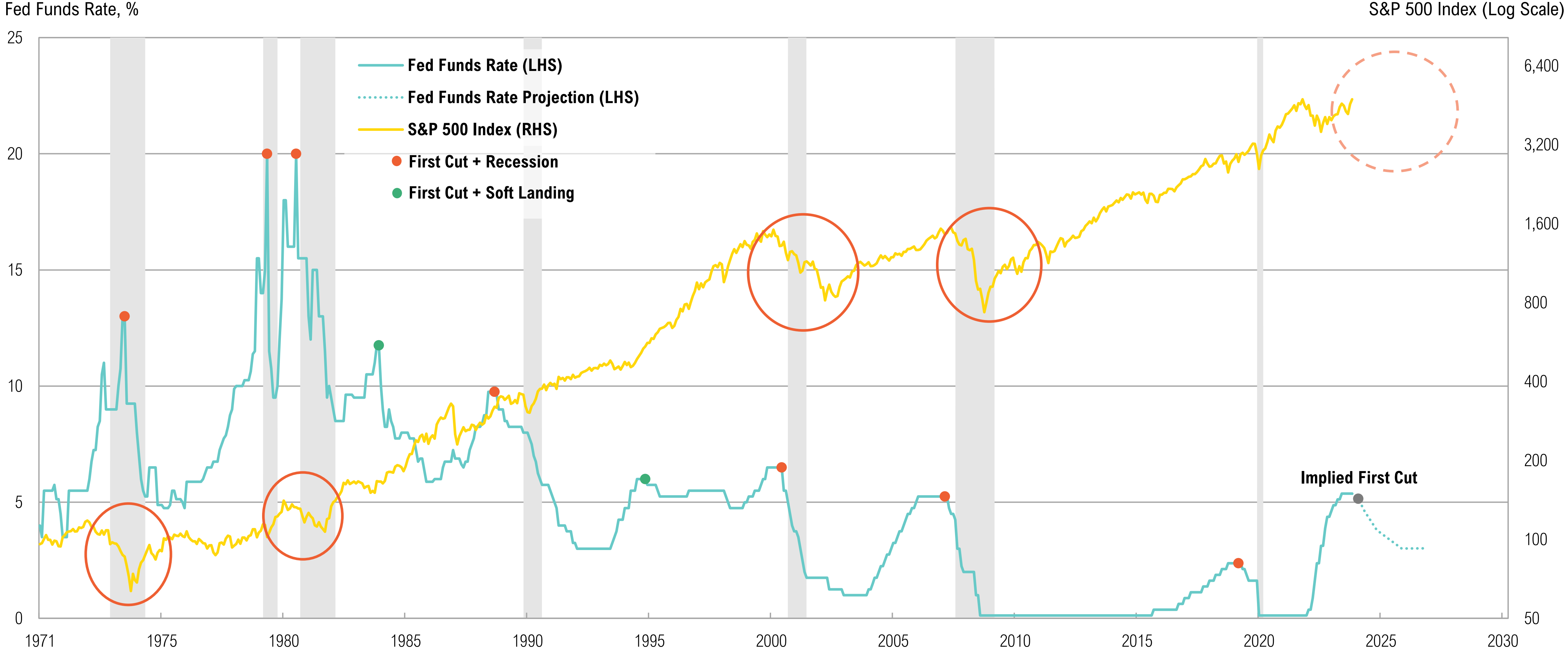
This cycle, however, with economic activity and labor markets in good shape and inflation coming down gradually to 2 percent, I see no reason to move as quickly or cut as rapidly as in the past.

Christopher Waller, *Governor of the Federal Reserve Bank*

While equities are often viewed as inflation hedges, that argument weakens when costs exceed revenues. Throughout this cycle, it was hopes and dreams, not cash flows, that propelled the share prices of the expanding proportion of unprofitable Russell 2000 constituents. Before the credit crisis, 20% of Russell members didn't make money. Today, it's 40%. Median net income for small cap public companies is basically the same place it was 25 years ago, in nominal dollars.

Palm Valley Capital

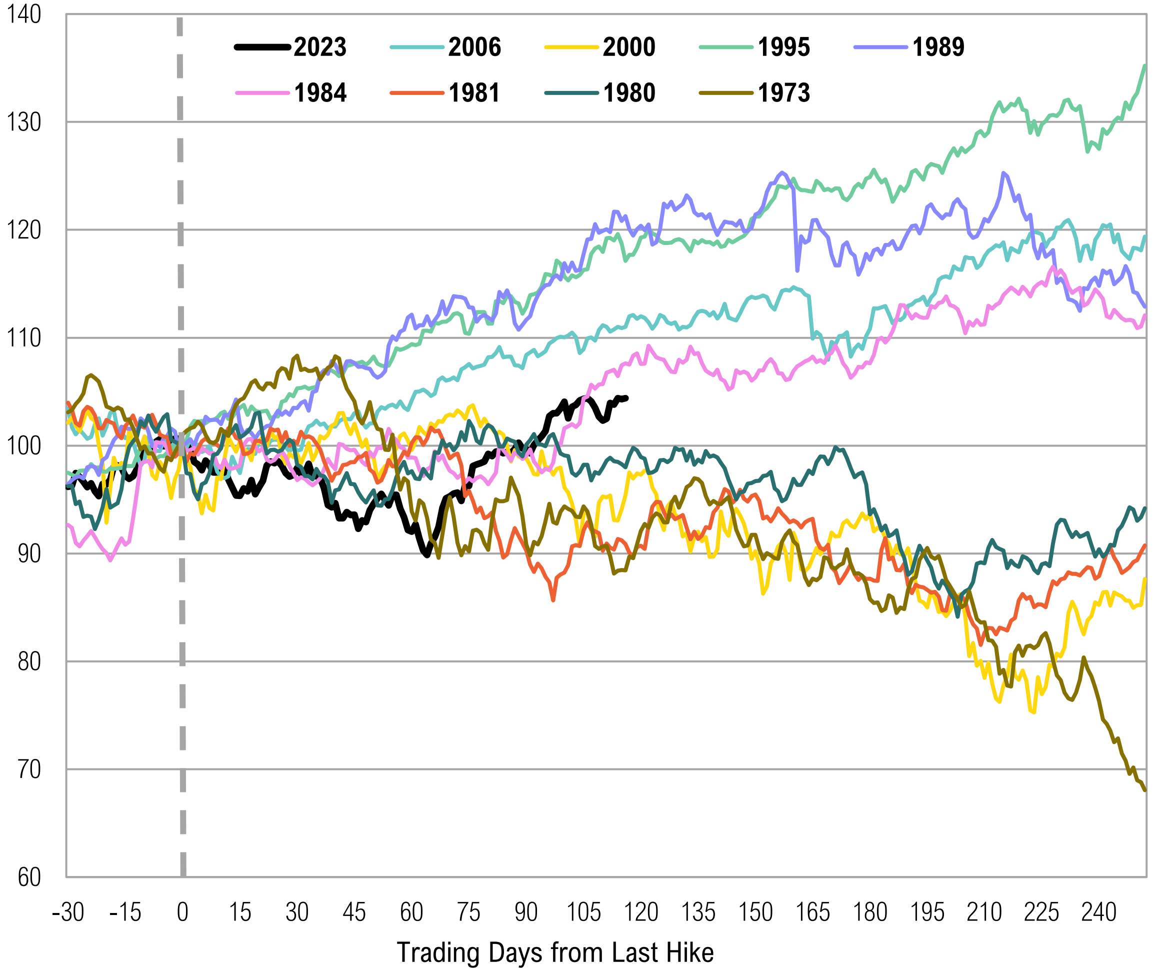
'Soft landings' are rare: while a rate cut seems to be on the horizon, history shows that the Fed cutting rates doesn't stop the pain from prior hikes and their 'long and variable' lags



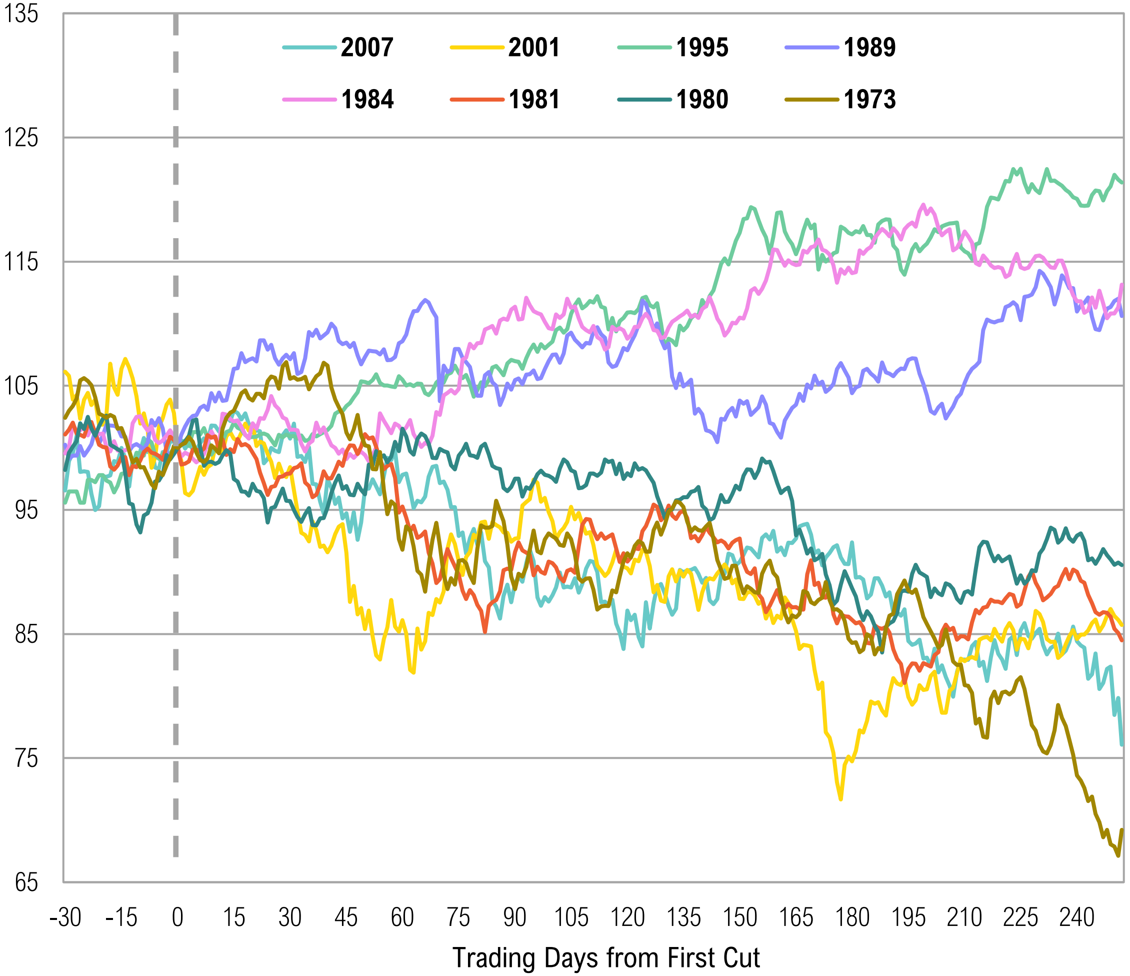
Source: Bloomberg. As of 12/31/2023.

The historical probability of a decline is slightly higher than that of a rally after the first cut following a major hiking cycle

S&P 500, Growth of 100



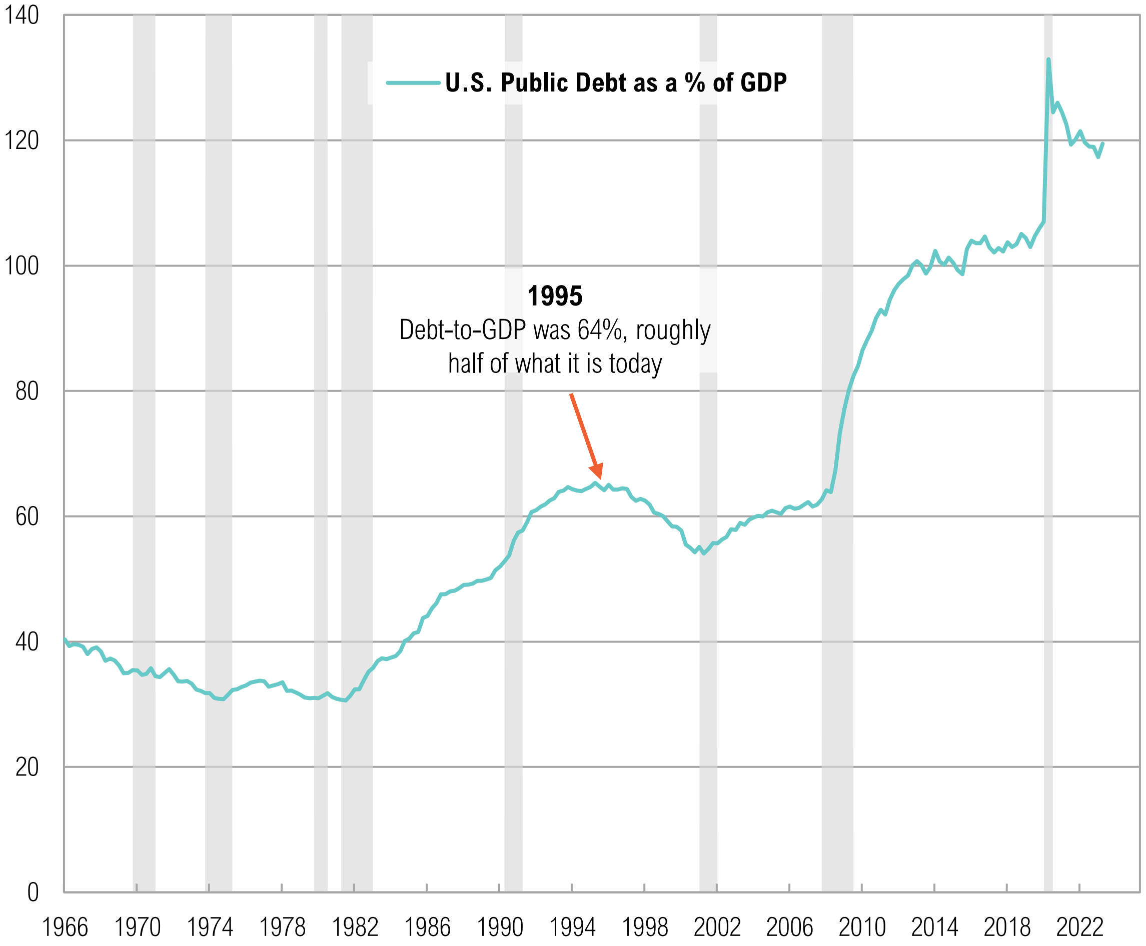
S&P 500, Growth of 100



Source: Bloomberg. LHS Chart assumes July 2023 was the final hike of this cycle.

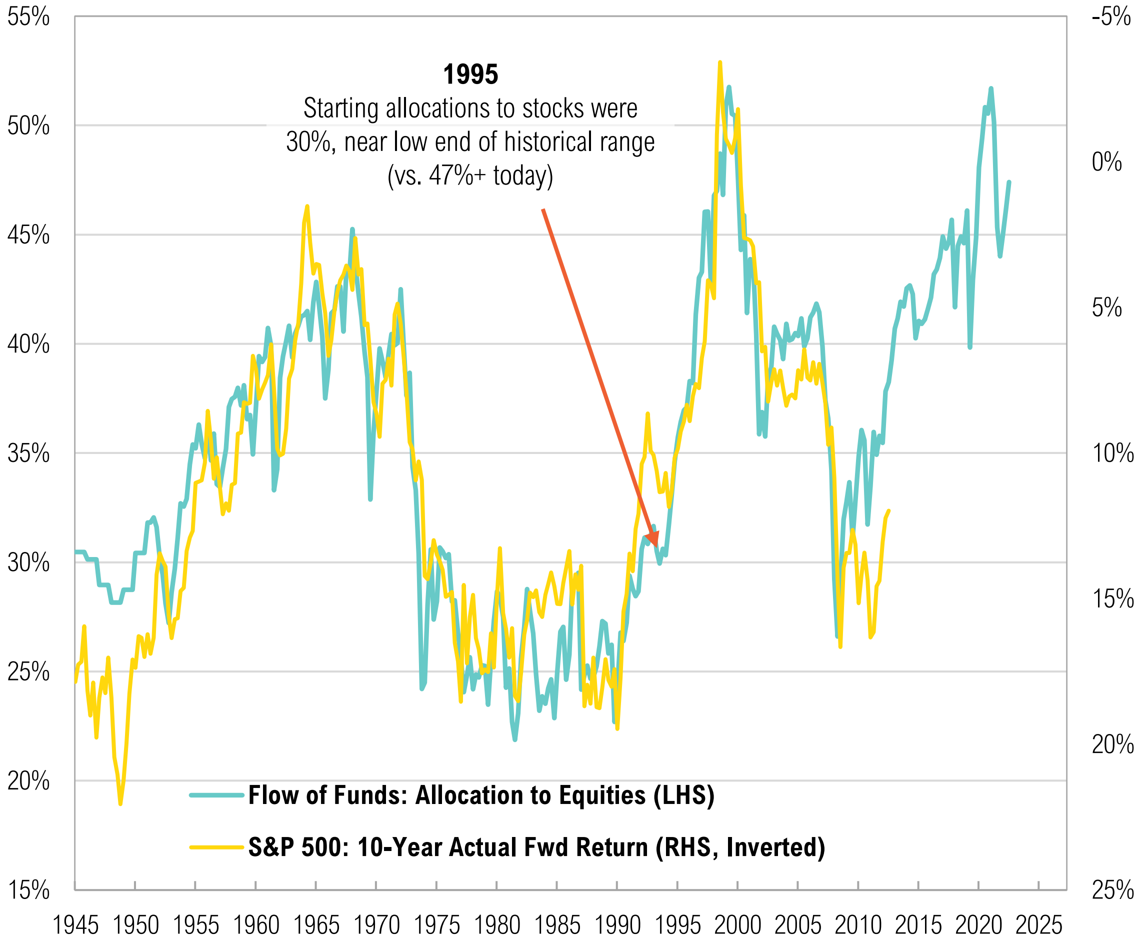
Are we underestimating a 1995-type outcome (i.e., a Fed cut will usher in a multi-year bull market)?

U.S. Debt to GDP, %



U.S. Flow of Funds: Allocation to Equities

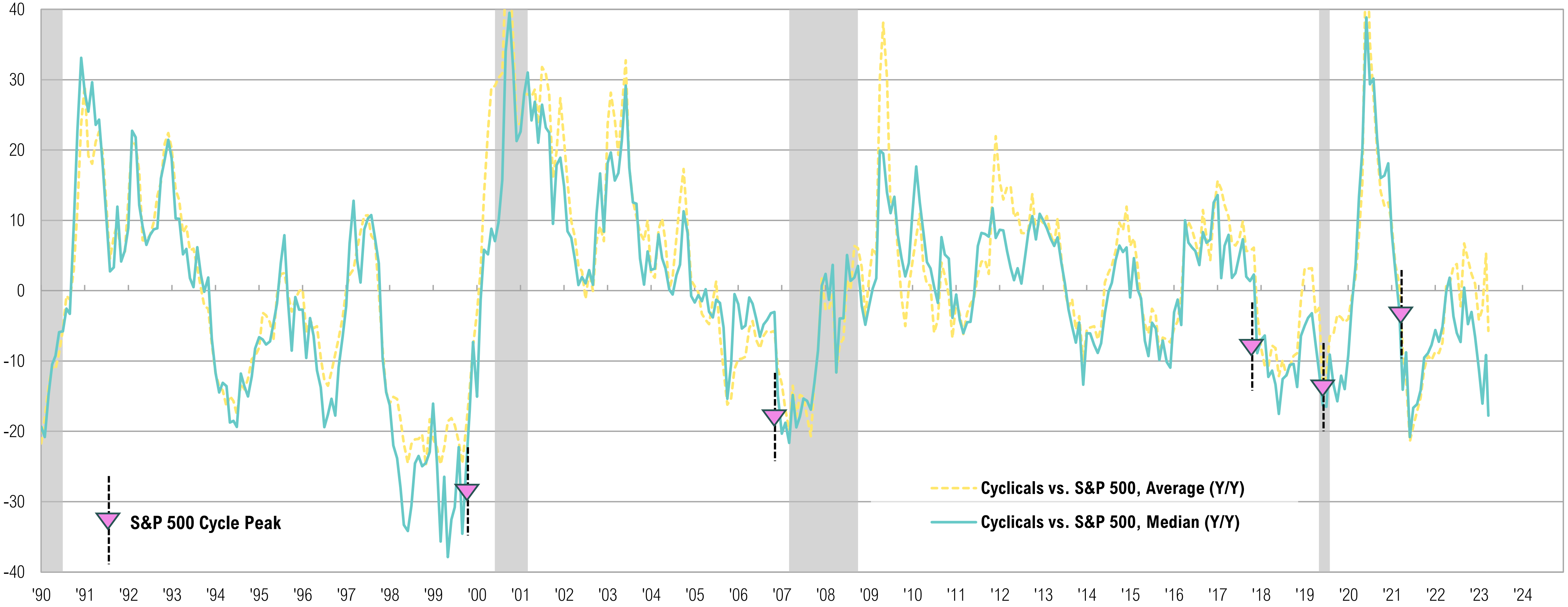
S&P 500: 10-Year Actual Fwd Return, Inverted



Source: Bloomberg, St Louis Fed, National Accounts (Release Z.1 Flow of Funds) as of 6/30/23.

"No better economist than the inside of the stock market" (i.e., market internals); recent bounce in cyclicals was *not enough* to send a definitive message re. a budding economic reacceleration

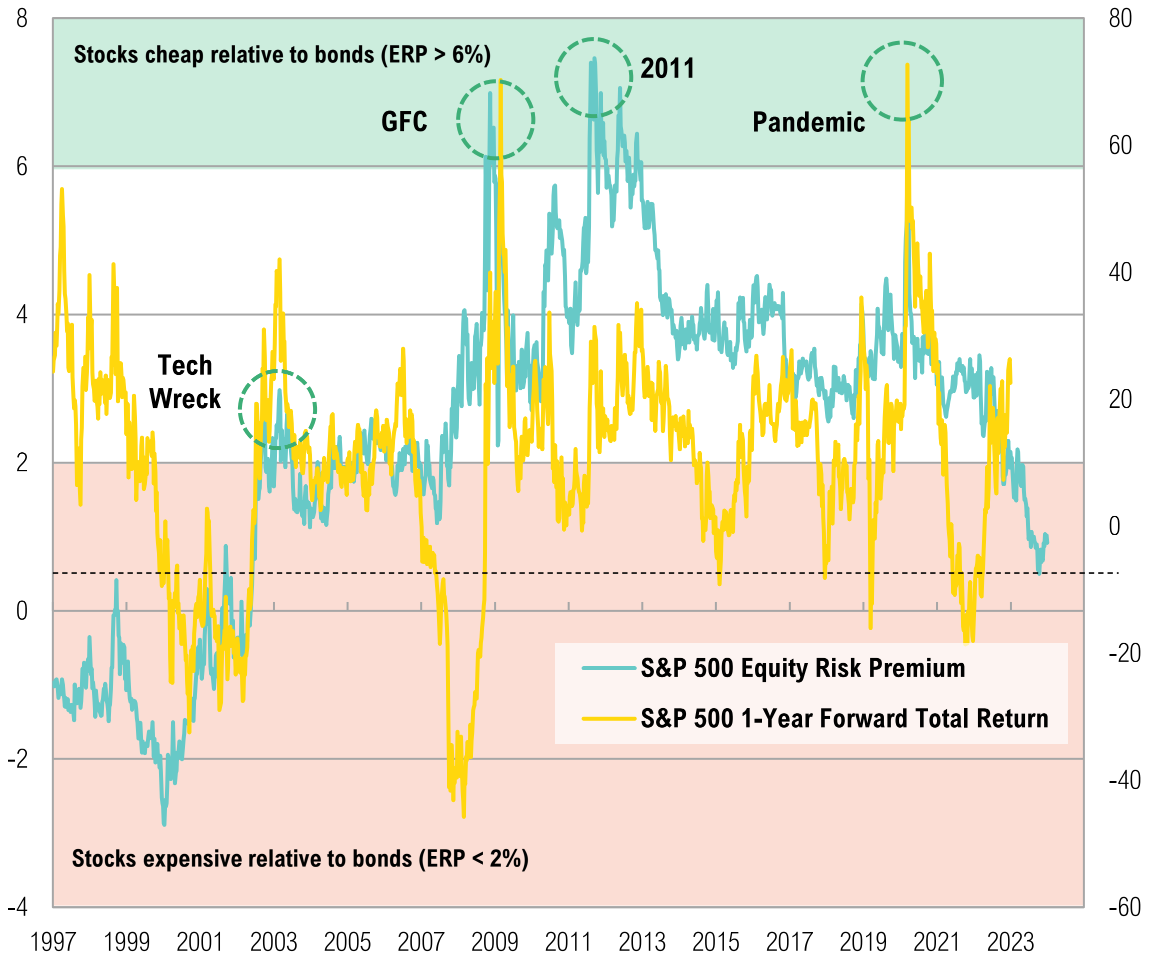
Cyclicals – S&P 500 Index, Y/Y Return %



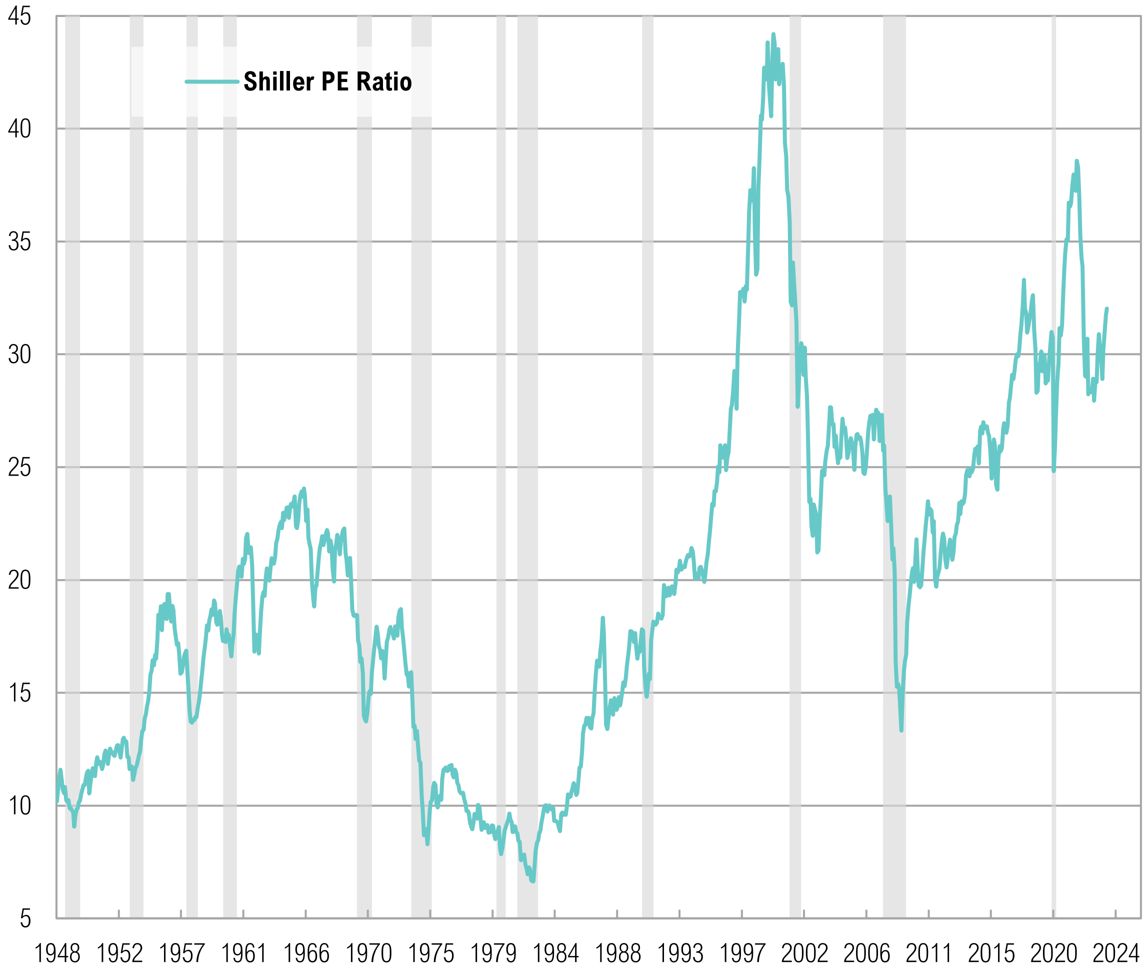
Source: Bloomberg, SpringTide. Cyclicals include U.S. Banks (S&P Composite 1500 Banks), Retail (S&P Composite 1500 Consumer Discretionary), Homebuilders (S&P Composite 1500 Homebuilders), Automobiles (S&P Composite 1500 Automobile Components) and U.S. Small Cap Stocks (Russell 2000 Index). Sector and industry data prior to 1995 derived from the S&P 500 index, but using the same methodology as the S&P 1500. As of 12/31/2023. "Cycle" defined as a significant S&P 500/market high prior to a bear market.

Using a simple yield-to-earnings yield comparison (ERP), U.S. stocks are less attractively priced vis-à-vis bonds than at any point since the 1990s; valuations also appear rich from a Shiller PE perspective

S&P 500 Forward Earnings Yield minus 10-Year US Treasury, % S&P 500 1-Year Forward Return



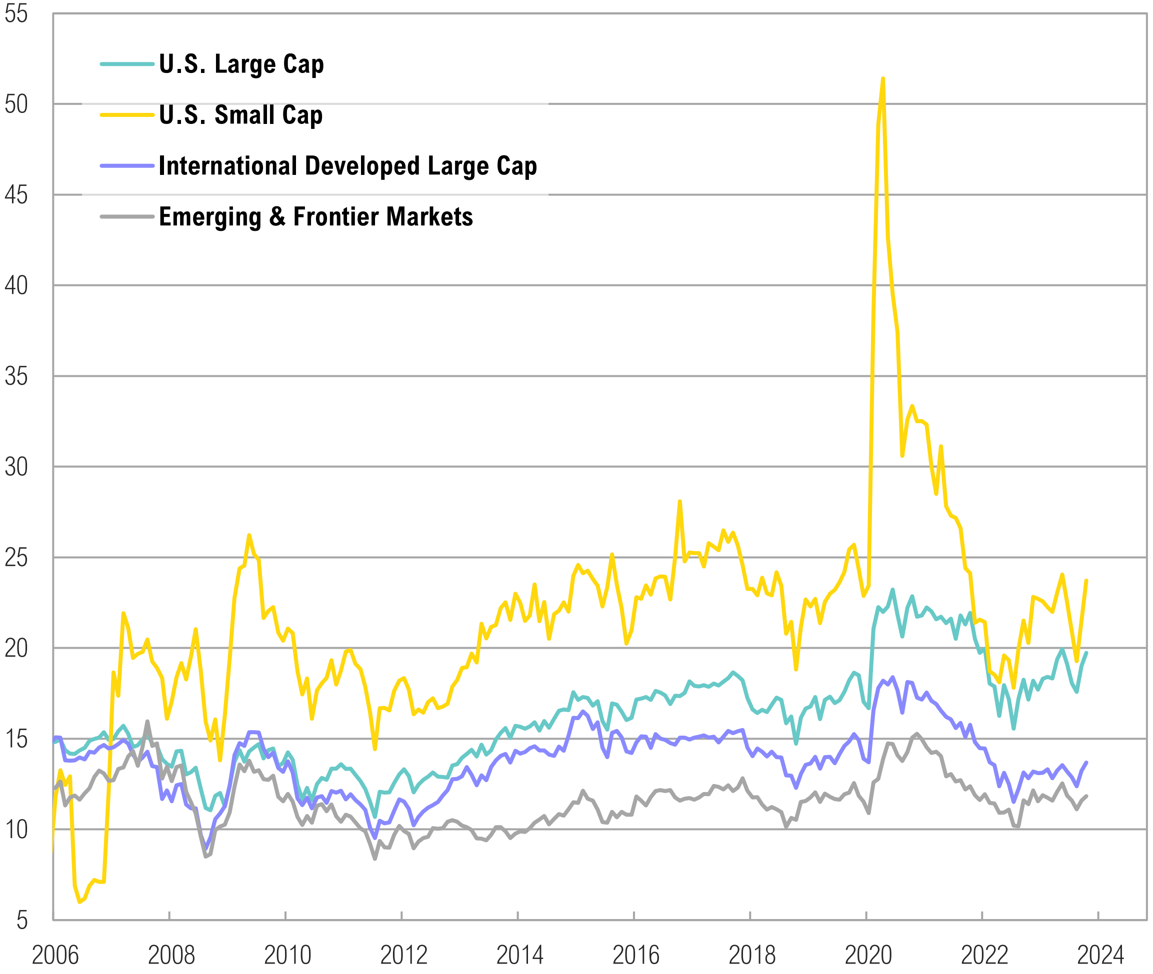
10-Year Cyclically Adjusted Price-to-Earnings Ratio



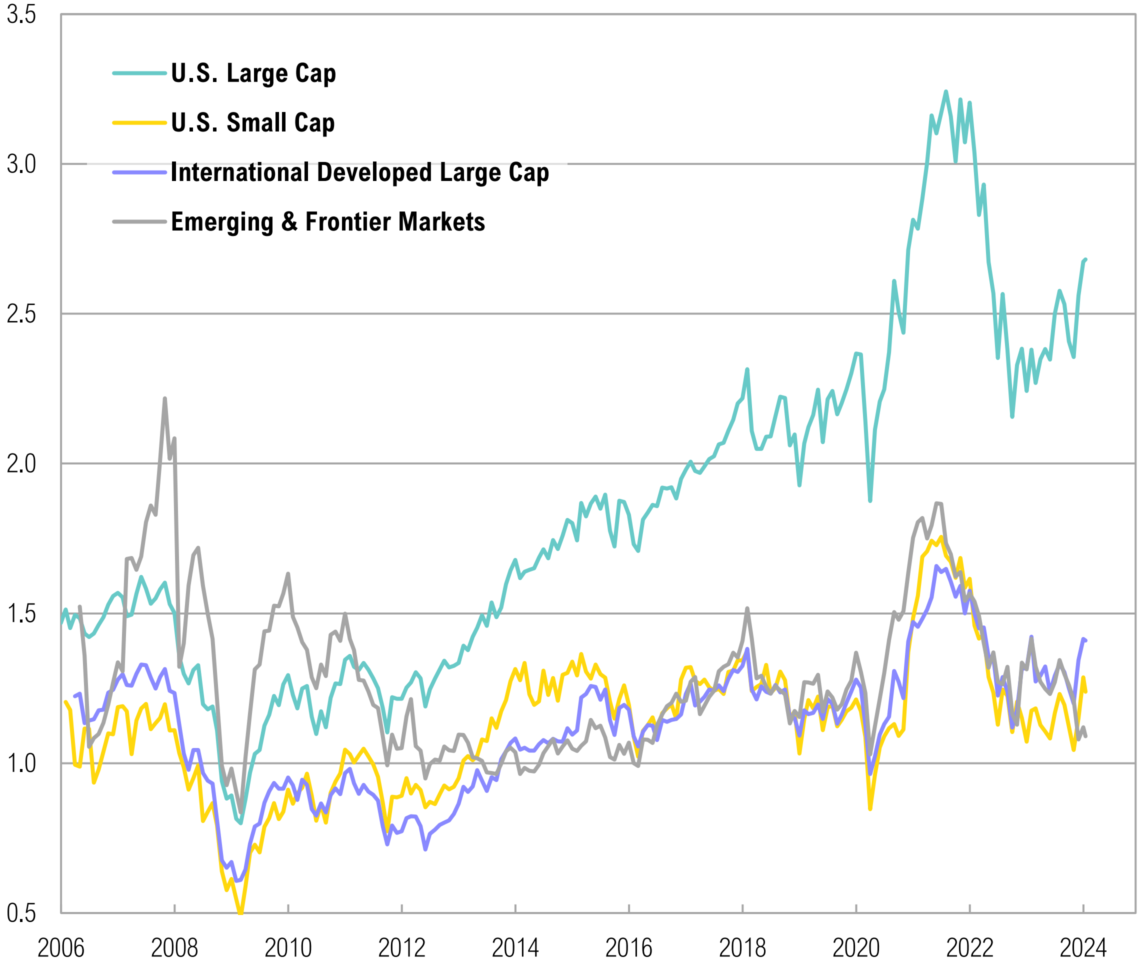
Source: Bloomberg. Equity risk premium calculated as S&P 500 earnings yield minus 10-year Treasury yield.

Emerging market stocks remain relatively cheap vs. developed markets

Price-to-Earnings Ratio, Forward 12-Months



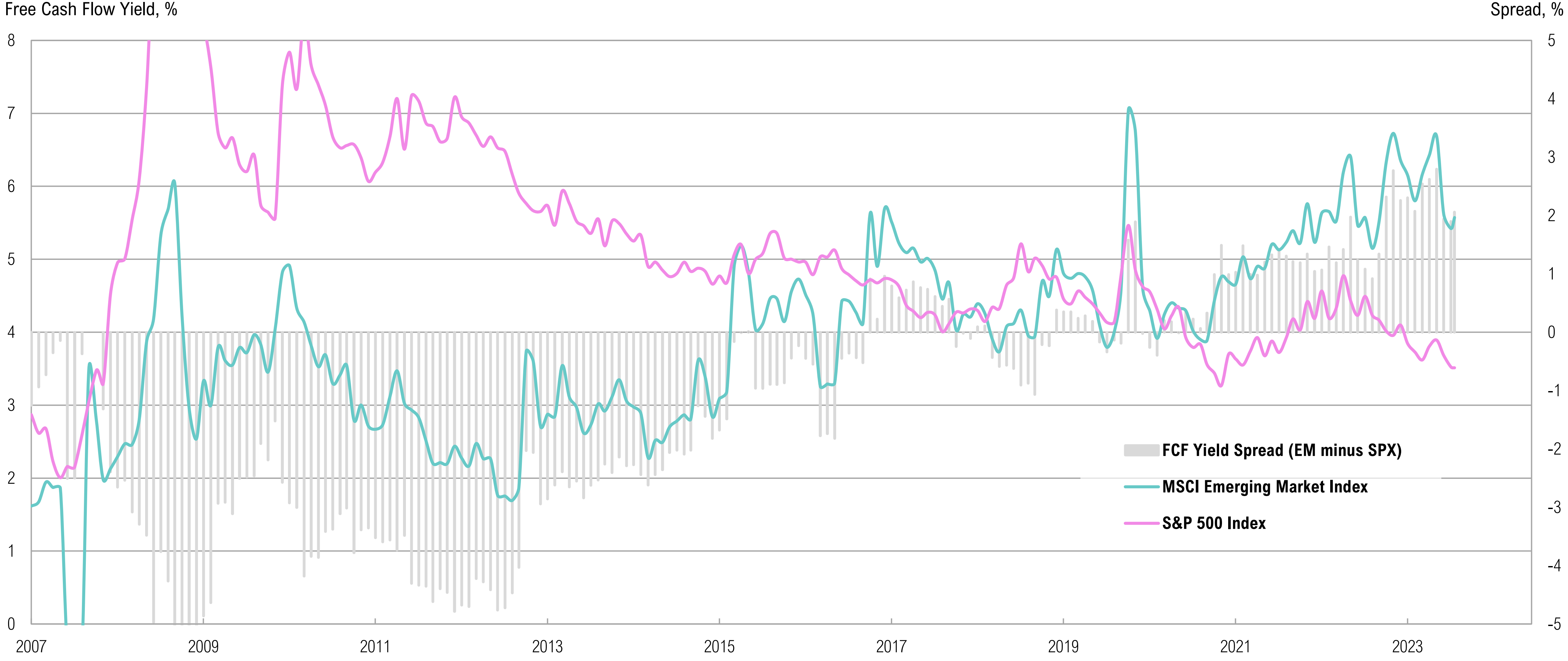
Price-to-Sales Ratio, Forward 12-Months



Source: Bloomberg. As of 12/31/2023.

See important disclosures at the end of this presentation

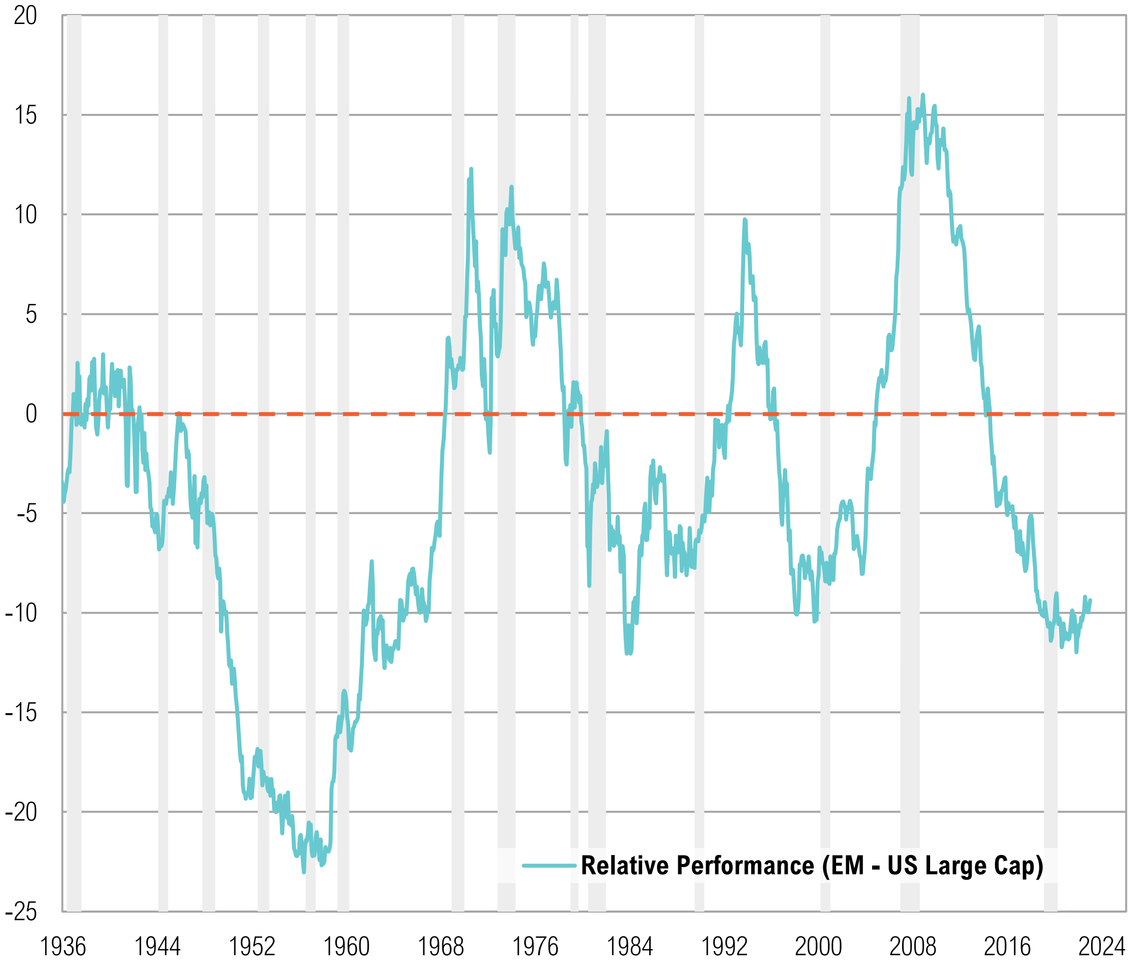
Emerging market stocks look cheap compared to U.S. large cap stocks; free cash flow yield of EM is ~2% higher than U.S. large caps, the widest margin in 15 years



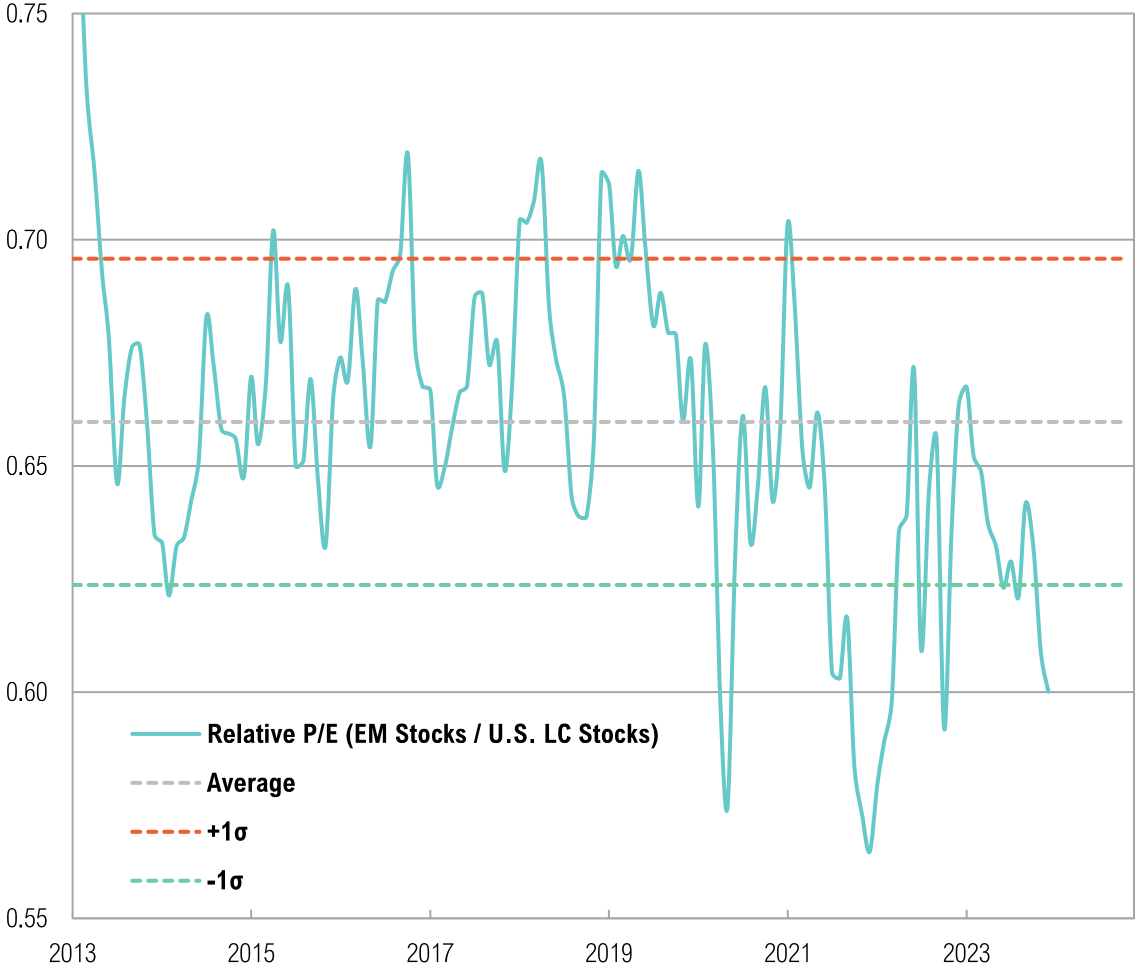
Source: Bloomberg

Over the very long term, EM stocks have seen prolonged periods of over/underperformance vs U.S. large caps; the current 10-year performance divergence is among the widest in history

Rolling 10-Year Relative Returns, %



12-Month Forward Relative Price-to-Earnings



Source: Bloomberg

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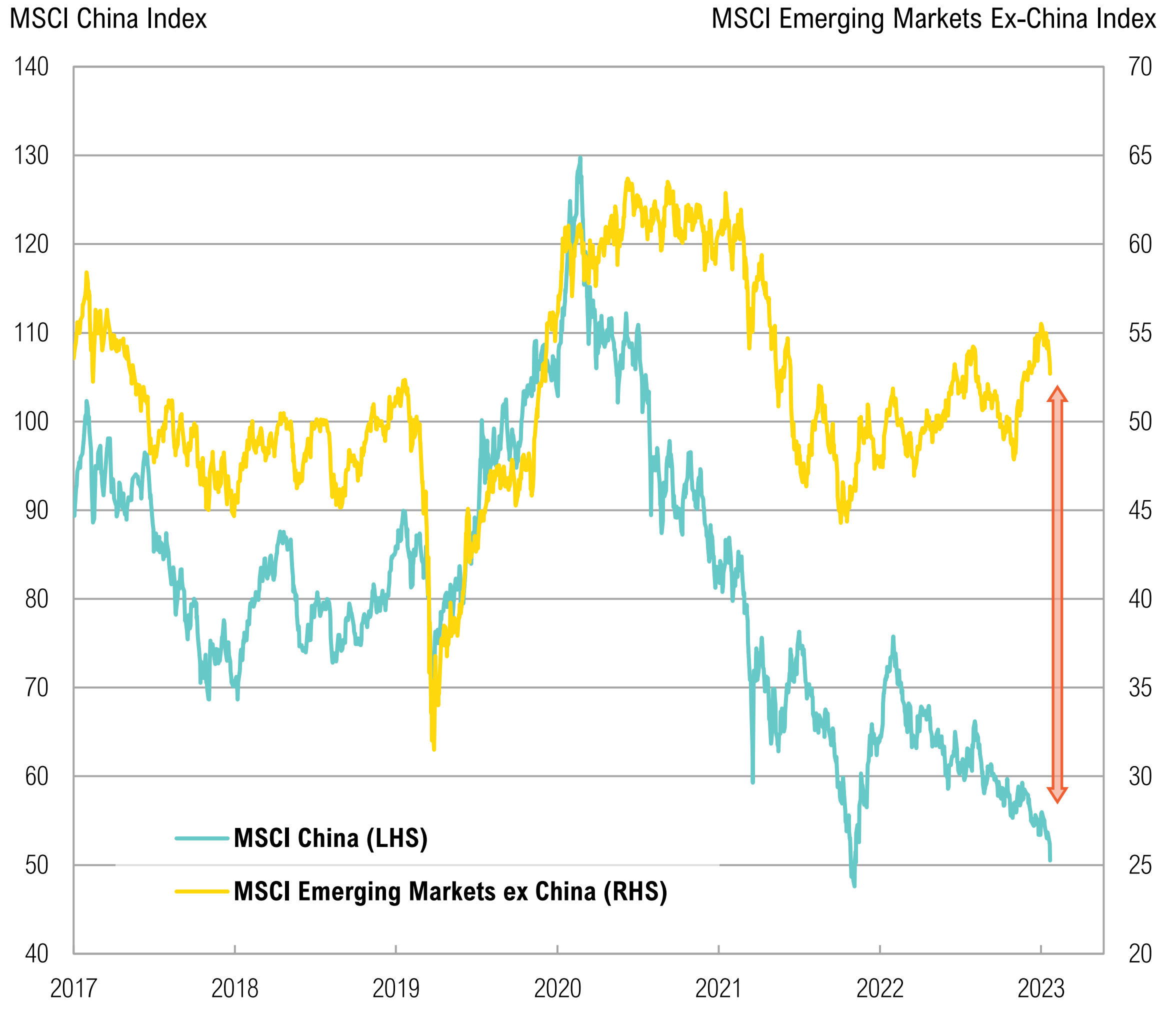
Chinese stocks have trailed the rest of the EM space, mostly due to recession/debt deflation concerns, but certainly not helped by geopolitical tensions (Taiwan)

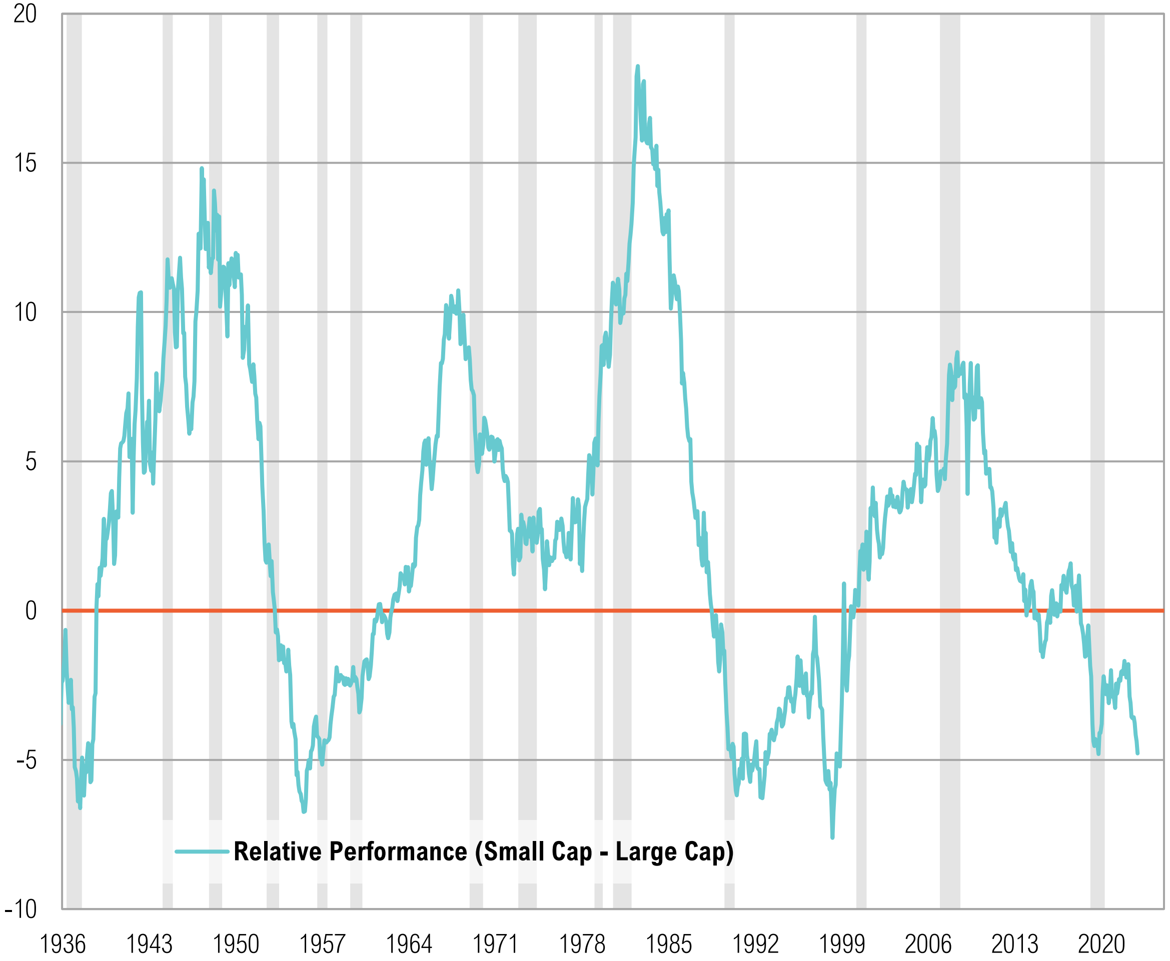
Emerging Markets Country Weights (%)			
Country	MSCI EM Index	MSCI EM (ex China) Index	Difference
China	23.0	-	-23.0
India	17.8	23.1	5.3
Taiwan	15.6	20.3	4.7
South Korea	12.2	15.8	3.6
Brazil	5.8	7.5	1.7
Saudi Arabia	4.4	5.7	1.3
Mexico	2.7	3.5	0.8
South Africa	2.7	3.5	0.8
Indonesia	2.0	2.6	0.6
Thailand	1.7	2.2	0.5
Malaysia	1.4	1.8	0.4
UAE	1.3	1.7	0.4
Hong Kong	1.3	1.7	0.4



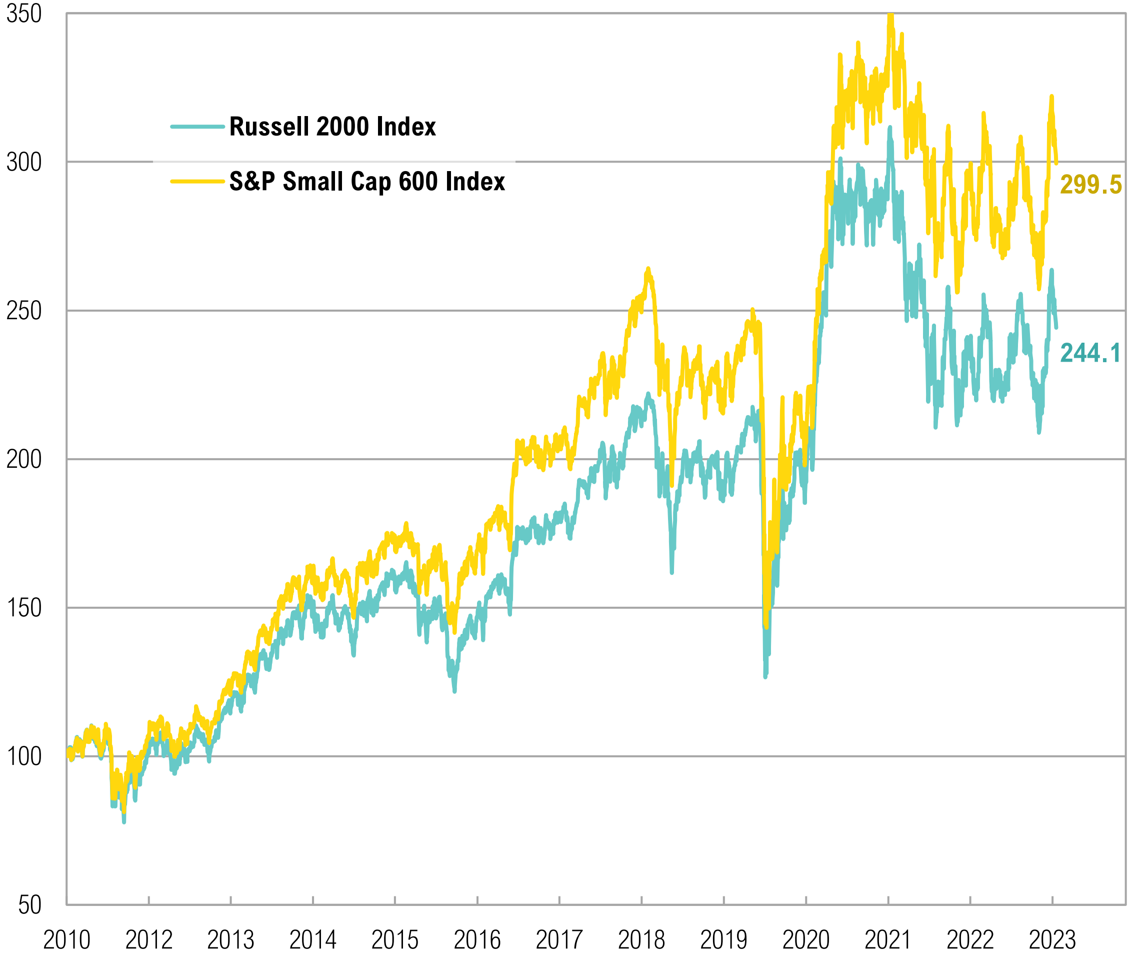
Source: Bloomberg

Active management in small cap is key; profitable small cap companies have substantially outperformed the broader small cap universe

Relative Rolling 10-Year Returns, %



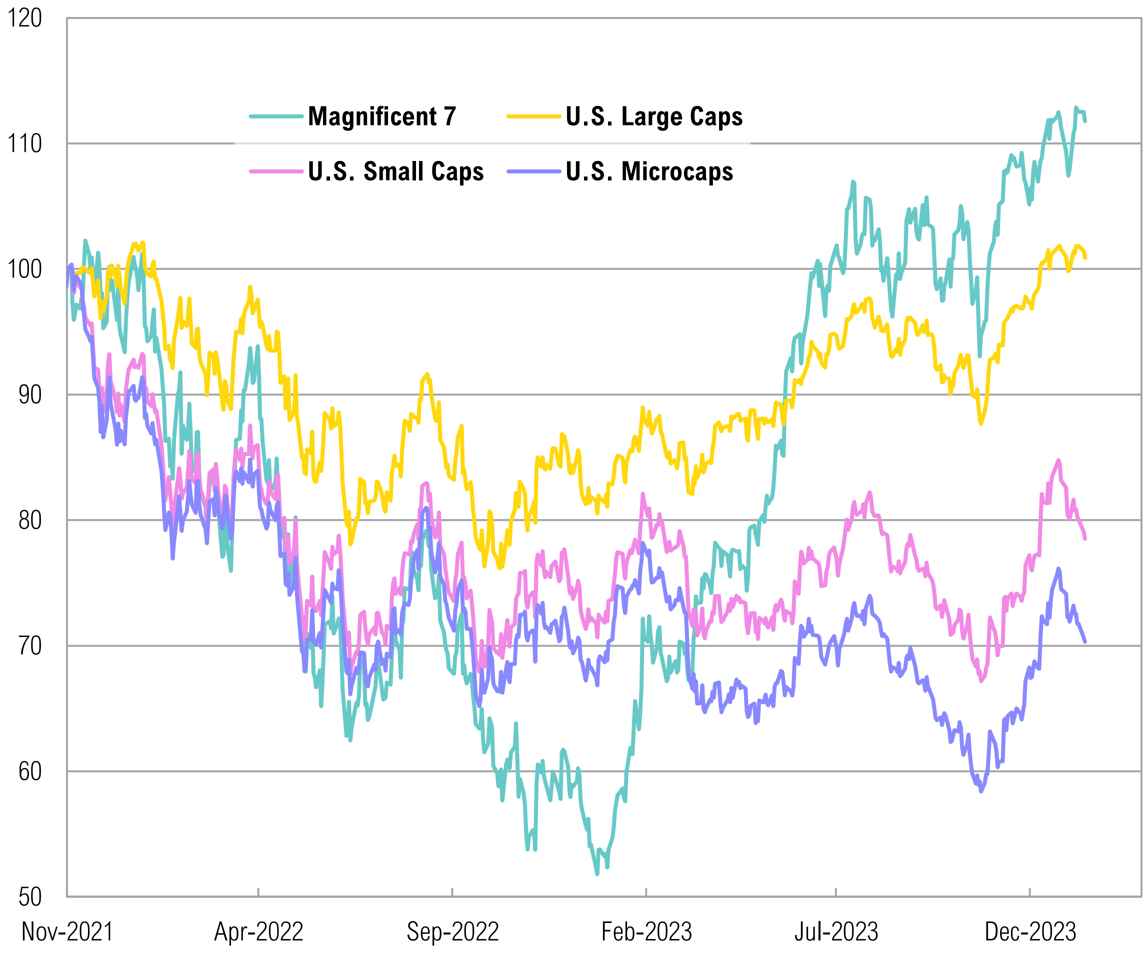
Growth of 100, 1/1/2011 - Present



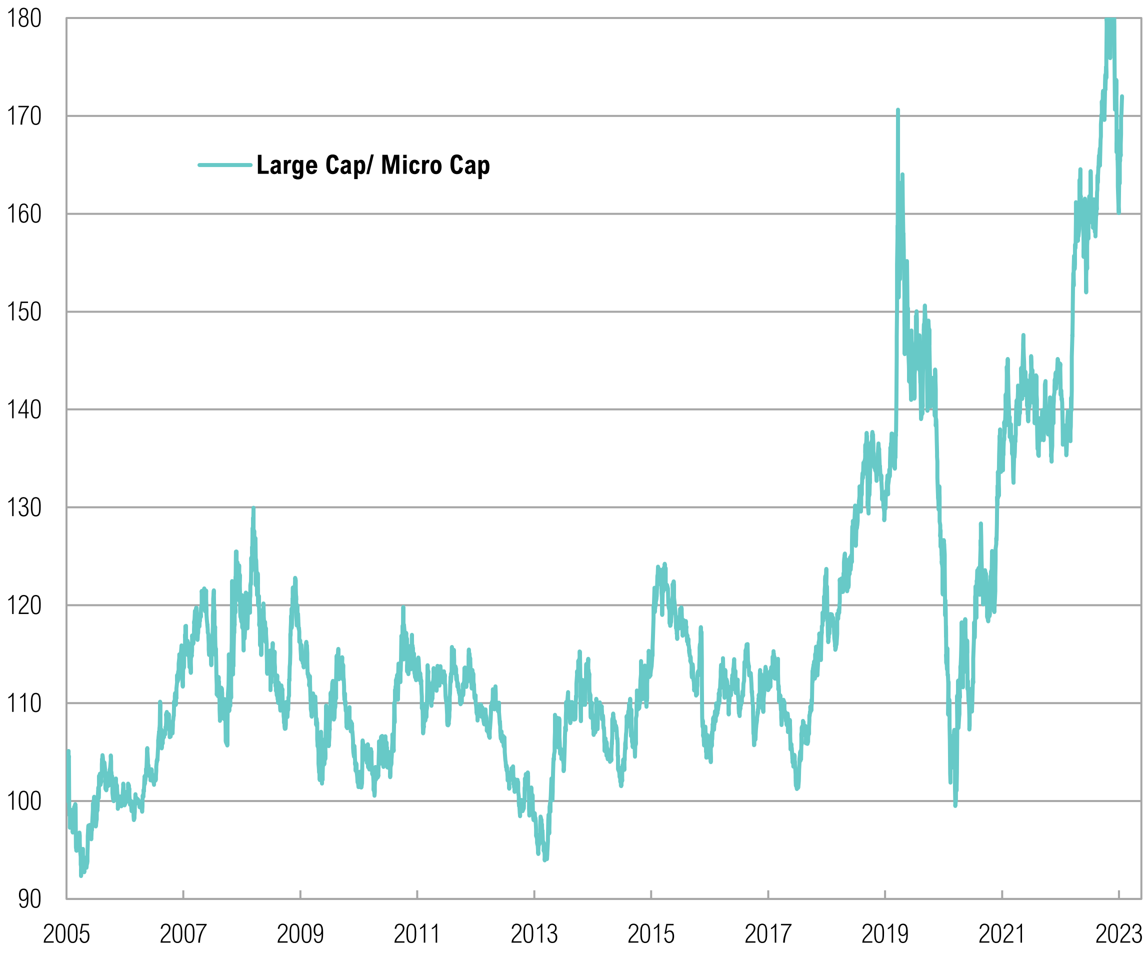
Source: Palm Valley, Bloomberg

There is a historic performance divergence between U.S. large cap and small cap stocks since Nov 5, 2021 (small cap peak)

Growth of 100, 11/5/2021 - Present



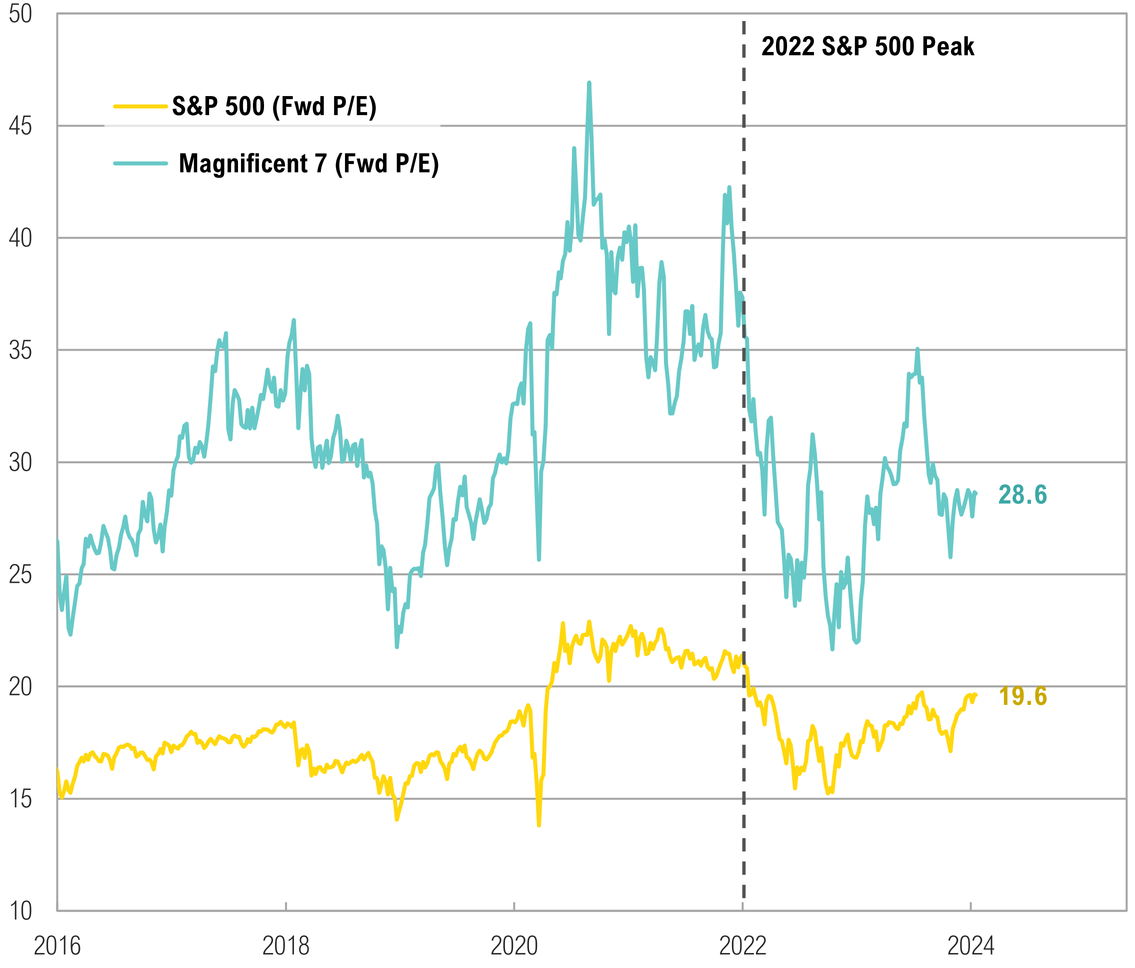
S&P 500 Index/ Russell Microcap Index, Growth of 100



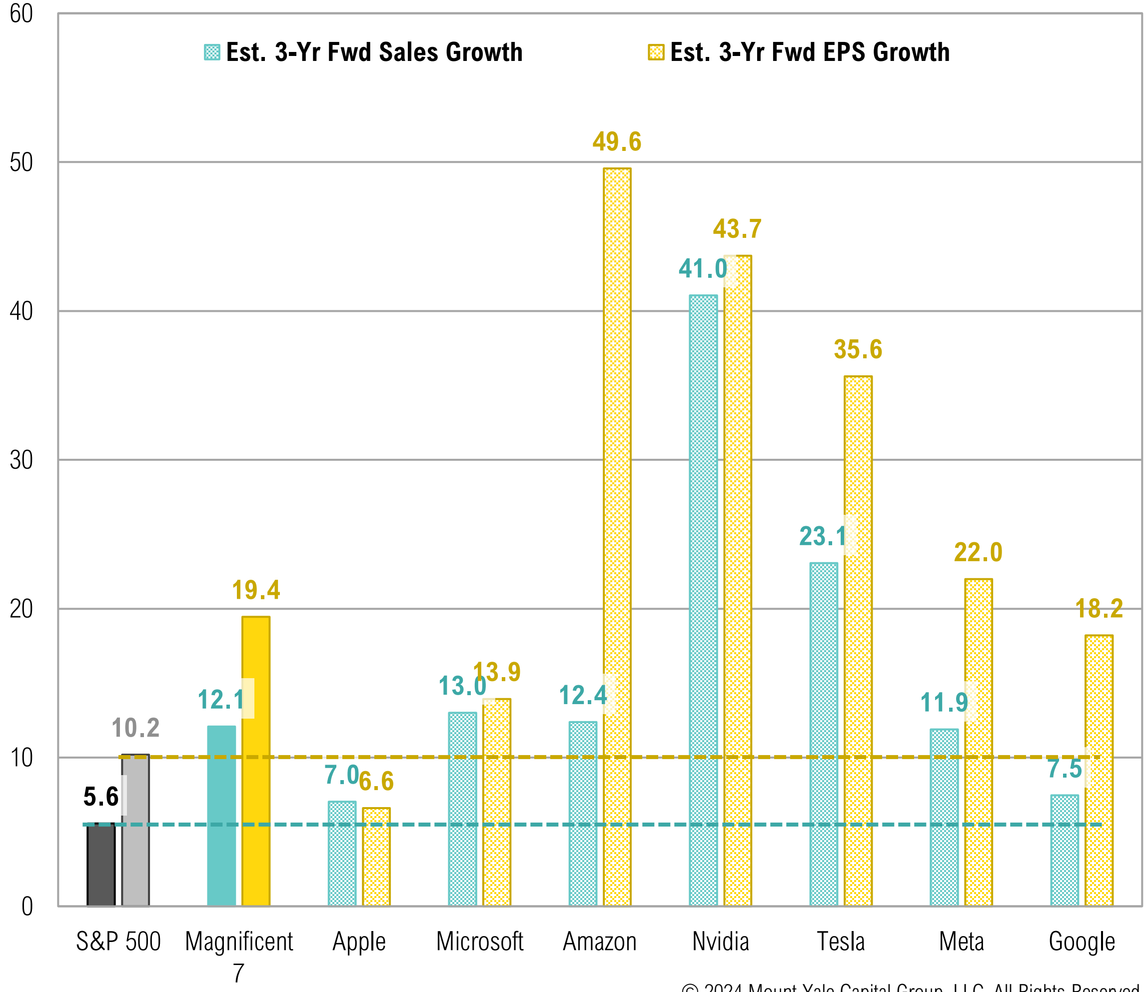
Source: Bloomberg. Small Cap proxied by the Russell 2000, Large Cap proxied by the S&P 500, Microcap proxied by the Russell Microcap Index. The Magnificent 7 is an equal-dollar weighted equity benchmark consisting of a fixed basket of Apple, Nvidia, Microsoft, Meta, Amazon, Tesla and Alphabet.

'Mag 7' forward valuations have dropped substantially from peak levels, but still remain disconnected from the market; Apple is currently trading at 30x earnings, despite single-digit growth expectations

12-Month Forward Price-to-Earnings Ratio*



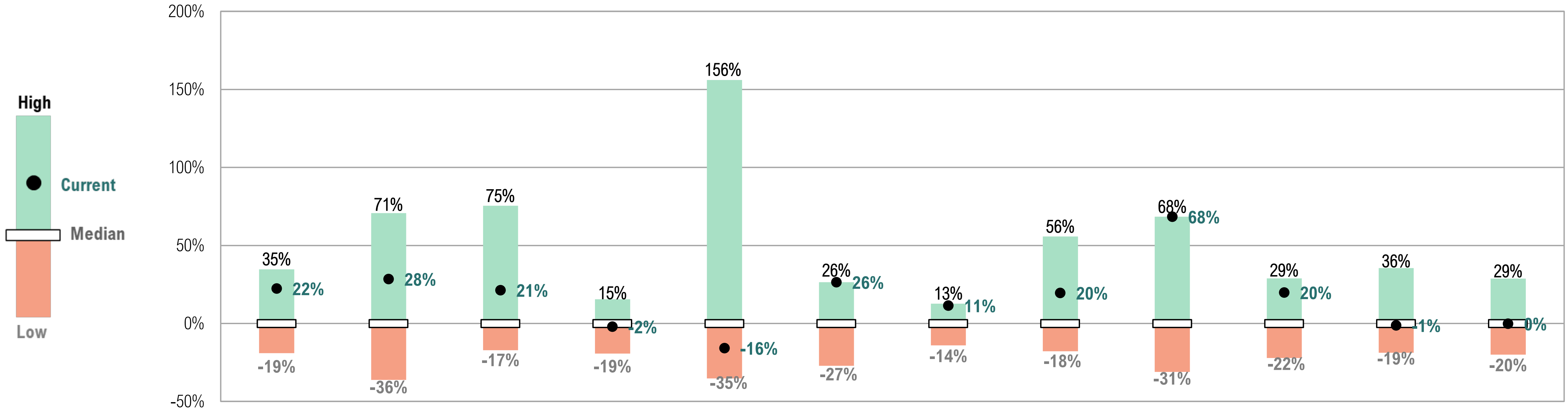
Consensus Annualized 3-Year Forward Growth Expectations, %



Source: Bloomberg. *The price to earnings ratio for the Magnificent 7 assumes an equal weighting of Apple, Nvidia, Microsoft, Meta, Amazon, Tesla and Alphabet.

Most sectors within the S&P 500 are trading at premiums relative to their median valuations, with tech and financials reaching 10-year extremes; energy still offers value relative to its ranges

Current Composite Valuation Premium/Discount vs. 10-Year Median*

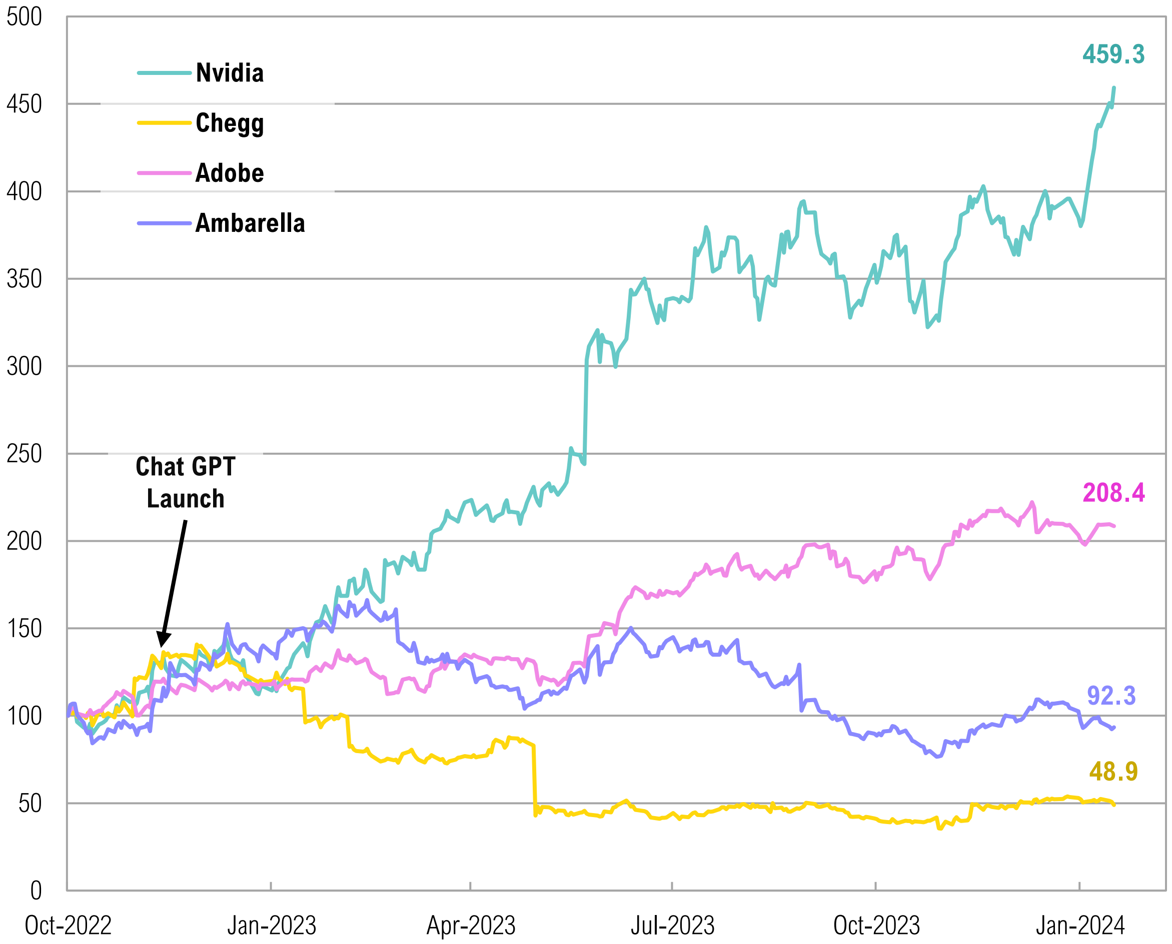


	S&P 500	Communication Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Information Technology	Materials	Real Estate	Utilities
High Valuation Date	4/30/2021	8/31/2021	4/30/2021	4/29/2022	4/29/2016	12/29/2023	7/30/2021	4/30/2021	12/29/2023	4/30/2021	12/31/2021	3/31/2022
Low Valuation Date	1/31/2014	5/31/2018	9/30/2014	1/31/2014	9/30/2022	3/31/2020	3/31/2020	9/30/2015	1/31/2014	9/30/2015	10/31/2023	12/31/2013
Valuation Premium on 12/31/2022	0%	-1%	-6%	8%	-23%	1%	4%	6%	15%	-1%	-12%	16%
Valuation Premium on 12/31/2021	34%	58%	62%	15%	-22%	16%	8%	30%	68%	14%	36%	27%
Valuation Premium on 12/31/2020	33%	59%	64%	10%	45%	5%	4%	41%	58%	28%	15%	17%
Valuation Premium on 12/31/2019	8%	31%	8%	6%	0%	5%	5%	2%	21%	9%	10%	20%
Valuation Premium on 12/31/2018	-13%	10%	-11%	-10%	-15%	-15%	-8%	-17%	-15%	-14%	-9%	-3%

Source: Bloomberg. *The composite valuation equal weights four valuation metrics (Fwd P/E, Fwd P/CF, TTM P/S and TTM EV/EBITDA) relative to each respective sectors' 10-year medium valuation. The Financials composite replaces EV/EBITDA with TTM P/B.

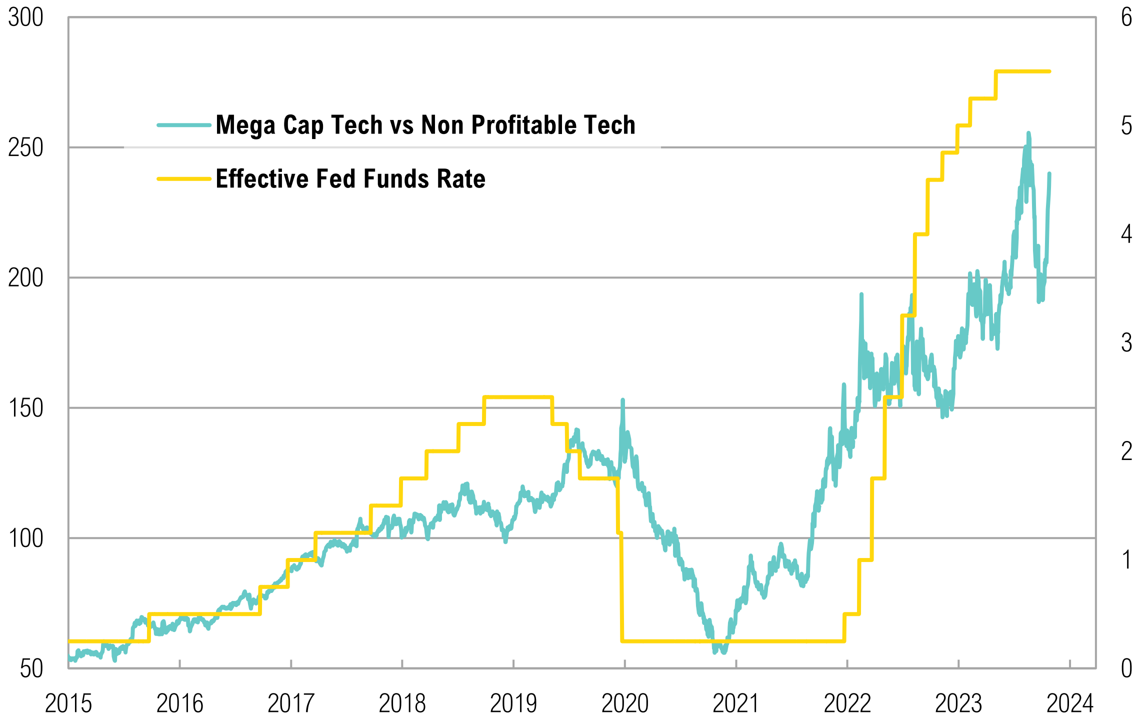
Despite high valuations, the market is still at least trying to be discerning with AI 'winners' and 'losers'

Share Price, Growth of 100



GS Mega Cap Tech vs Non-Profitable Tech Index

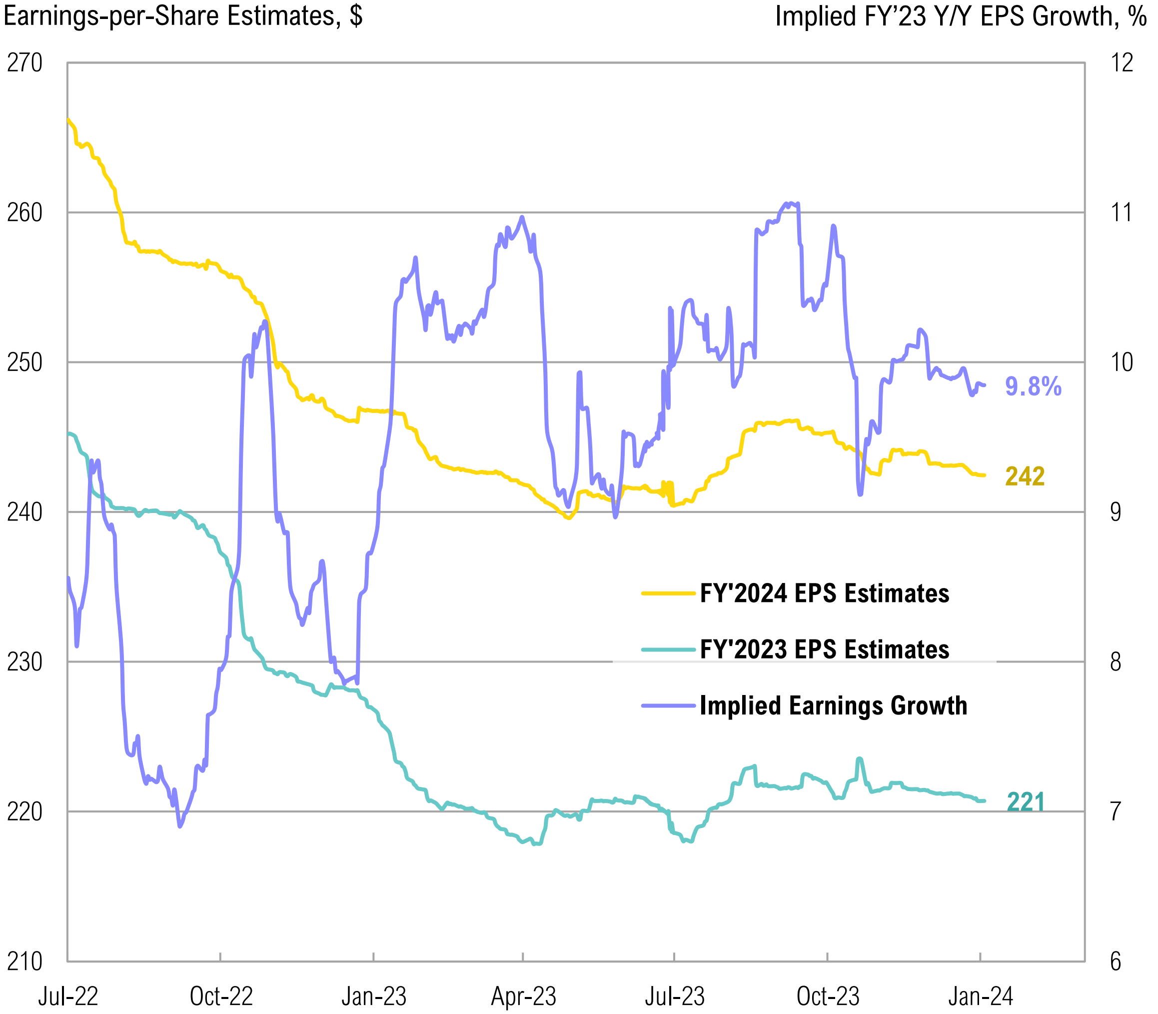
Effective Fed Funds Rate, %

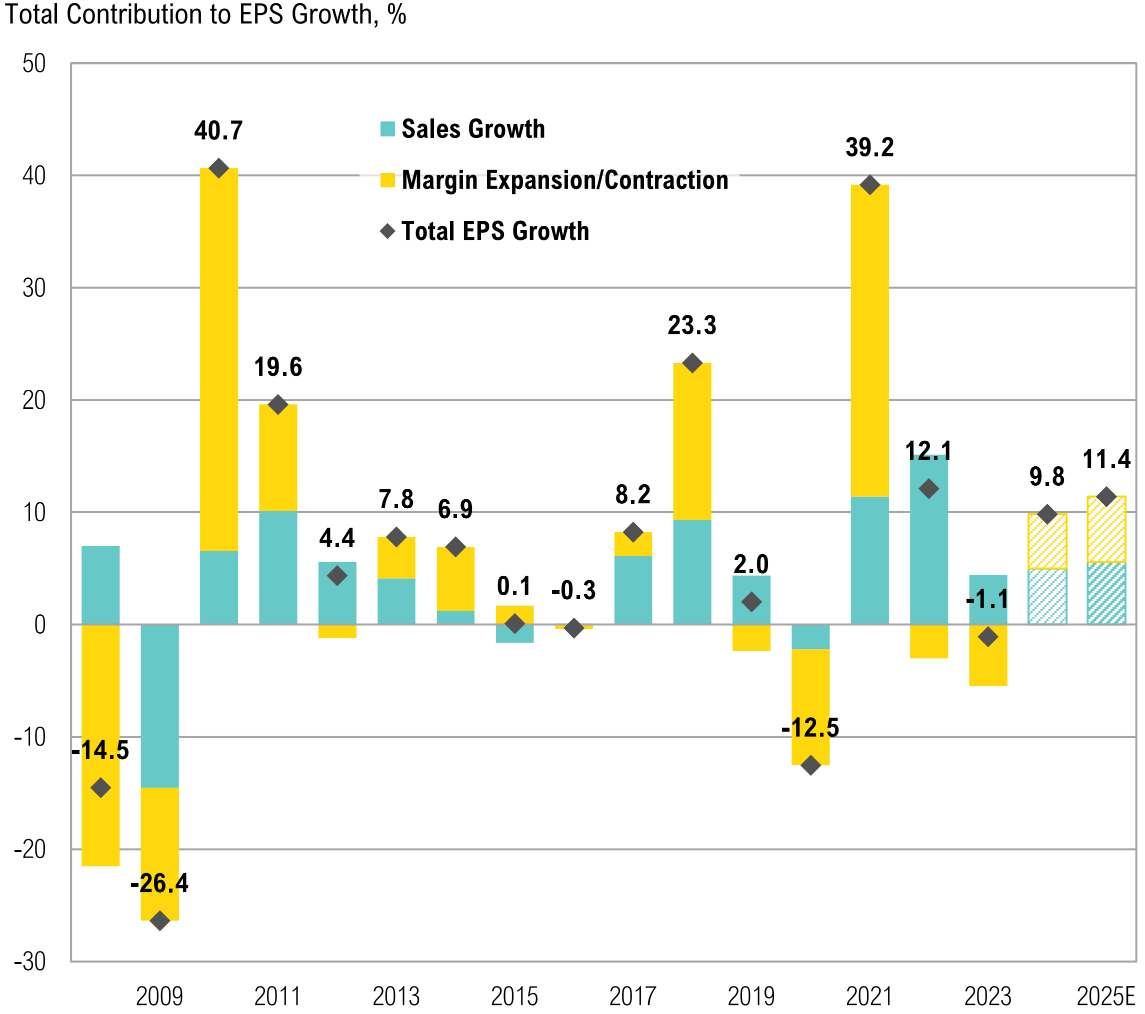


	Market Wt. (%)	Cash as % of Market Cap	Net Debt to Equity	RoE (%)	Net Margin (%)
Magnificent 7	29.3%	4.3%	-0.3	44.0%	25.0%
Tech Bubble	19.0%	2.4%	0.0	28.0%	16.0%

Source: Bloomberg. Magnificent 7 aggregate companies comprise of Apple. Microsoft, Alphabet, Amazon, Nvidia, Telsa, Meta and Tech Bubble aggregate companies comprise Microsoft, Cisco, Intel, Oracle, IBM, Lucent, Nortel Networks.

After failing to materialize in 2023, will earnings growth finally accelerate in 2024? If so, will the expected +10% be sufficient to grow into high valuations?

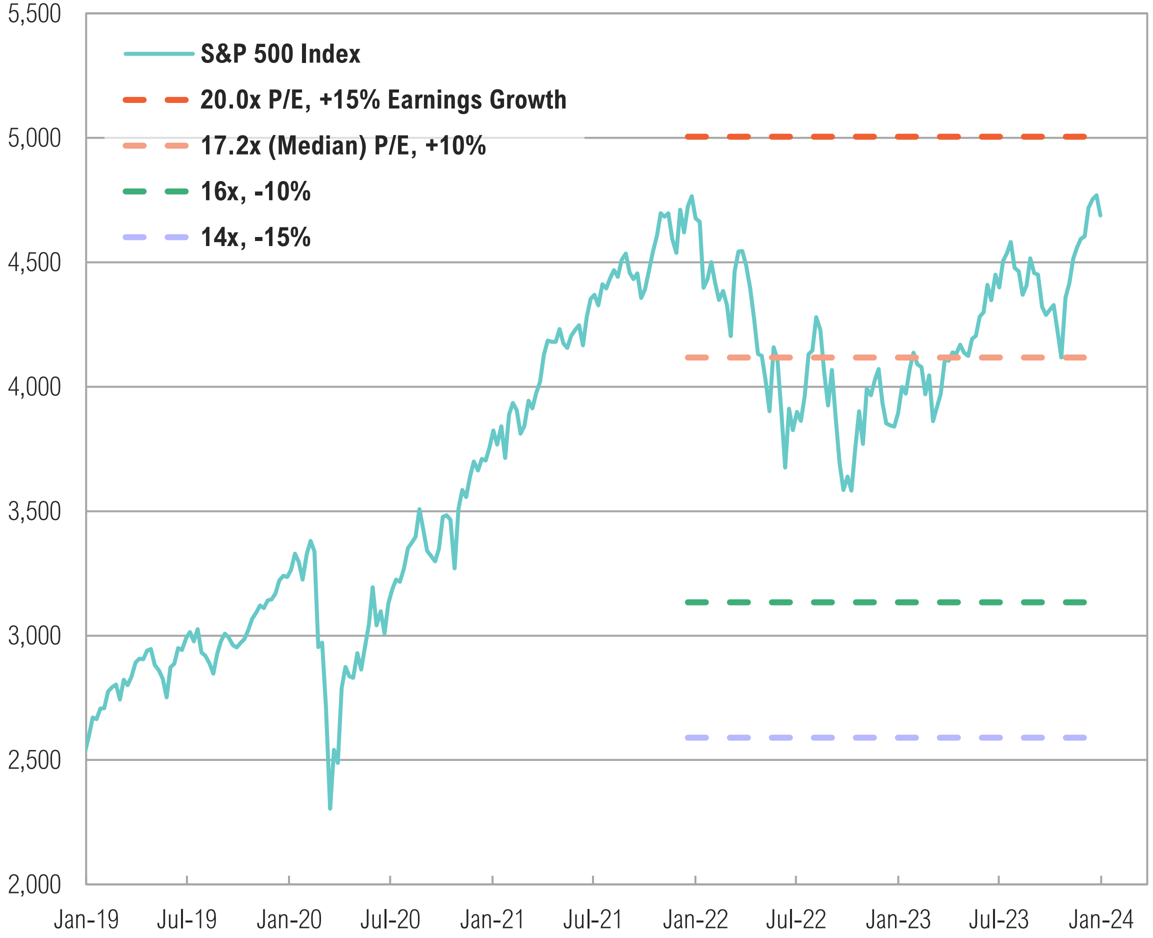




Source: FactSet, JP Morgan

Depending on the path of inflation and earnings growth, where might the S&P 500 trend to? Markets are currently pricing in 11.6% EPS growth over the next 12 months, implying a 19.6x P/E vs LT average of 17.2x

S&P 500 Index

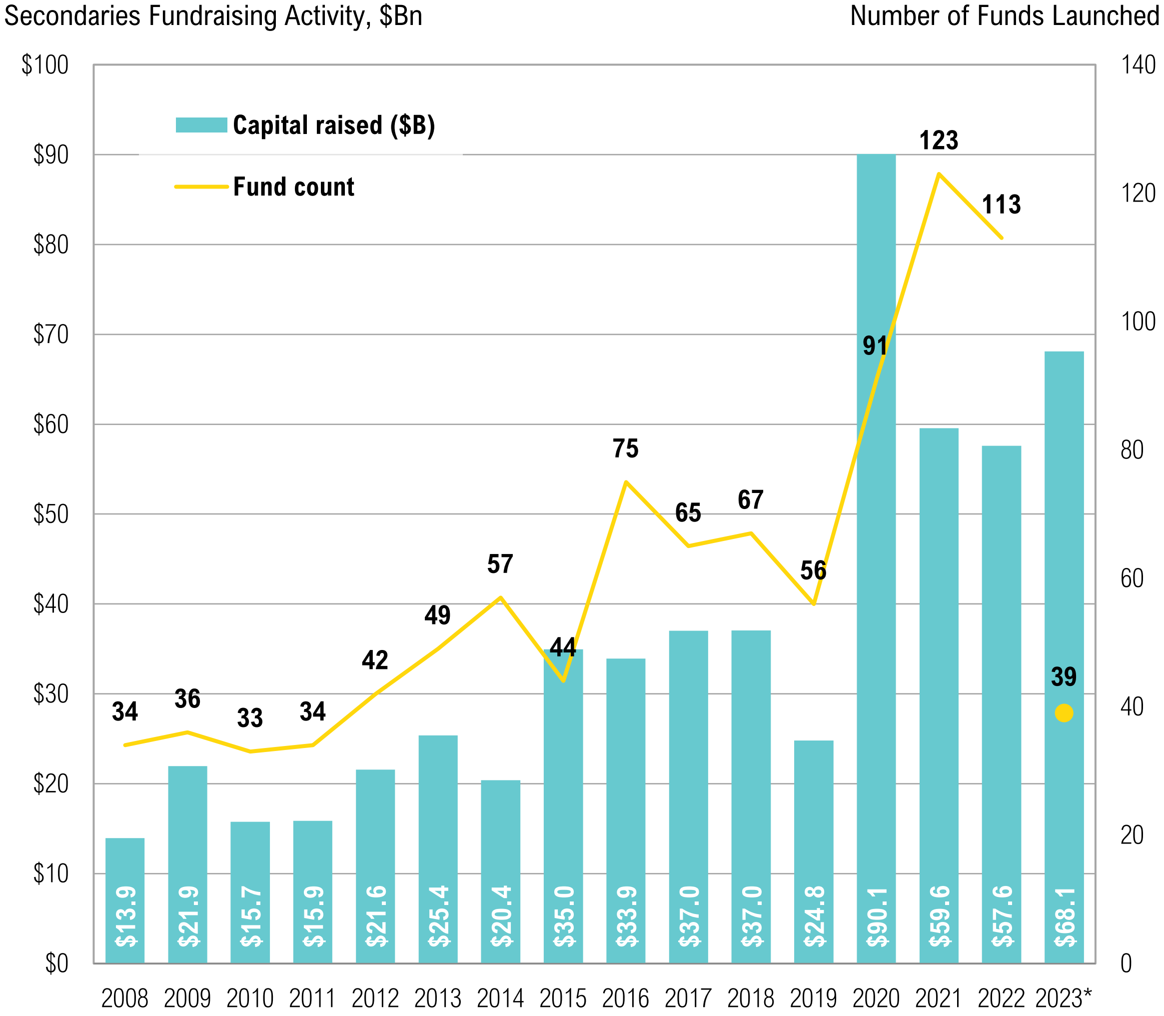


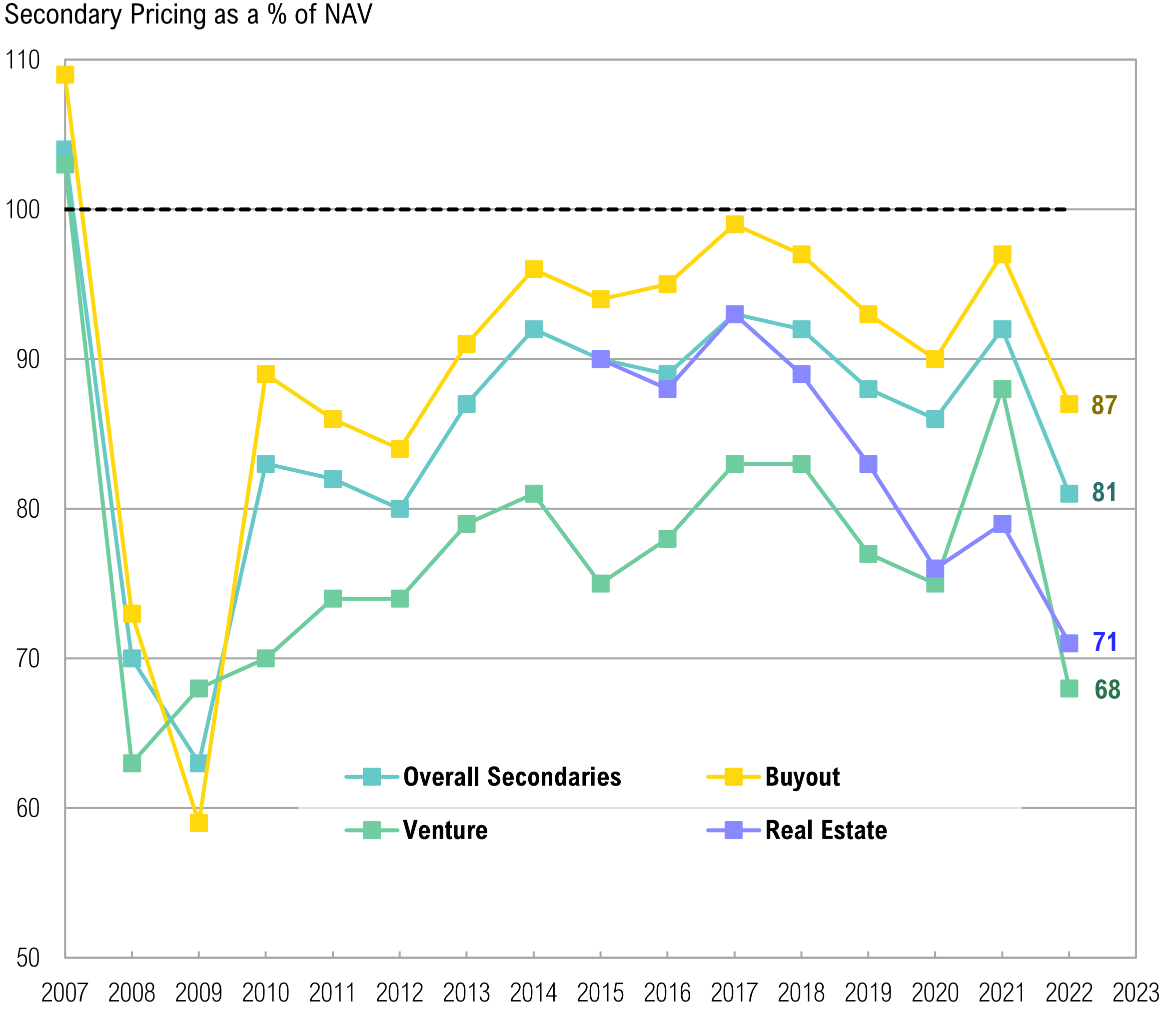
Implied Return Matrix, 1 Year

12-Month Forward P/E Multiple \ Earnings growth	-25%	-20%	-15%	-10%	-5%	0%	5%	10%	15%	20%	25%
26.0	-9.5%	-3.6%	2.3%	8.3%	14.2%	20.1%	26.0%	32.0%	37.9%	43.8%	49.8%
25.0	-13.0%	-7.3%	-1.6%	4.1%	9.8%	15.6%	21.3%	27.0%	32.7%	38.4%	44.1%
24.0	-16.4%	-10.9%	-5.4%	0.0%	5.5%	11.0%	16.5%	21.9%	27.4%	32.9%	38.4%
23.0	-19.8%	-14.6%	-9.3%	-4.1%	1.2%	6.4%	11.7%	16.9%	22.2%	27.4%	32.7%
22.0	-23.2%	-18.2%	-13.2%	-8.2%	-3.2%	1.9%	6.9%	11.9%	16.9%	21.9%	27.0%
21.0	-26.7%	-21.9%	-17.1%	-12.3%	-7.5%	-2.7%	2.1%	6.9%	11.7%	16.5%	21.3%
20.0	-30.1%	-25.5%	-20.9%	-16.4%	-11.8%	-7.3%	-2.7%	1.9%	6.4%	11.0%	15.6%
19.0	-33.5%	-29.2%	-24.8%	-20.5%	-16.2%	-11.8%	-7.5%	-3.2%	1.2%	5.5%	9.8%
18.0	-36.9%	-32.8%	-28.7%	-24.6%	-20.5%	-16.4%	-12.3%	-8.2%	-4.1%	0.0%	4.1%
17.0	-40.3%	-36.5%	-32.6%	-28.7%	-24.8%	-20.9%	-17.1%	-13.2%	-9.3%	-5.4%	-1.6%
16.0	-43.8%	-40.1%	-36.5%	-32.8%	-29.2%	-25.5%	-21.9%	-18.2%	-14.6%	-10.9%	-7.3%
15.0	-47.2%	-43.8%	-40.3%	-36.9%	-33.5%	-30.1%	-26.7%	-23.2%	-19.8%	-16.4%	-13.0%
14.0	-50.6%	-47.4%	-44.2%	-41.0%	-37.8%	-34.6%	-31.4%	-28.2%	-25.1%	-21.9%	-18.7%
13.0	-54.0%	-51.1%	-48.1%	-45.1%	-42.2%	-39.2%	-36.2%	-33.3%	-30.3%	-27.3%	-24.4%
12.0	-57.5%	-54.7%	-52.0%	-49.2%	-46.5%	-43.8%	-41.0%	-38.3%	-35.5%	-32.8%	-30.1%
11.0	-60.9%	-58.4%	-55.9%	-53.3%	-50.8%	-48.3%	-45.8%	-43.3%	-40.8%	-38.3%	-35.8%
10.0	-64.3%	-62.0%	-59.7%	-57.5%	-55.2%	-52.9%	-50.6%	-48.3%	-46.0%	-43.8%	-41.5%

Source: SpringTide, Bloomberg. The implied return matrix includes dividends.

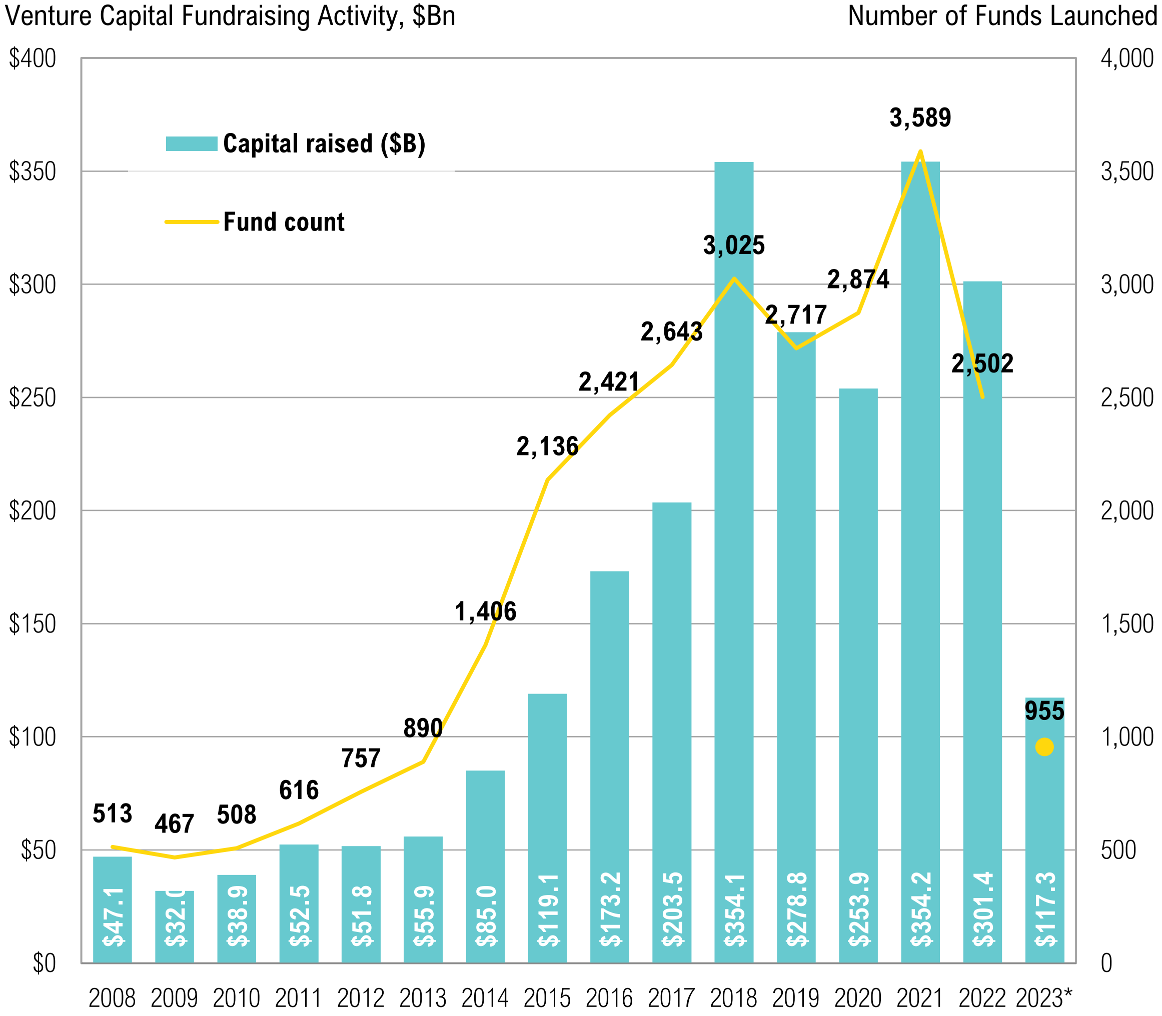
While secondaries fundraising has been robust in 2023, it still represents just 4% of all private market fundraising over the last 7 years

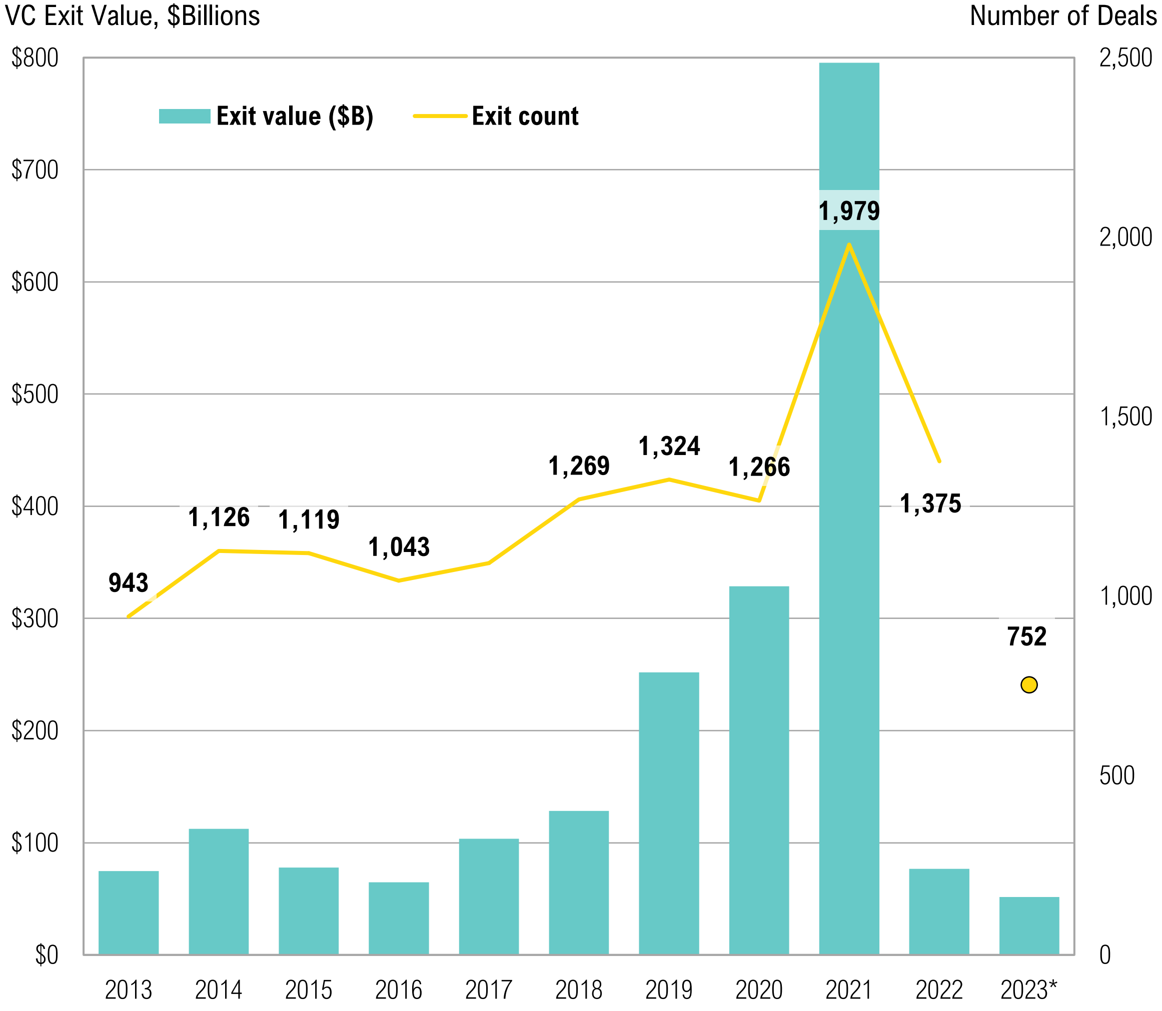




Source: Pitchbook, StepStone. Fundraising data as of 9/30/2023; Secondary pricing data as of 12/31/2022.

VC fundraising is on pace for its worst year since 2016, driven by negative investor sentiment and a lack of viable exit opportunities

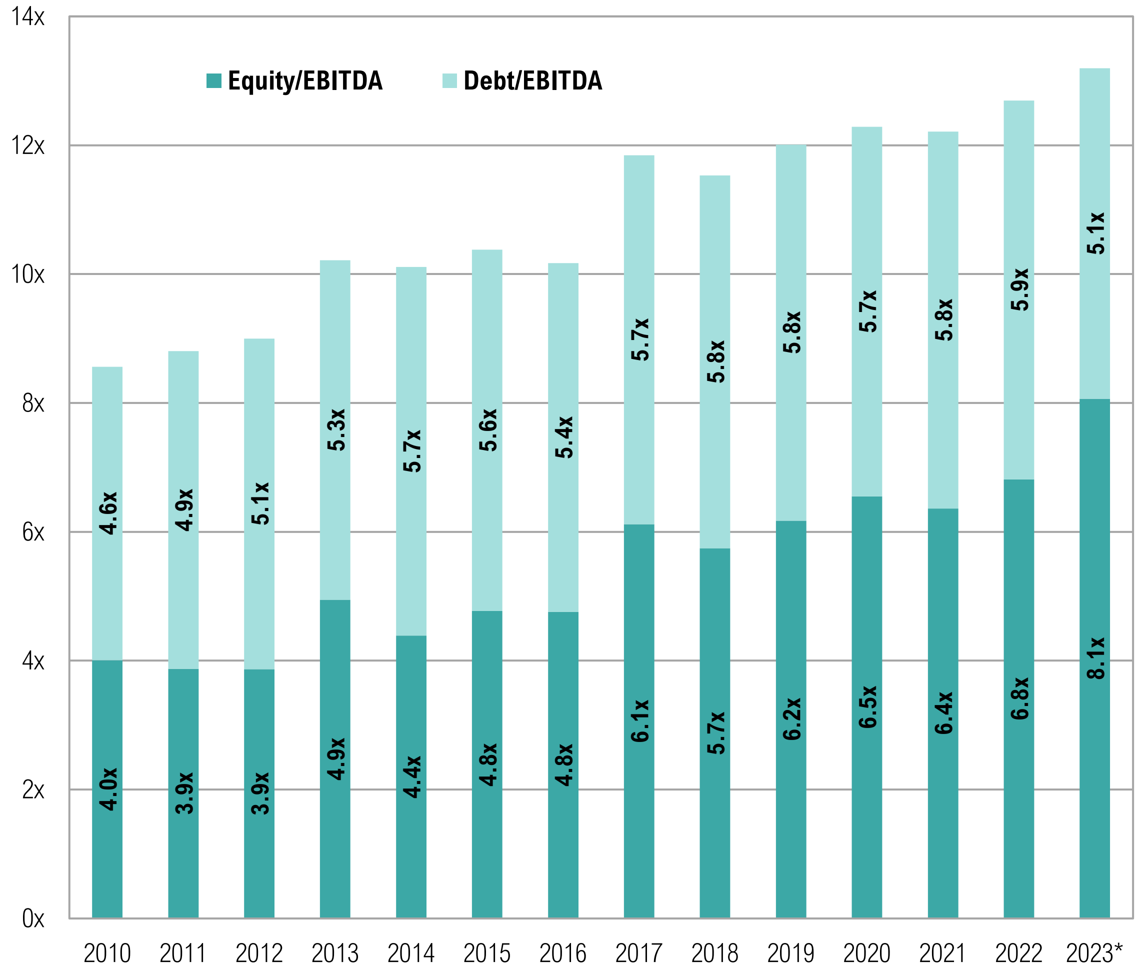




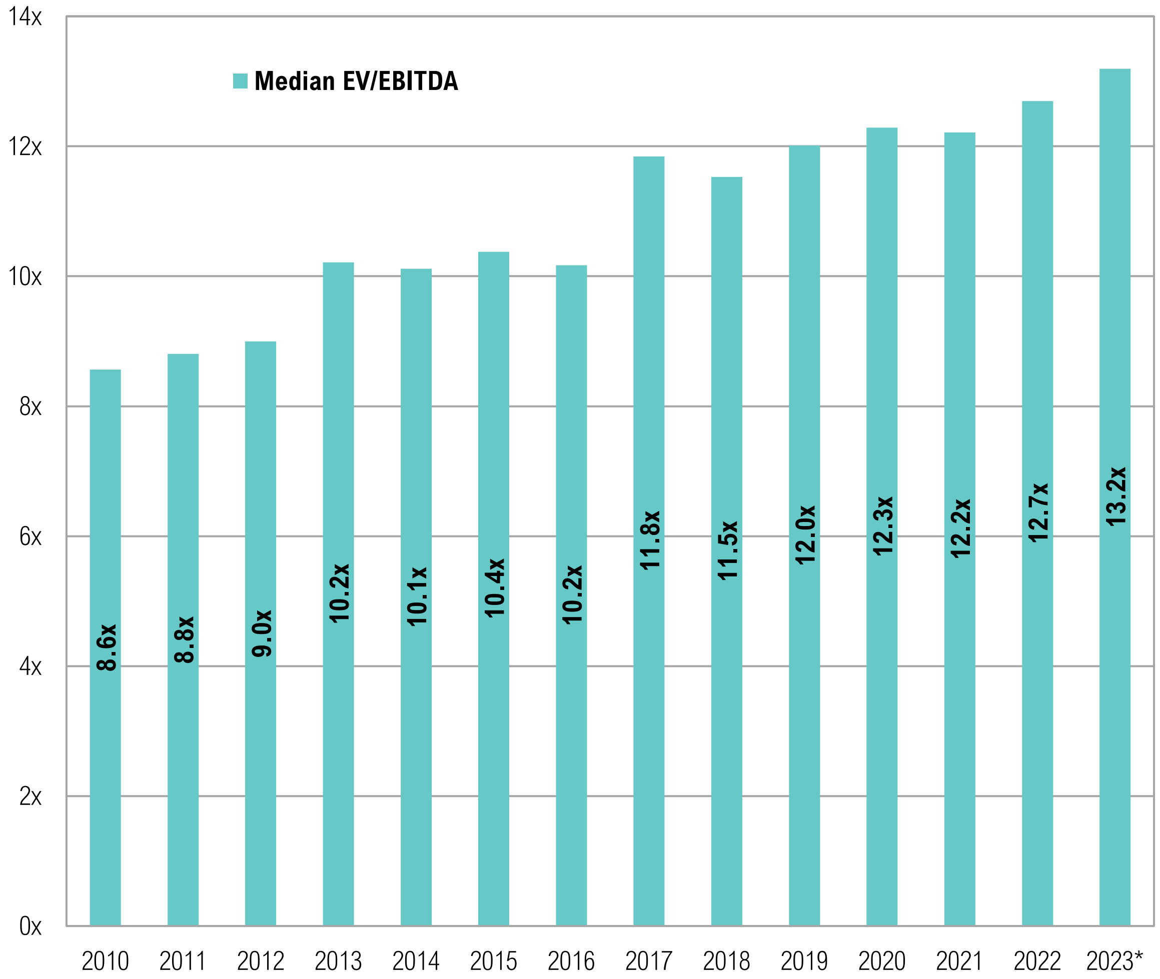
Source: Pitchbook. Data as of 9/30/2023

PE buyout multiples continue to creep higher as elevated interest rates and looser covenants deter debt investors, causing equity share in new deals to climb above 60% for first time ever

Median PE Buyout Multiples



Median PE Buyout Multiple



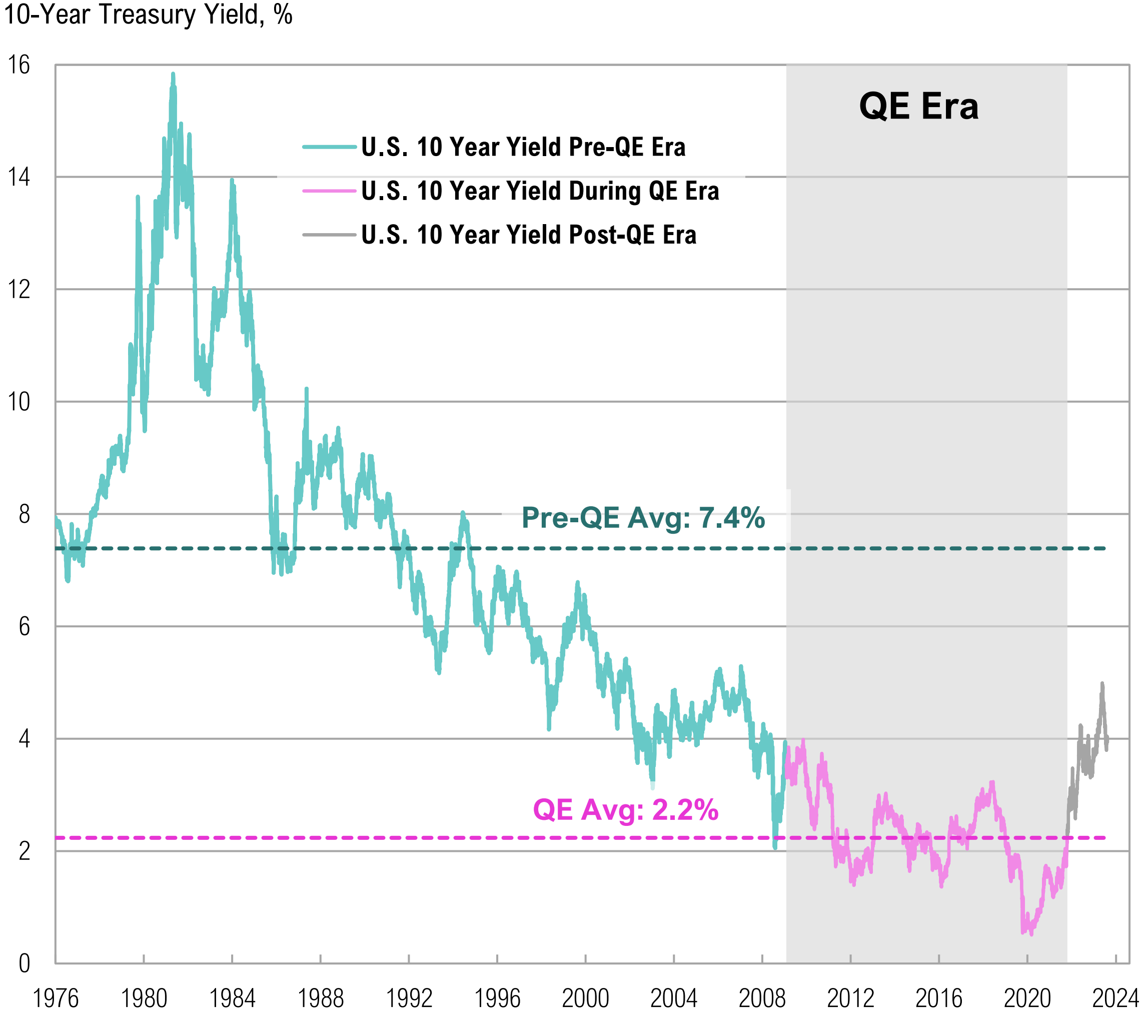
Source: Pitchbook, Multiples are for North America and Europe. As of 9/30/2023.

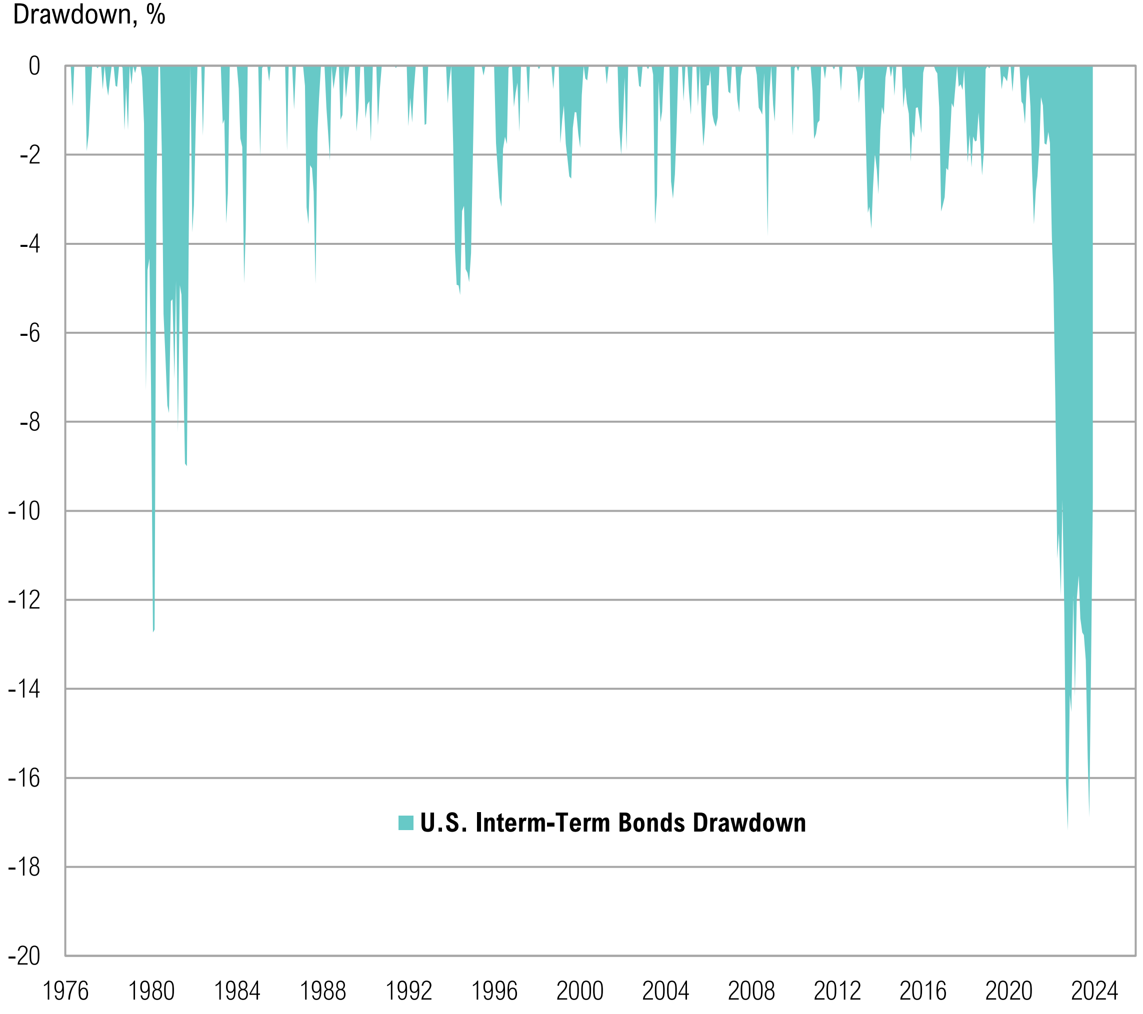
“

We are spending like drunken sailors. Pre-COVID, the federal government was 20% of GDP in spending. Now it’s 25% of GDP… My father told me ‘if you’re in a hole, stop digging Stan’.

Stanley Druckenmiller, *American Investor*

We are in the biggest bond bear market of all time – the question is whether the future will look like the 2010s, or more in line with broader history

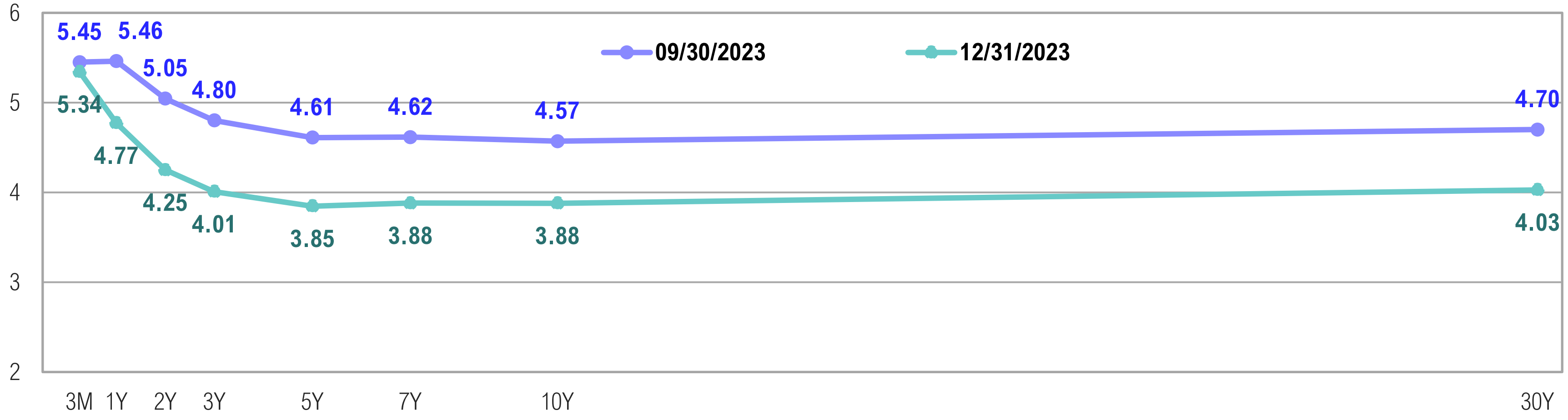




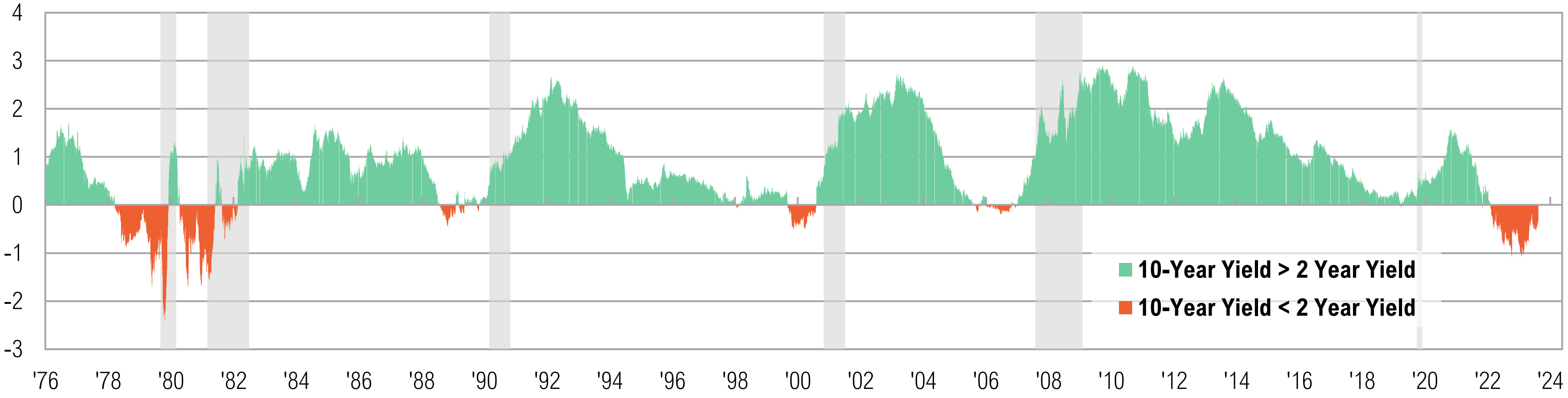
Source: Bloomberg. *QE Era defined as per Bianco Research from 6/30/2009 – 3/16/2022.

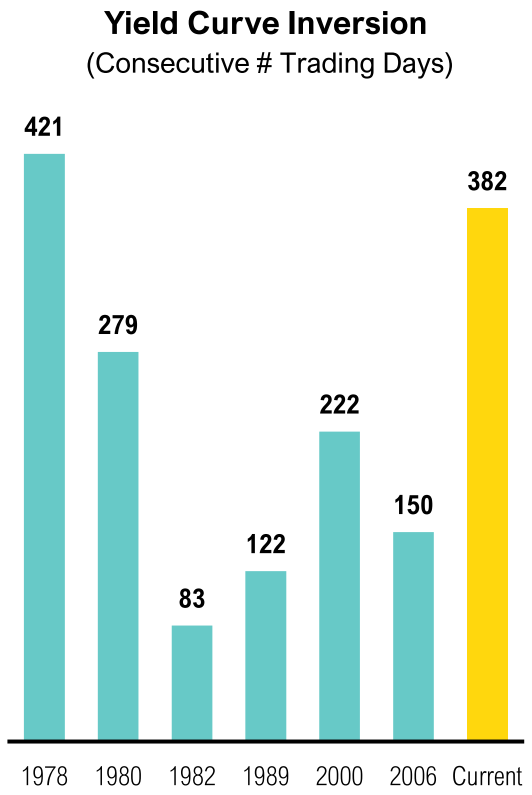
While yields have come down considerably, the yield curve remains inverted; this time will *have to be* different to avoid a recession

U.S. Treasury Yield Curve, %



U.S. 10-Year Treasury Yield – U.S. 2-Year Treasury Yield, %





Source: Bloomberg

There's always opportunity: the 2–3-year part of yield curve has an attractive risk-reward profile—yields could rise 1.5% in the next year and total returns would still be positive

Estimated 1-Year Total Return for Given Change in Yields

Change in Yields (%)	3-Mnth	6-Mnth	1-Yr	2-Yr	3-Yr	4-Yr	5-Yr	7-Yr	10-Yr	15-Yr	20-Yr	30-Yr
3.0%	4.7%	3.8%	2.0%	-1.3%	-4.0%	-6.9%	-9.5%	-14.2%	-19.7%	-27.6%	-34.4%	-45.1%
2.5%	4.8%	4.1%	2.5%	-0.3%	-2.7%	-5.1%	-7.3%	-11.2%	-15.8%	-22.3%	-28.0%	-37.0%
2.0%	4.9%	4.3%	2.9%	0.6%	-1.3%	-3.3%	-5.0%	-8.2%	-11.8%	-17.1%	-21.5%	-28.8%
1.5%	5.0%	4.5%	3.4%	1.6%	0.0%	-1.5%	-2.8%	-5.1%	-7.9%	-11.8%	-15.1%	-20.6%
1.0%	5.2%	4.8%	3.9%	2.5%	1.4%	0.4%	-0.5%	-2.1%	-3.9%	-6.5%	-8.6%	-12.3%
0.5%	5.3%	5.0%	4.4%	3.4%	2.8%	2.2%	1.7%	1.0%	0.0%	-1.3%	-2.2%	-4.1%
0.0%	5.4%	5.3%	4.8%	4.4%	4.1%	4.0%	4.0%	4.0%	4.0%	4.0%	4.3%	4.1%
-0.5%	5.5%	5.5%	5.3%	5.3%	5.5%	5.9%	6.2%	7.0%	7.9%	9.3%	10.8%	12.4%
-1.0%	5.6%	5.8%	5.8%	6.3%	6.9%	7.7%	8.5%	10.1%	11.9%	14.6%	17.2%	20.6%
-1.5%	5.8%	6.0%	6.3%	7.2%	8.2%	9.5%	10.7%	13.1%	15.9%	19.9%	23.7%	28.9%
-2.0%	5.9%	6.2%	6.7%	8.2%	9.6%	11.3%	13.0%	16.2%	19.8%	25.2%	30.2%	37.2%
-2.5%	6.0%	6.5%	7.2%	9.1%	11.0%	13.2%	15.2%	19.2%	23.8%	30.5%	36.7%	45.5%
-3.0%	6.1%	6.7%	7.7%	10.0%	12.3%	15.0%	17.5%	22.2%	27.7%	35.8%	43.2%	53.8%

Tenor	3-Mnth	6-Mnth	1-Yr	2-Yr	3-Yr	4-Yr	5-Yr	7-Yr	10-Yr	15-Yr	20-Yr	30-Yr
Duration (Yrs)	0.2	0.5	1.0	1.9	2.7	3.7	4.5	6.1	7.9	10.6	12.9	16.5
Yield YTM	5.4	5.3	4.8	4.4	4.1	4.0	4.0	4.0	4.0	4.0	4.3	4.1
Convexity	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*0.2*	*0.2*	*0.4*	*0.7*	*1.4*	*2.2*	*3.9*

Yield Increase Insulation by Tenor:

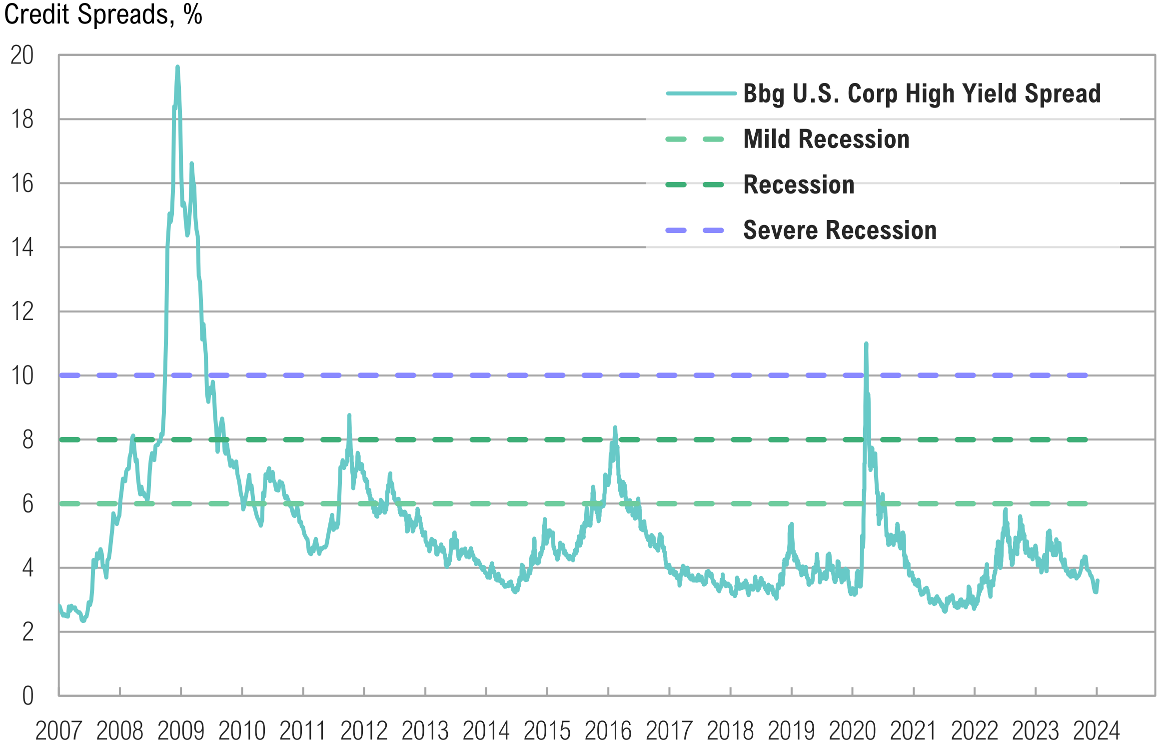
- **1-Year: +4% (rise in yields)**
- **2-Year: +2.0%**
- **3-Year: +1.5%**
- **4-Year: +1.0%**
- **5-Year: +0.5%**

Total Returns by Tenor (for a 1% decline in yields):

- **15-Year: +14.6%**
- **20-Year: +17.2%**
- **30-Year: +20.6%**

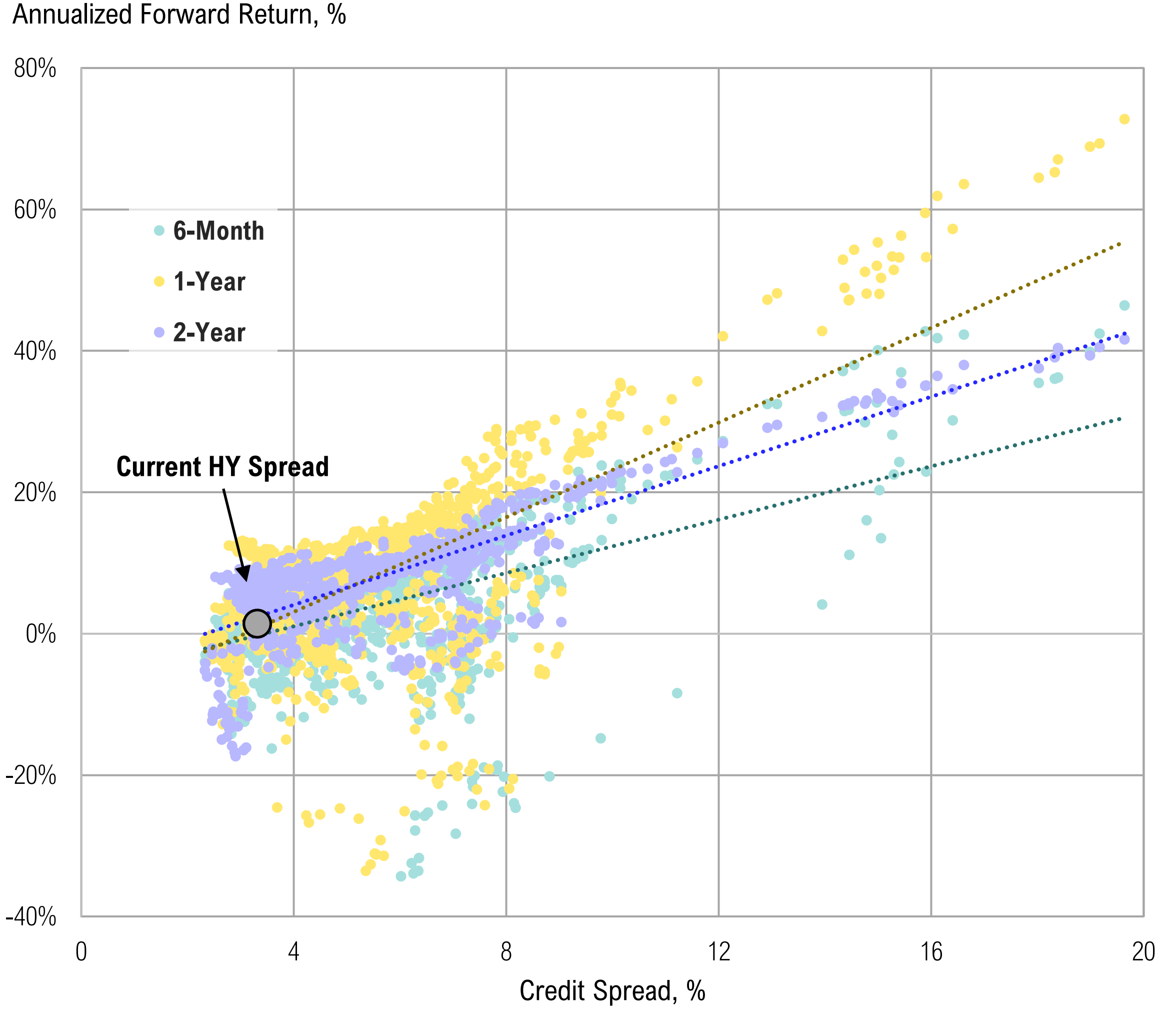
Source: Bloomberg. As of 1/3/2024.

Current credit spreads (at 3.6%) are significantly below 2022 highs and continue to suggest runway for the economy (i.e., a 'soft landing'); spreads below 4% have historically resulted in below-average forward returns



Average Forward Return

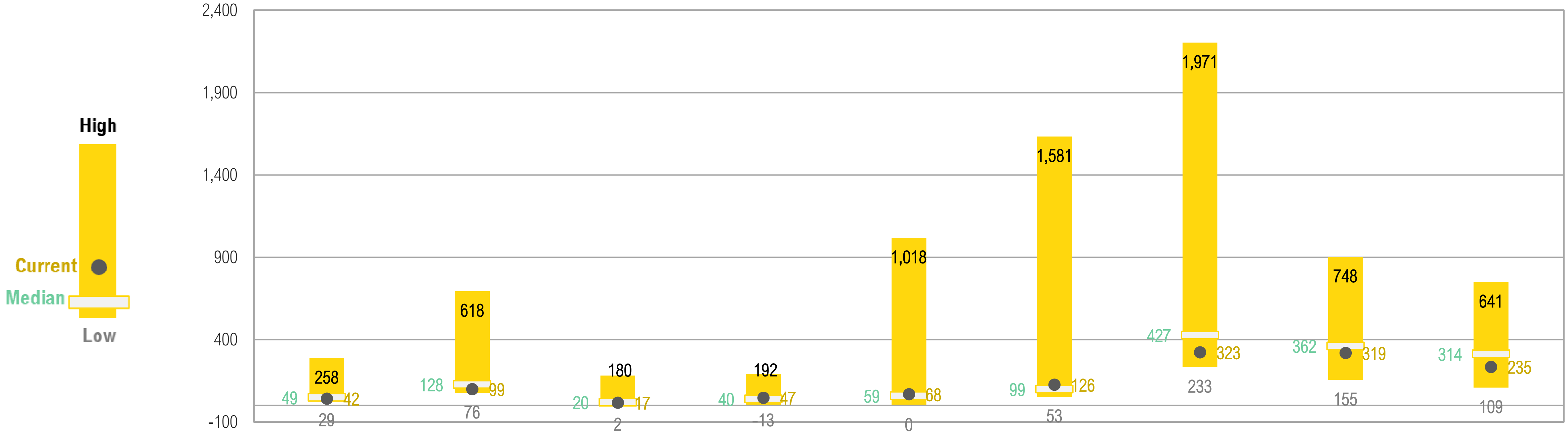
Spread Buckets	3M	6M	1Y	2Y	3Y
≤4	0.2%	1.3%	4.0%	3.1%	3.9%
4 < Spread ≤ 6	1.5%	3.1%	5.6%	6.5%	6.3%
6 < Spread ≤ 8	1.4%	2.2%	7.7%	9.8%	10.2%
>8	7.4%	16.4%	30.2%	22.1%	17.1%
All Spreads	**1.7%**	**3.5%**	**7.8%**	**7.7%**	**7.9%**



Source: SpringTide, Bloomberg. Forward return analysis from 2/4/1994 through 12/31/2023.

Credit spreads are near or below median across most sectors; while a recession still seems probable based on LEIs & manufacturing data, HYB *spreads* at current levels don't corroborate that view

Current Credit Spread vs. Long-Term High/Low Range

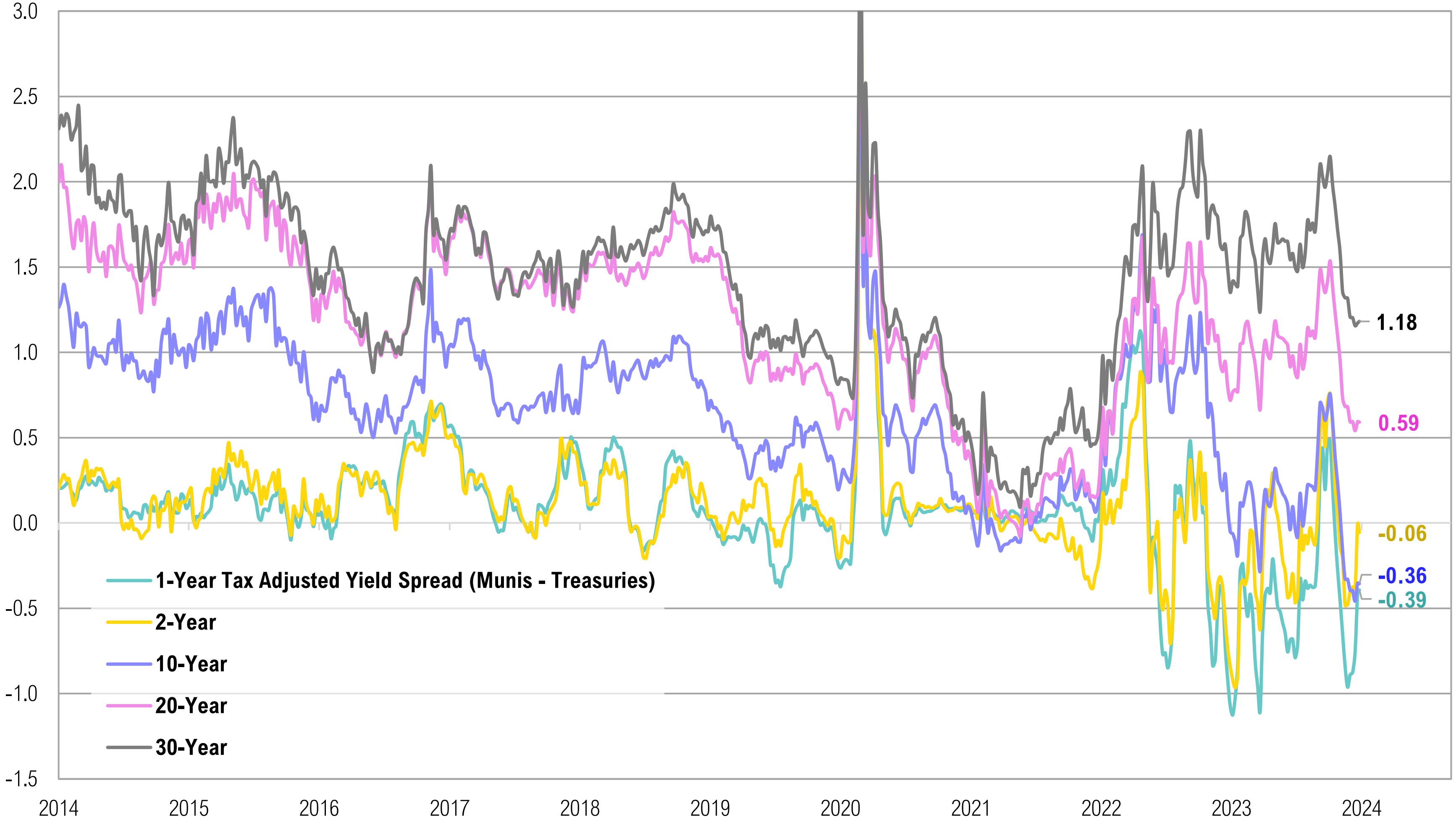


	Aggregate	Corporate	Agency	MBS	ABS	CMBS	High Yield	Emerging Markets	High Yield Muni Spread*
Max Spread Date	12/3/2008	12/3/2008	11/20/2008	12/3/2008	1/6/2009	11/21/2008	12/16/2008	11/28/2008	1/12/2009
Min Spread Date	4/14/2021	3/8/2005	4/19/2021	7/27/2010	10/1/2009	12/8/2004	5/22/2007	5/31/2007	6/11/2007
Spread on 12/31/22	51	130	26	51	76	120	469	374	228
Spread on 12/31/21	36	92	8	31	38	68	283	330	200
Spread on 12/31/20	42	96	10	39	33	81	360	323	275
Spread on 12/31/19	39	93	10	39	44	72	336	277	223

Source: Bloomberg. High Yield Muni Spread data is relative to Bloomberg Municipal Bond Index. Yield spread data is from 2004 – current.

Shorter duration muni yields are unattractive relative to Treasuries; while longer duration muni's offer better tax-adjusted yields, spreads remains below median

Tax Adjusted U.S. Muni Yield minus U.S. Treasury Yield*, Spread %



Source: Bloomberg. *Assumes 35% tax rate.

Median Tax-Adjusted Yield Spread:

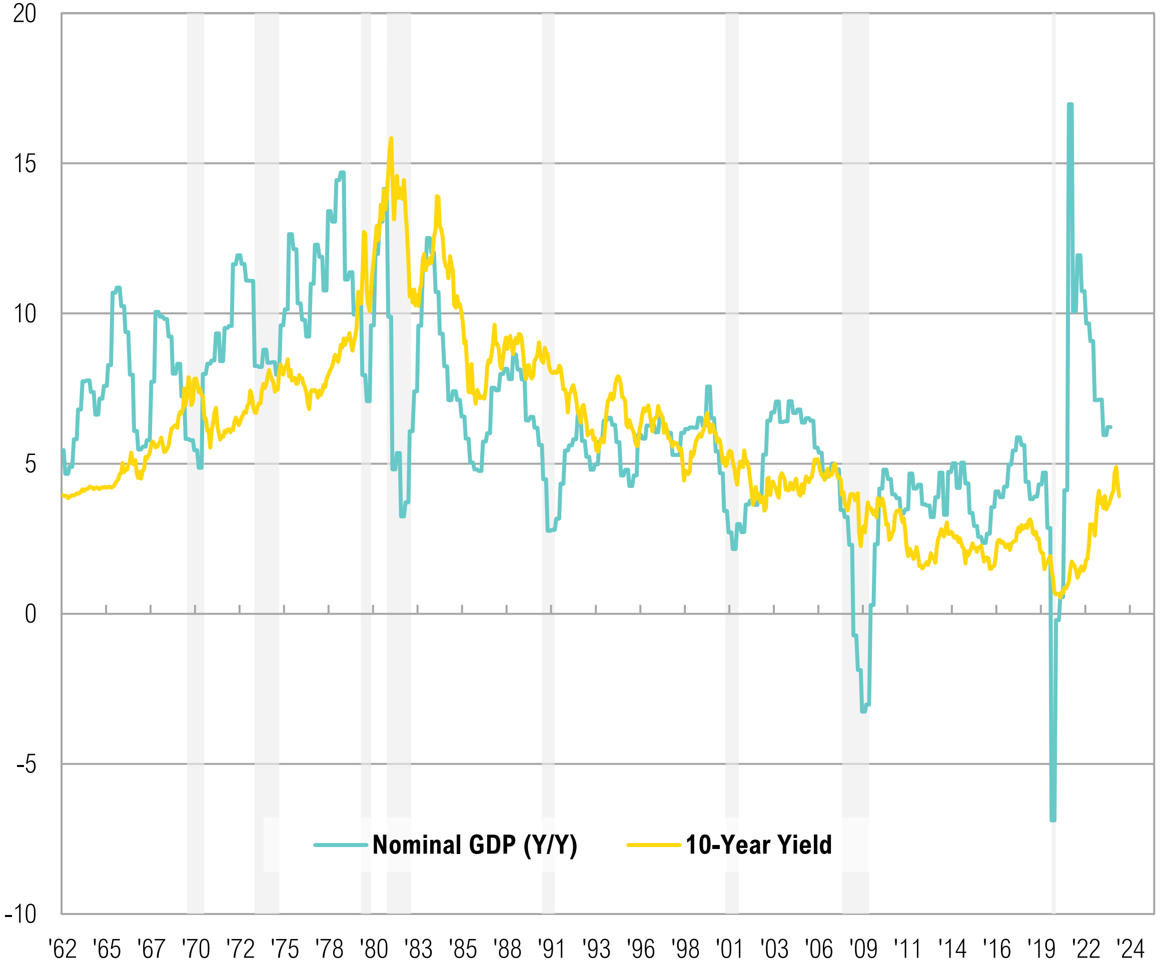
- 1-Year: +0.08%
- 2-Year: +0.10%
- 5-Year: +0.25%
- 10-Year: +0.70%
- 20-Year: +1.31%
- 30-Year: +1.54%

Current Tax-Adjusted Yield Spread:

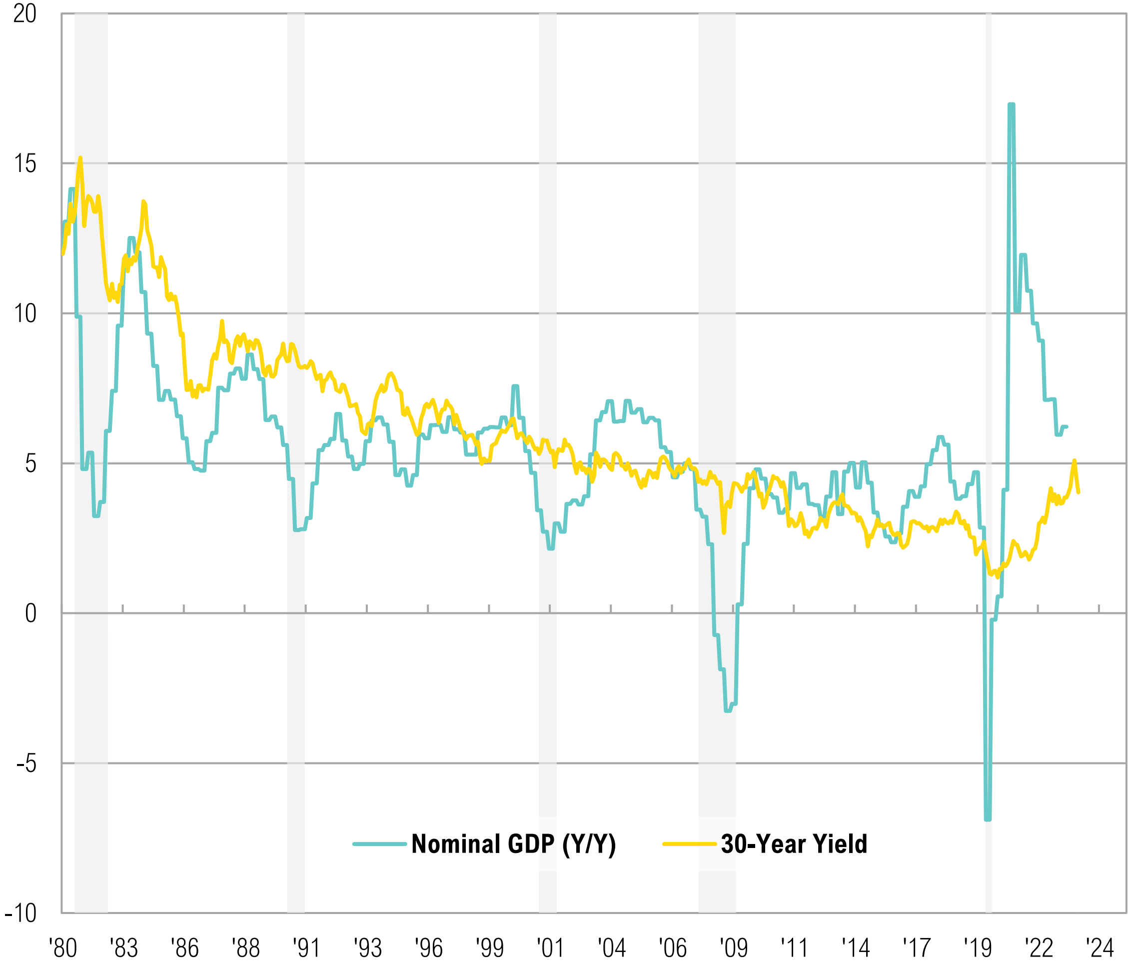
- 1-Year: -0.39%
- 2-Year: -0.06%
- 5-Year: -0.35%
- 10-Year: -0.36%
- 20-Year: +0.59%
- 30-Year: +1.18%

The fiscal balancing act: Historically, long-term yields tend to follow GDP; but what will happen in 2024 depends largely on policy

Nominal GDP & 10-Year Treasury Yield, %



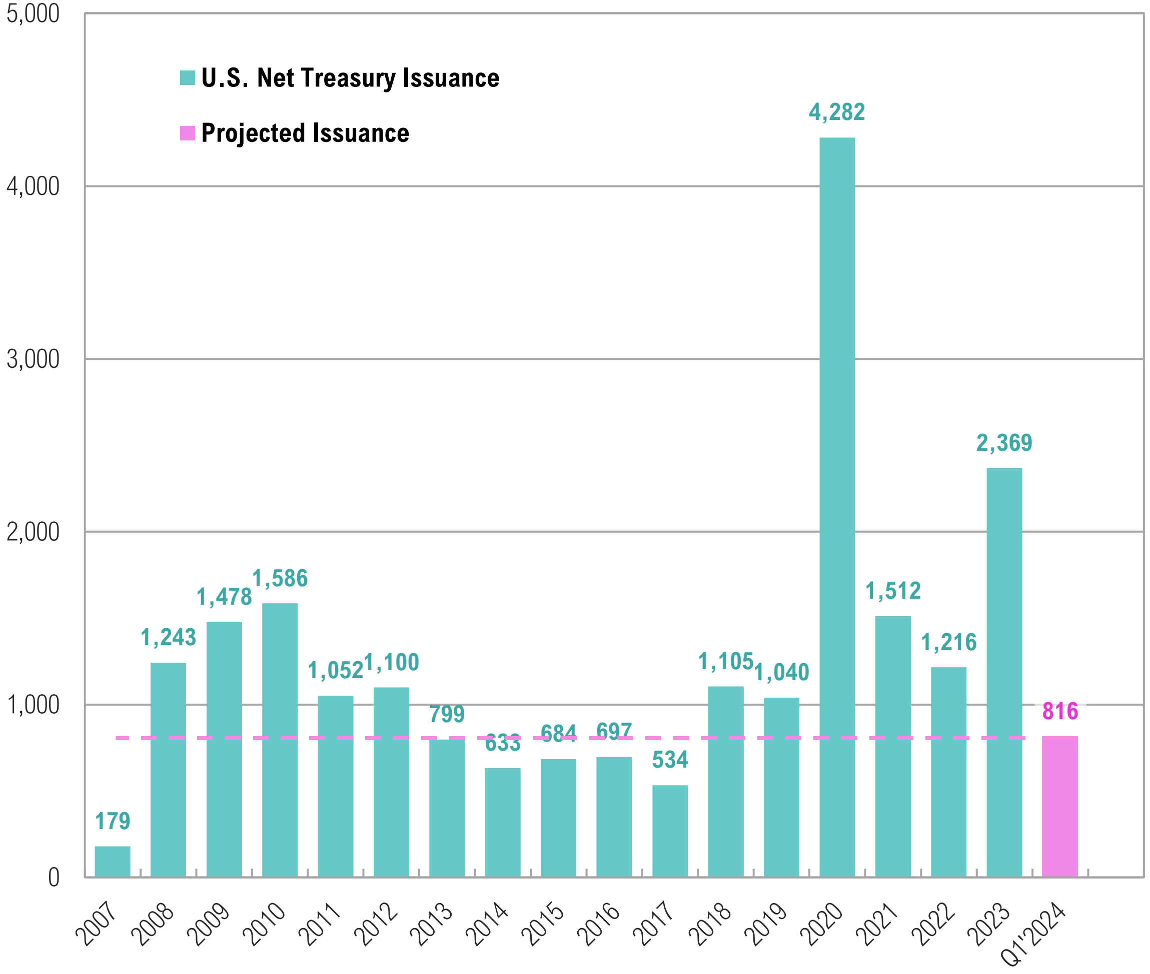
Nominal GDP & 30-Year Treasury Yield, %



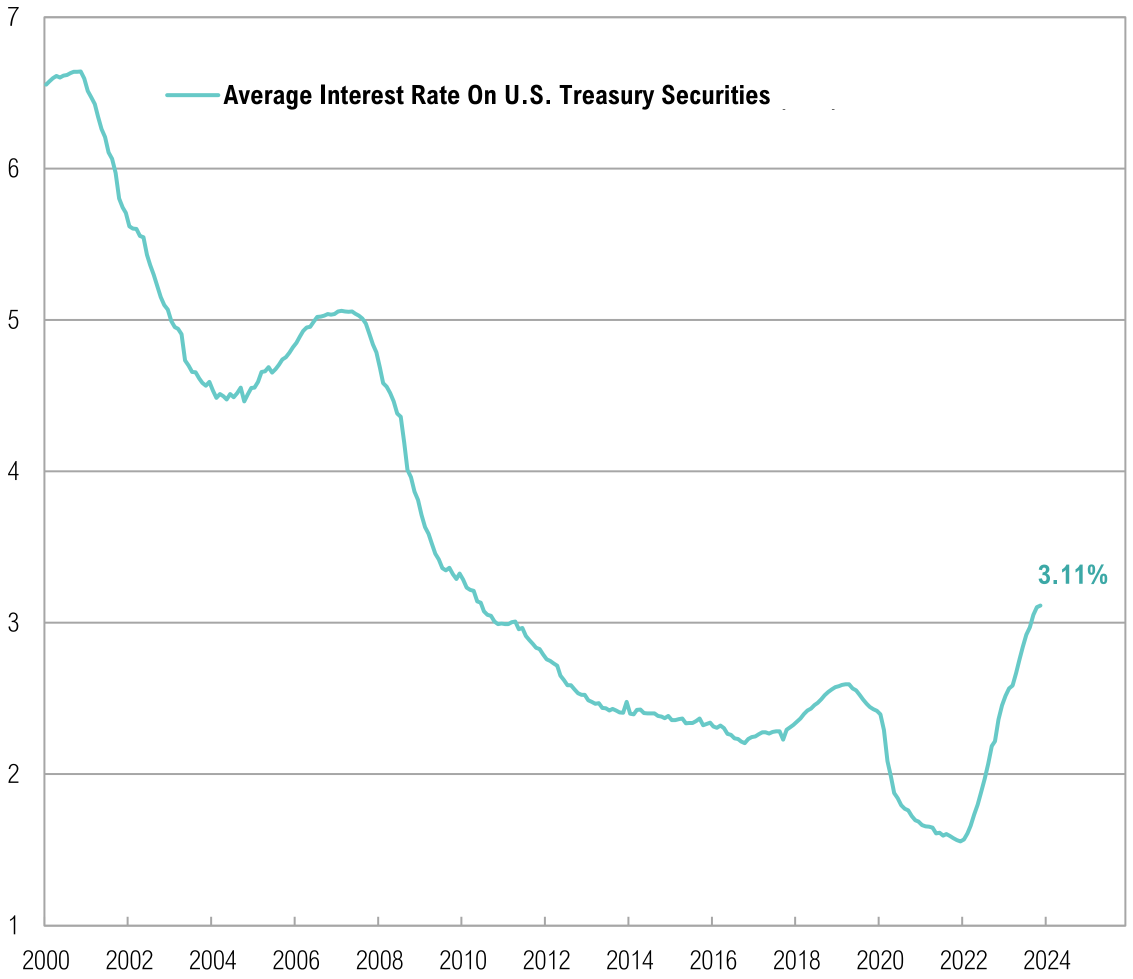
Source: Bloomberg

2023 Treasury issuance was the highest after 2020, and 2024 is gearing up for another big year—Q1 estimates alone outpace several historic FY issuances; the cost of outstanding debt continues to climb, now above 3.1%

Quarterly U.S. Net Issuance, $Bn



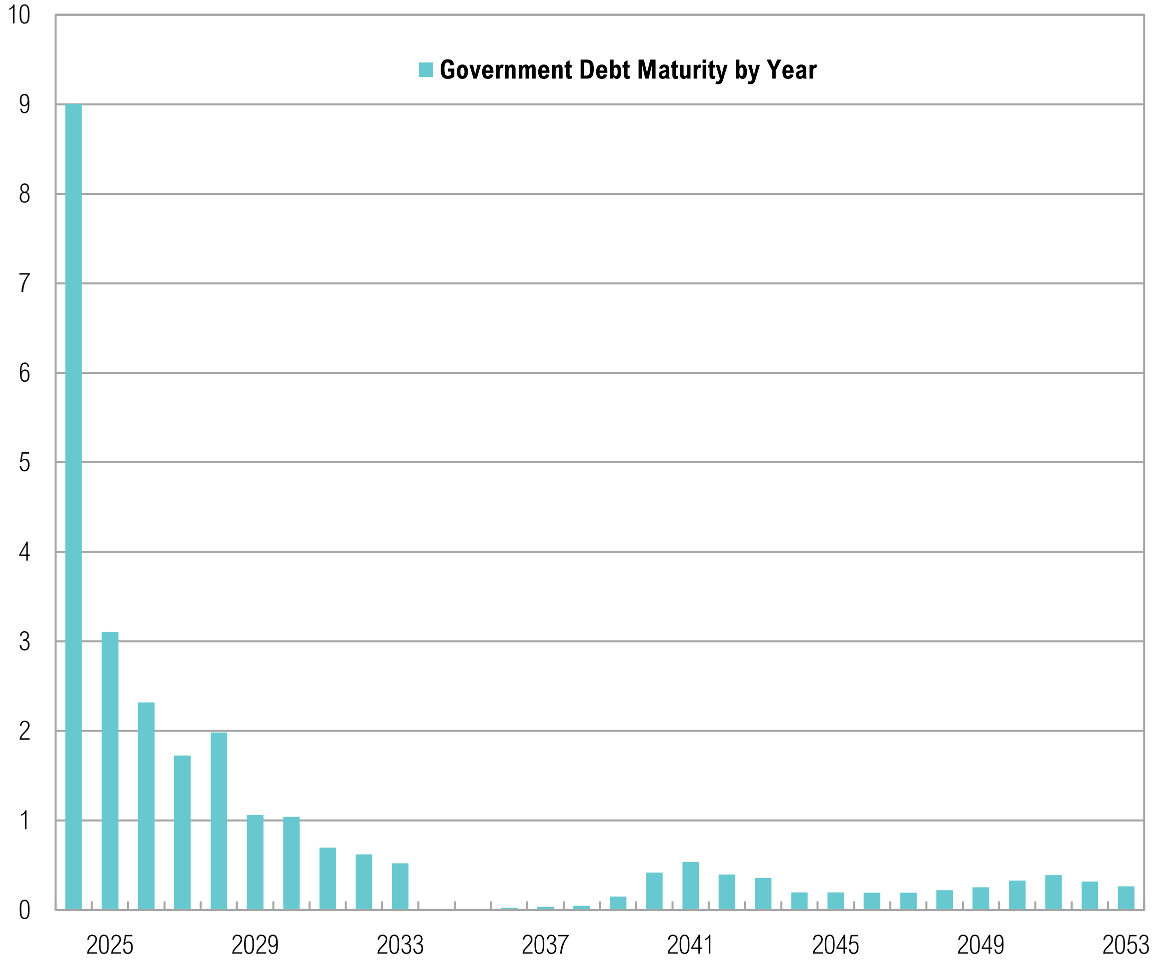
Average U.S. Treasury Interest Rate, %



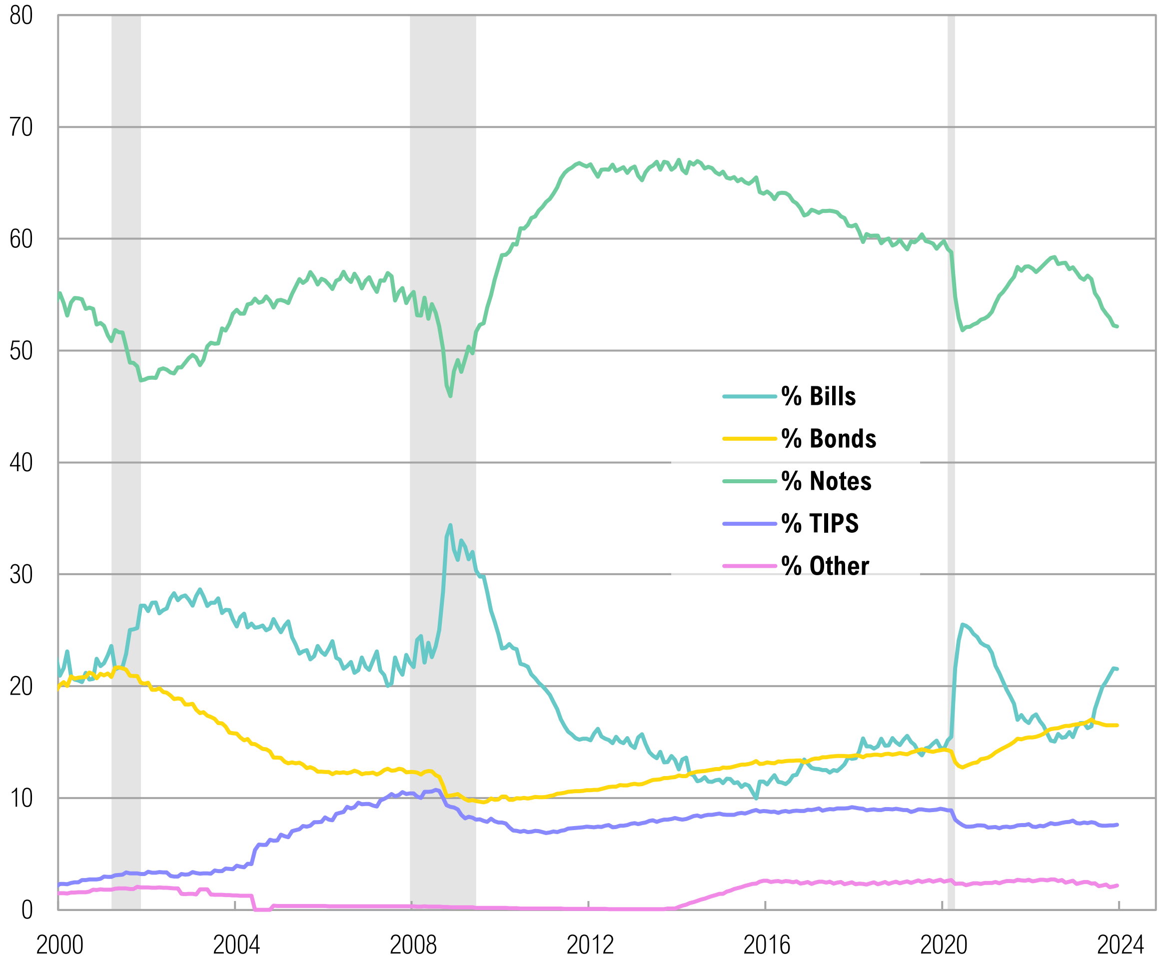
Source: Bloomberg, U.S. Treasury.

Nearly $9 trillion in government debt matures within the next year, and will need to be rolled at much higher rates; bills comprise over 21% of total debt and are expected to continue to rise, yet *eventually*, the Treasury will need to extend durations

Government Debt Maturity by Year, $Tn



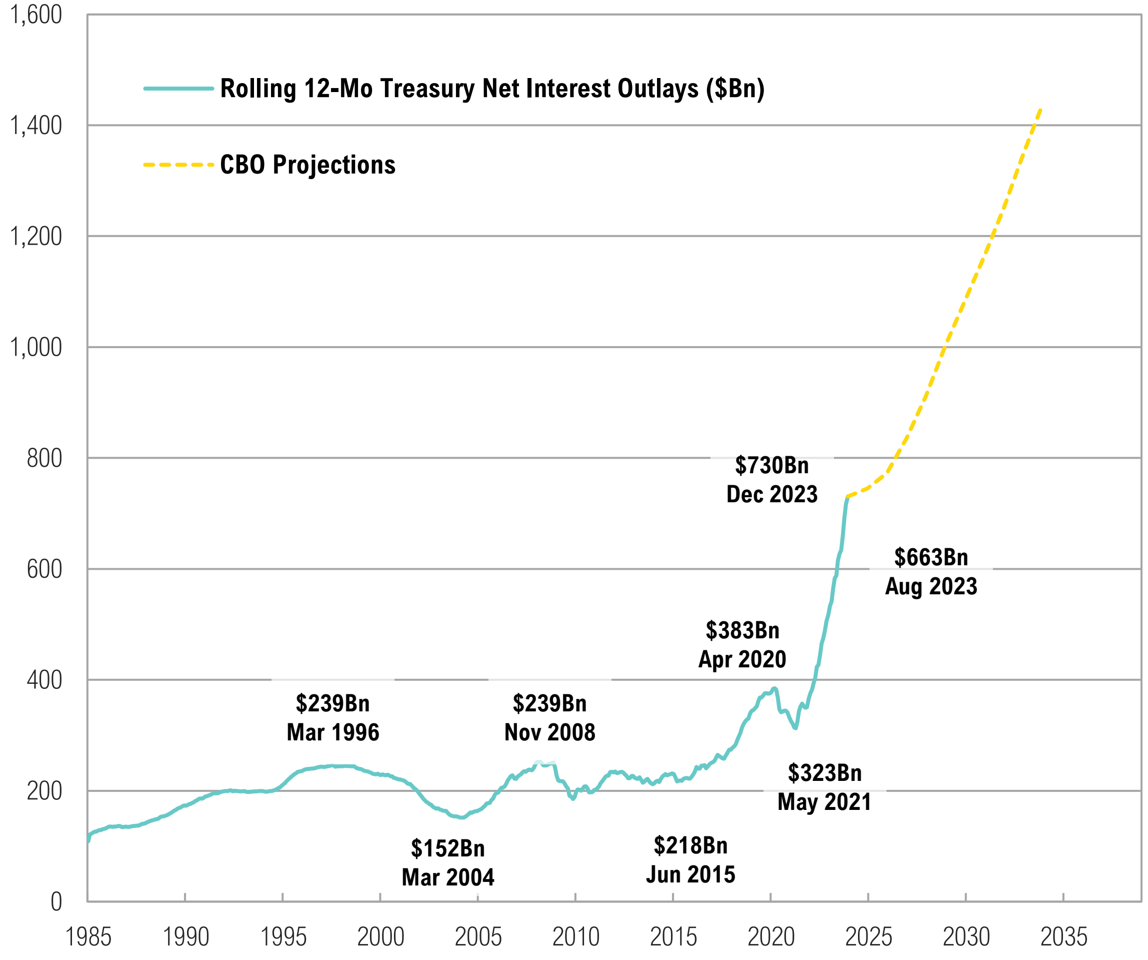
Debt Distribution, % of Total U.S. Marketable Debt Outstanding



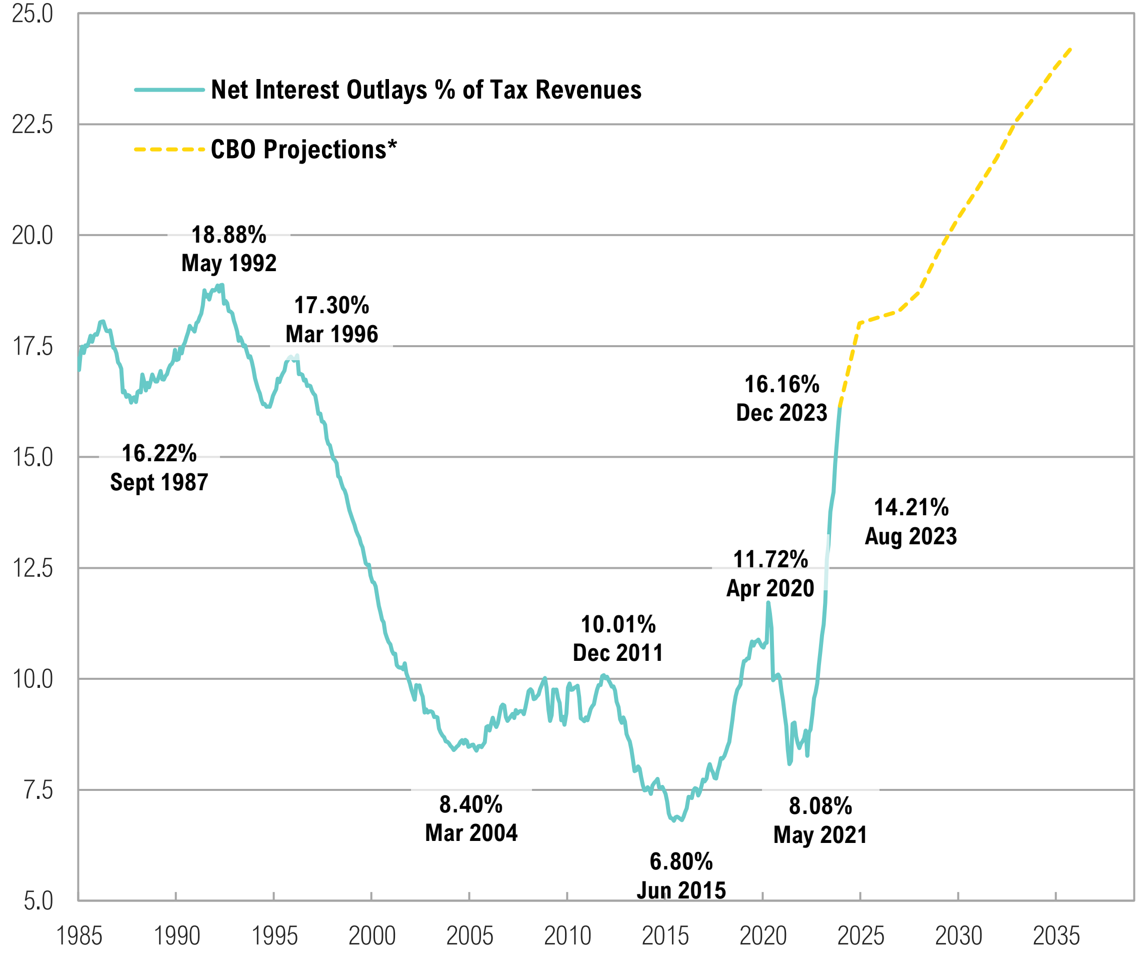
Source: Bloomberg. High Yield Muni Spread data is relative to Bloomberg Municipal Bond Index. Yield spread data is from 2004 – current.

Treasury net interest outlays climbed to $730bn in 2023, nearly matching the CBO's 2024 projection; tax receipts aren't keeping pace and will need to play catch-up if the fiscal situation is to be kept under control

12-Mo Rolling Treasury Net Interest Outlays, $Bn

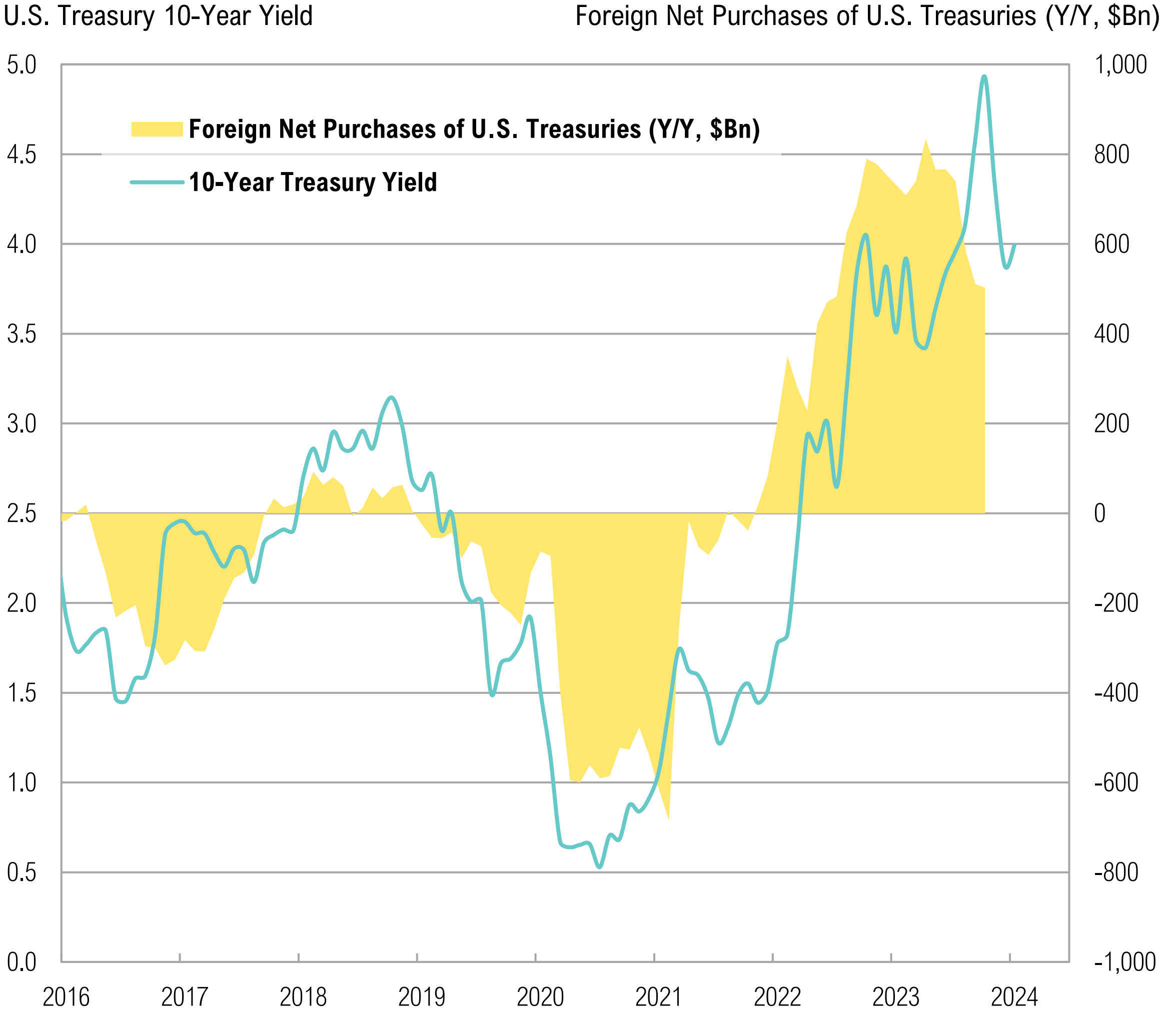


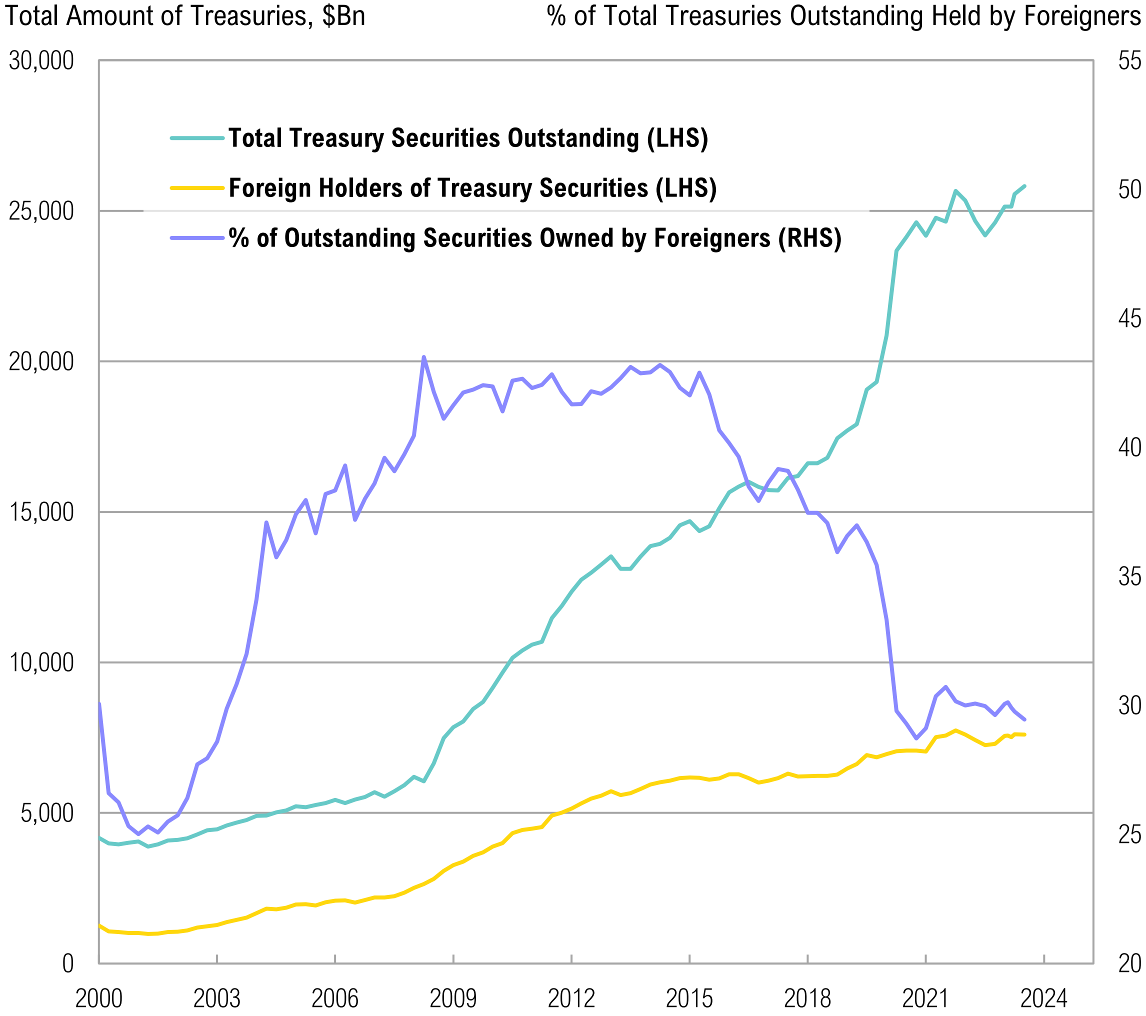
Net Interest Outlays as a % of Total Tax Receipts



Source: U.S. Treasury, CBO. As of 06/30/2023. *Given prior estimates have already been exceeded, forecasts for 2024-2035 have been interpolated to fit.

Foreign ownership of Treasuries has waned significantly since 2015 (while foreigners are still buying, they're buying much less proportionally)

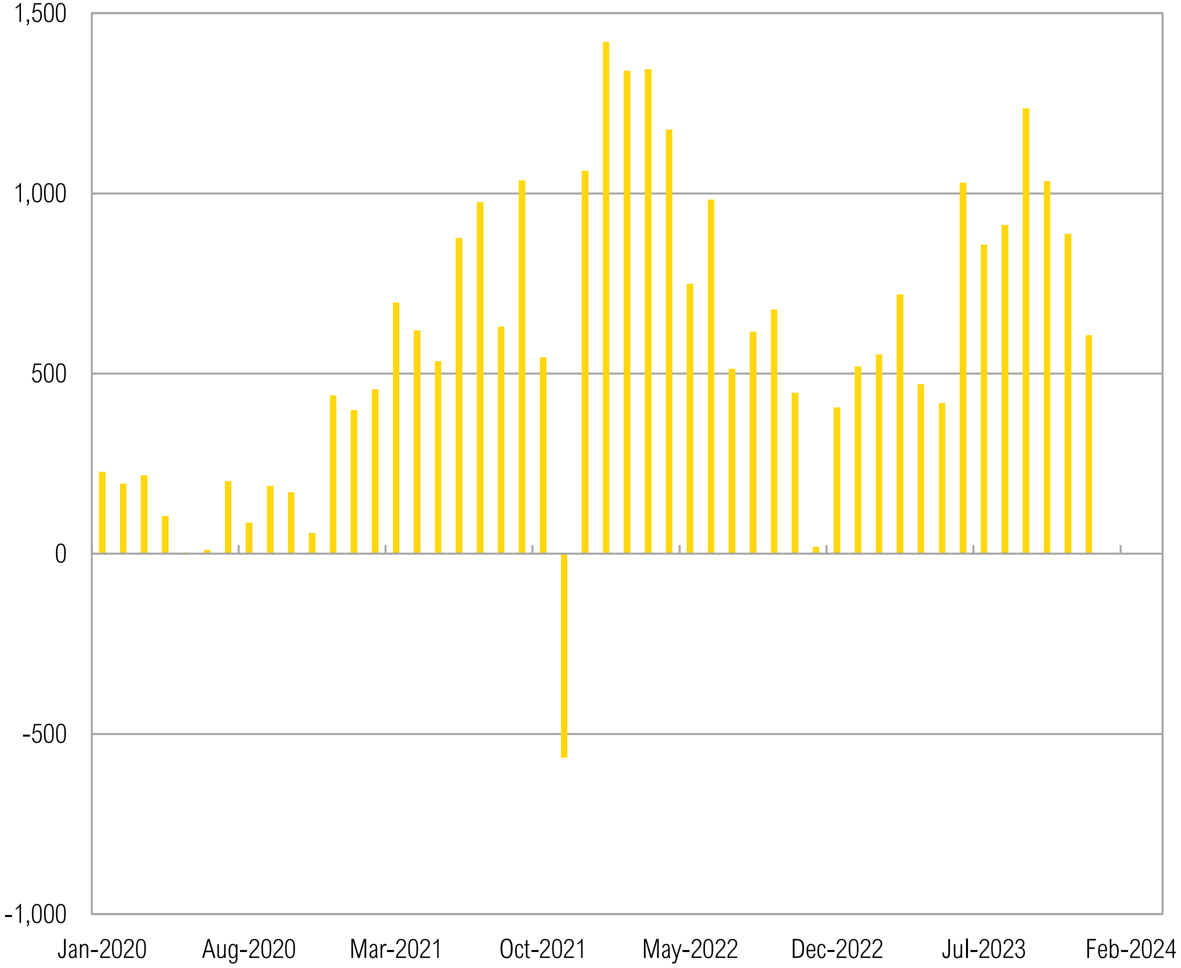




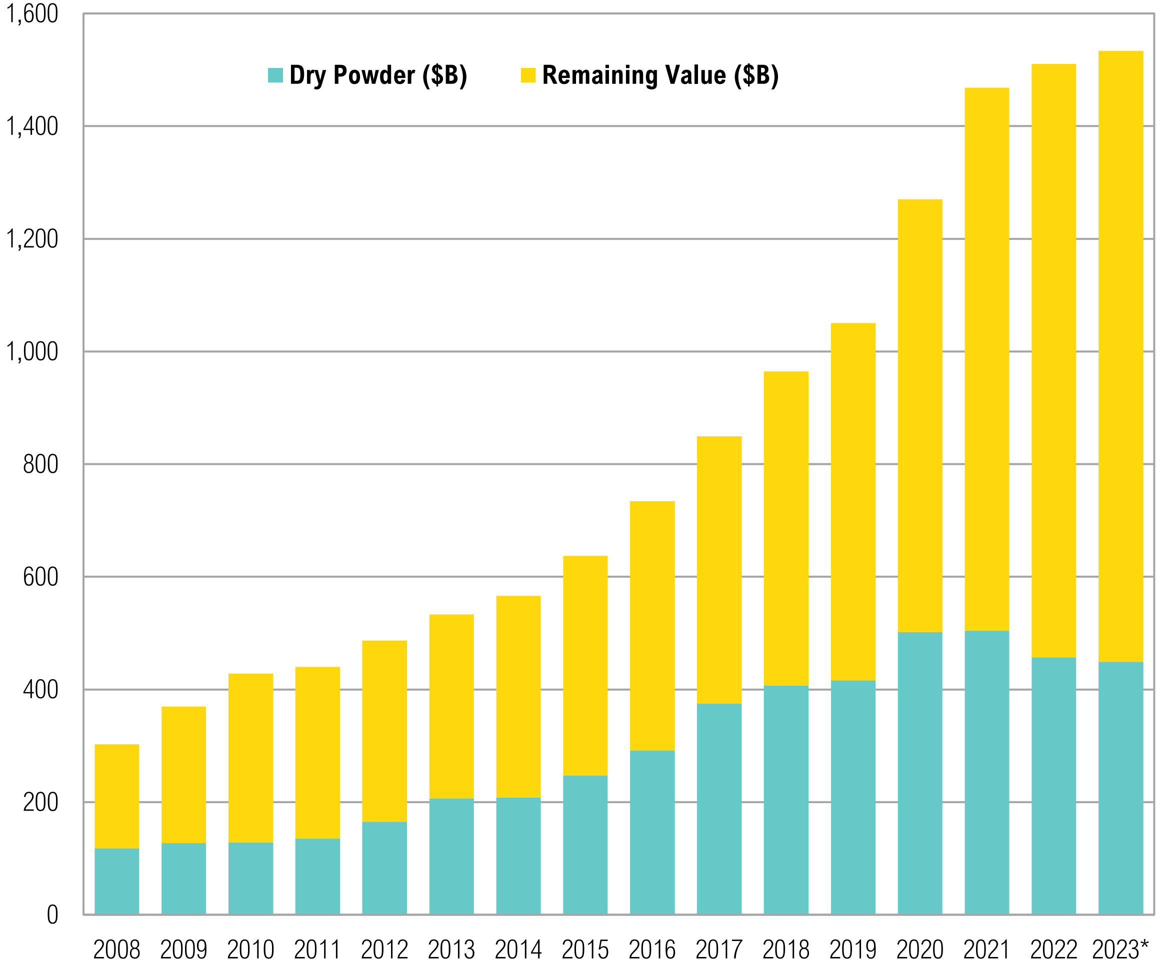
Source: Bloomberg, U.S. Treasury.

Private credit AUM surpassed $1.5 trillion in 2023, now roughly 5x bigger since the GFC

Select Private Credit Interval Fund Flows, $Mn



Private Debt AUM, $Bn



Source: Morningstar, Pitchbook. Fund flows data as of 9/13/2023. Private Debt AUM data as of 3/31/2023.

“

[Red Sea disruptions] could potentially have quite significant consequences on global growth… At this time when inflation is a big issue, it’s putting inflationary pressure on our costs, on our consumers, and ultimately on consumers in the U.S. and Europe.

Vincent Clerc, *Maersk CEO*

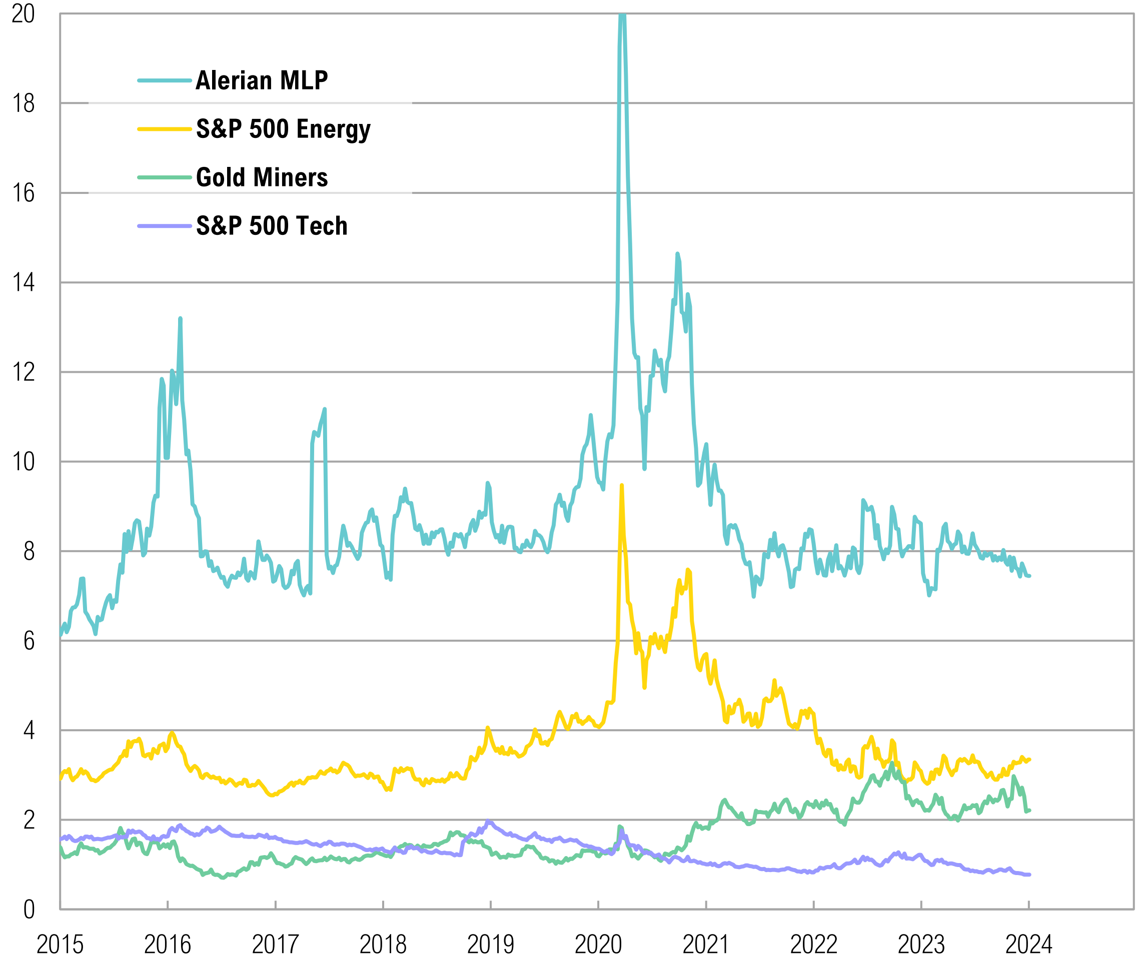
“

Having been in this industry for decades, I’ve never seen such strong support for nuclear power… A number of private companies are taking action now with plans to support the expansion of clean nuclear energy today and in the years to come.

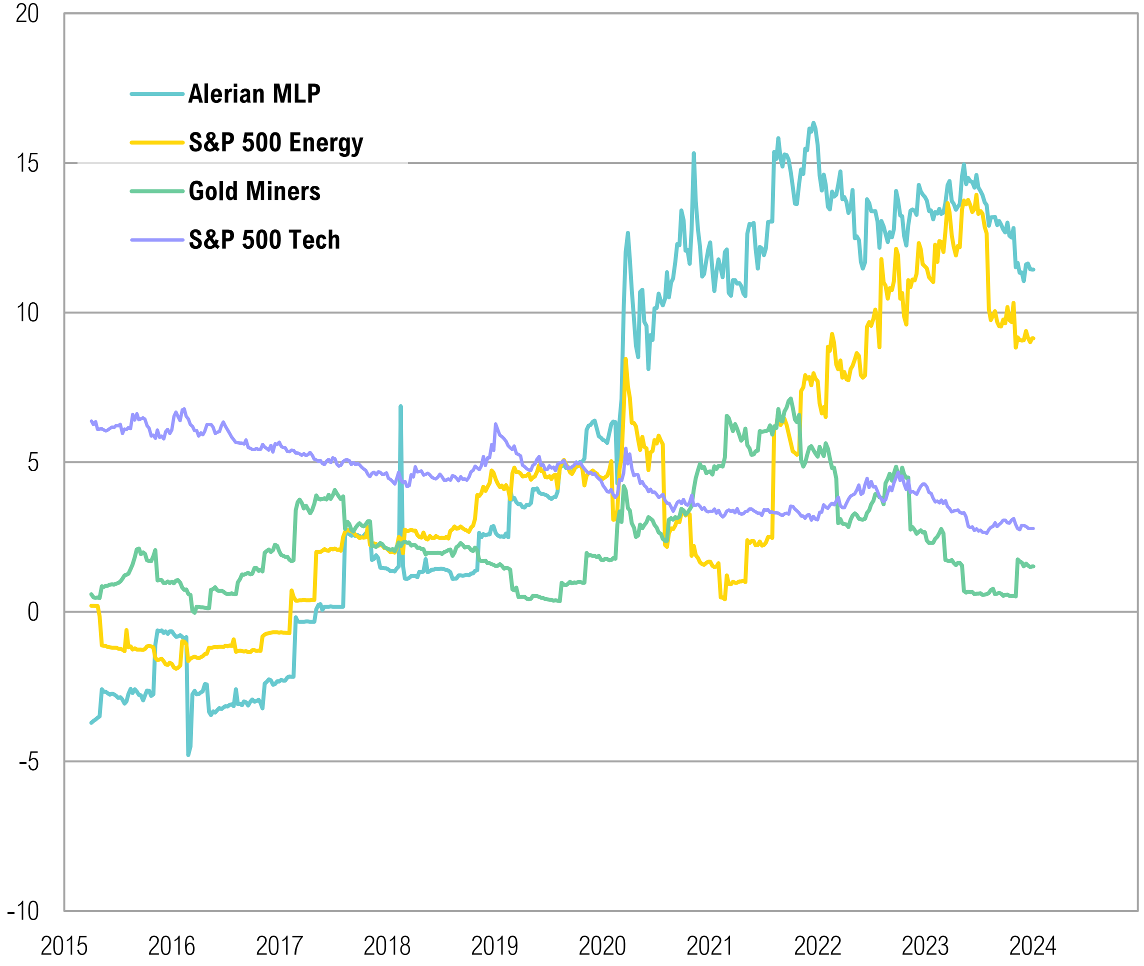
Timothy Gitzel, *Cameco CEO*

Midstream distribution yields trended lower as the sector broke out to upside but remains stabilized around an attractive 7.5%; free cash flow yields of the energy sector have declined

12-Month Forward Dividend Yield, %



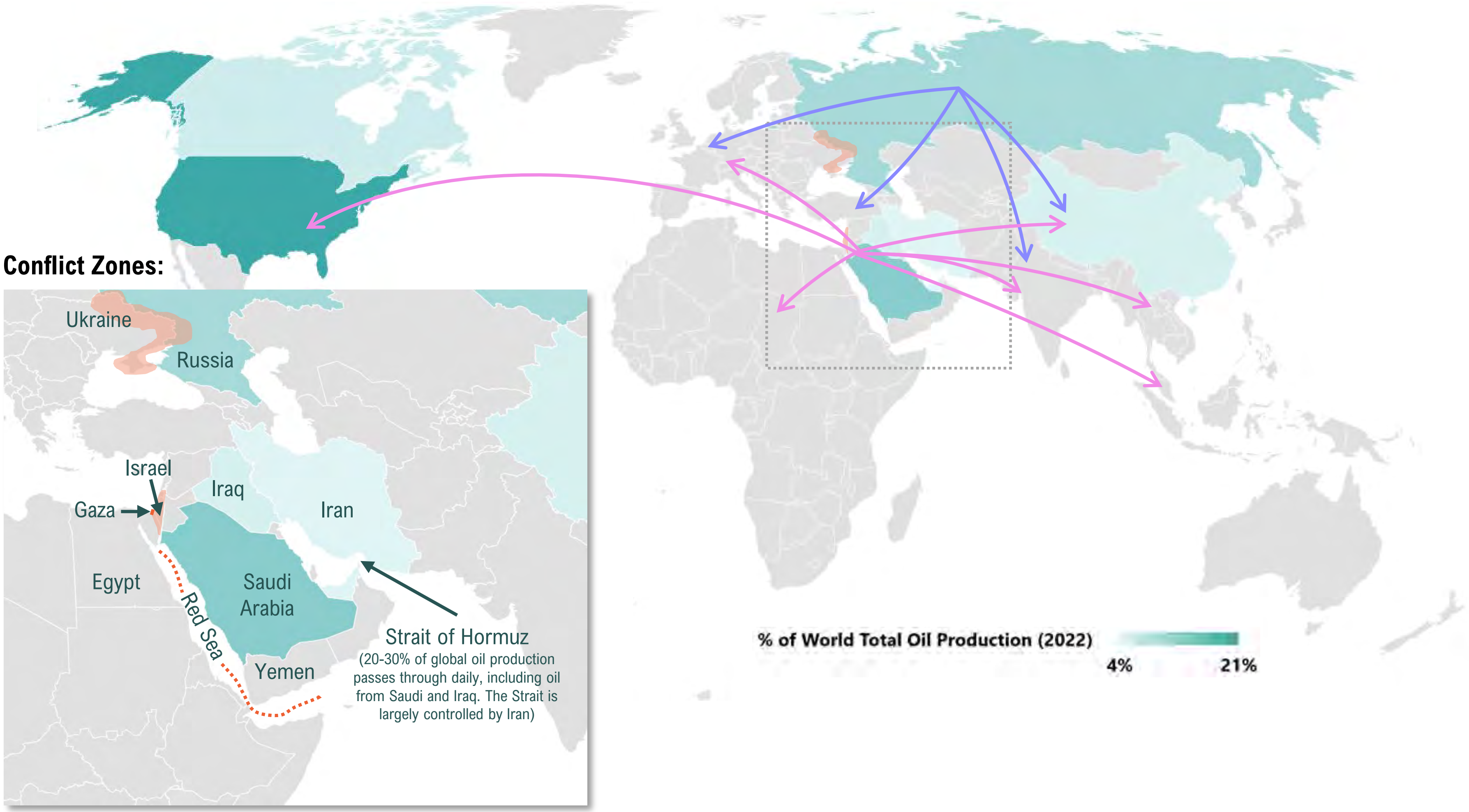
12-Month Forward FCF Yield, %



Source: Bloomberg

Heightened geopolitical risk from key global oil producers could increase volatility in the oil market if conflict escalates or spreads further in the Middle East

Top Global Oil Producers by % of Oil Produced



The Israel-Hamas conflict has spilled over into the Red Sea, causing disruptions to shipping routes as Yemen-backed Houthi rebel group attacks cargo ships.

95% of container ships that would have transited the Red Sea are now rerouting around the Southern Tip of Africa.

This longer route has led to global freight rates jumping by 126% over the past six weeks.

High-value cargo has dropped by 50% since late November.

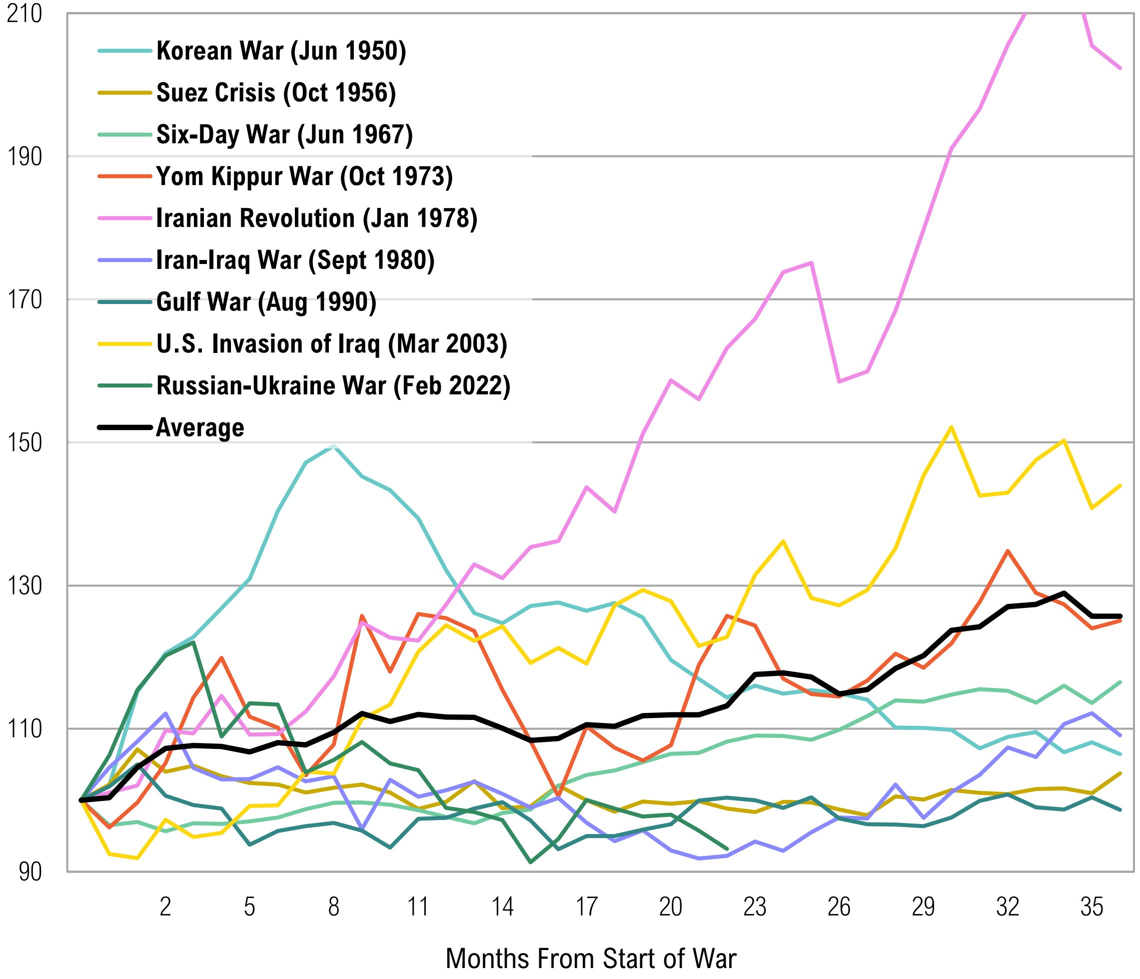
Shipping insurance has increased by 500%.

Import levels have plummeted to COVID levels.

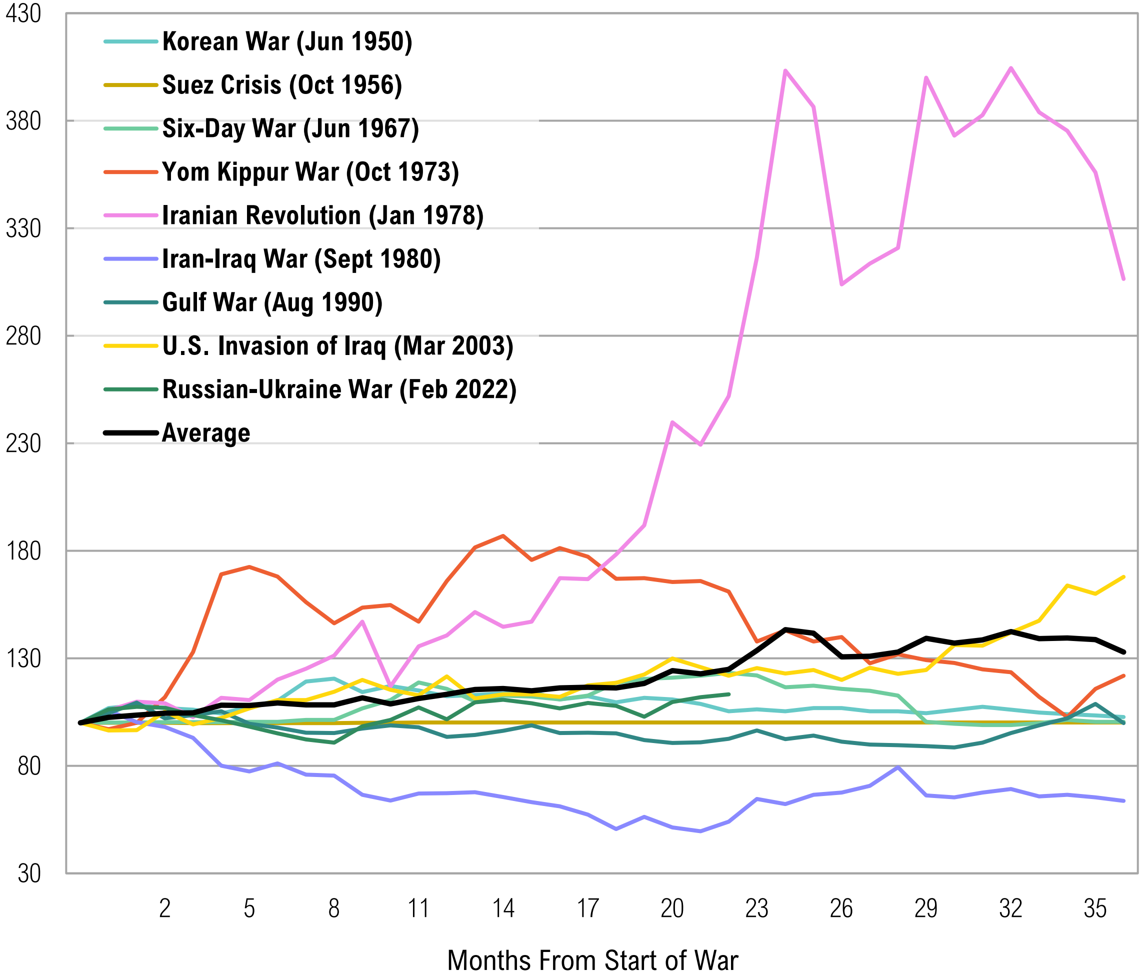
Source: Bianco Research, EIA. Oil production includes crude oil, all other petroleum liquids and biofuels.

Commodities and gold tend to perform relatively well during wars and periods of general geopolitical stress

Bloomberg Commodity Index, Growth of 100



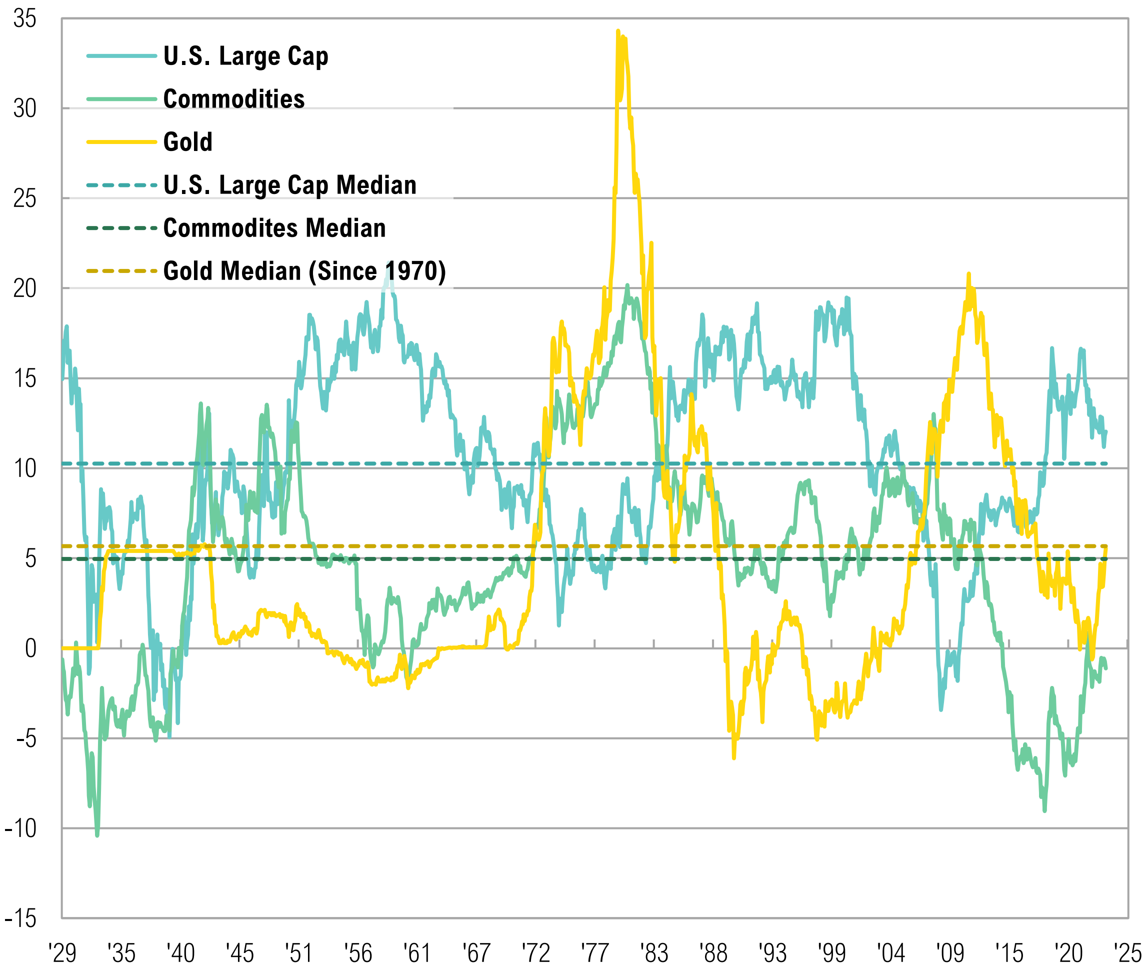
Gold Spot, Growth of 100



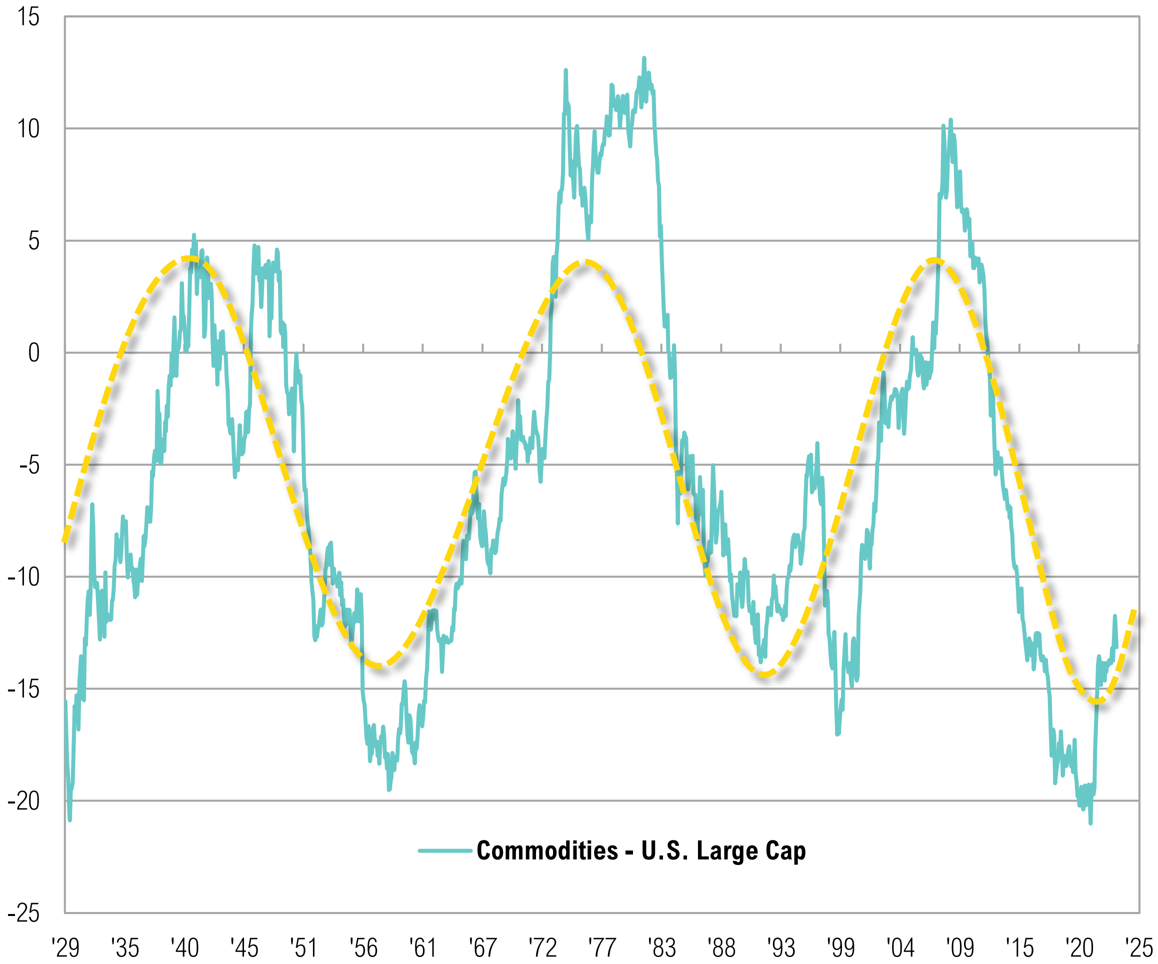
Source: Bloomberg, SpringTide.

While not useful for timing the market, it is useful to keep in mind longer-term cycles that are not observable on a day-to-day basis

Returns (Rolling 10-Year), %



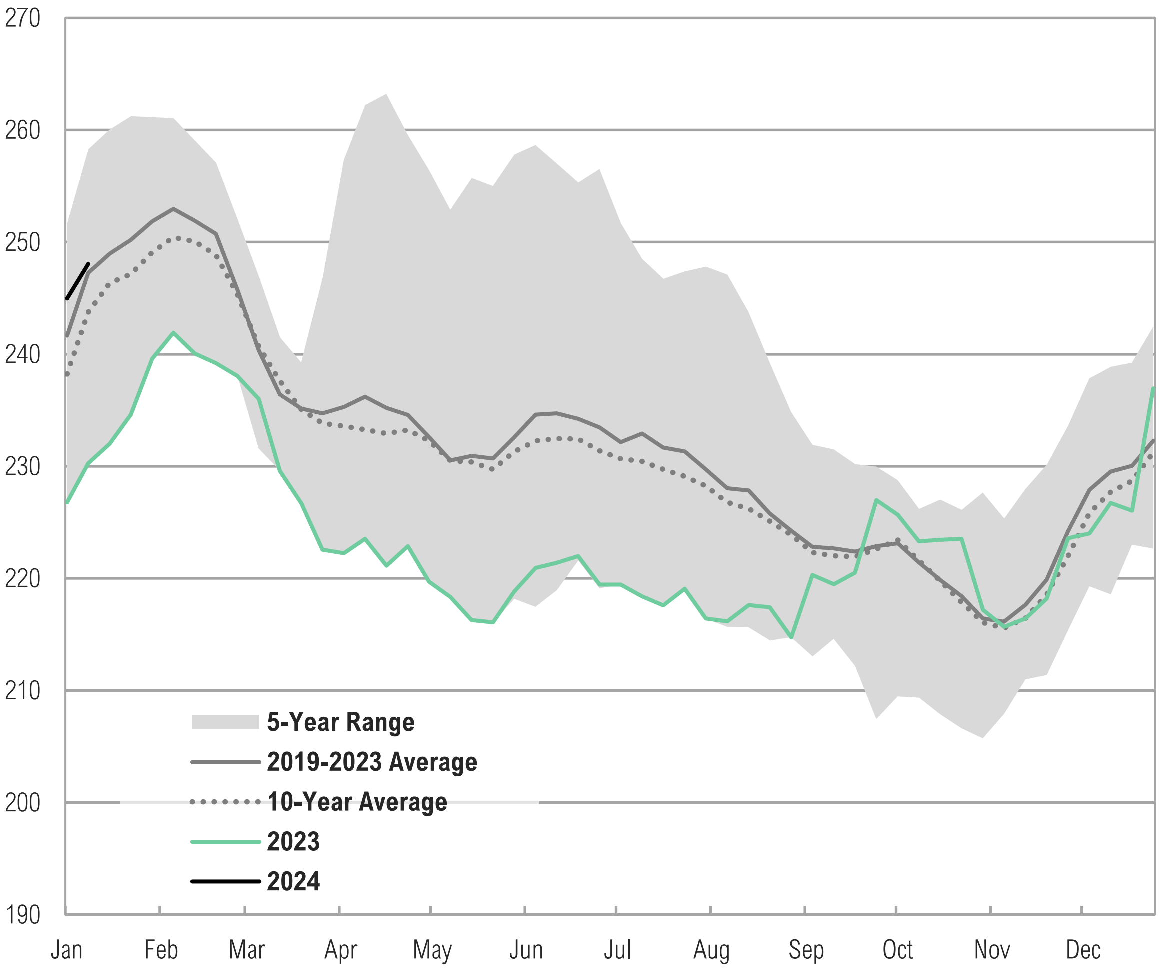
Returns (Rolling 10-Year), %



Source: Bloomberg. U.S. Large Cap uses total return indices. Gold median performance since 1970 to exclude Bretton Woods. See appendix for asset class & index definitions.

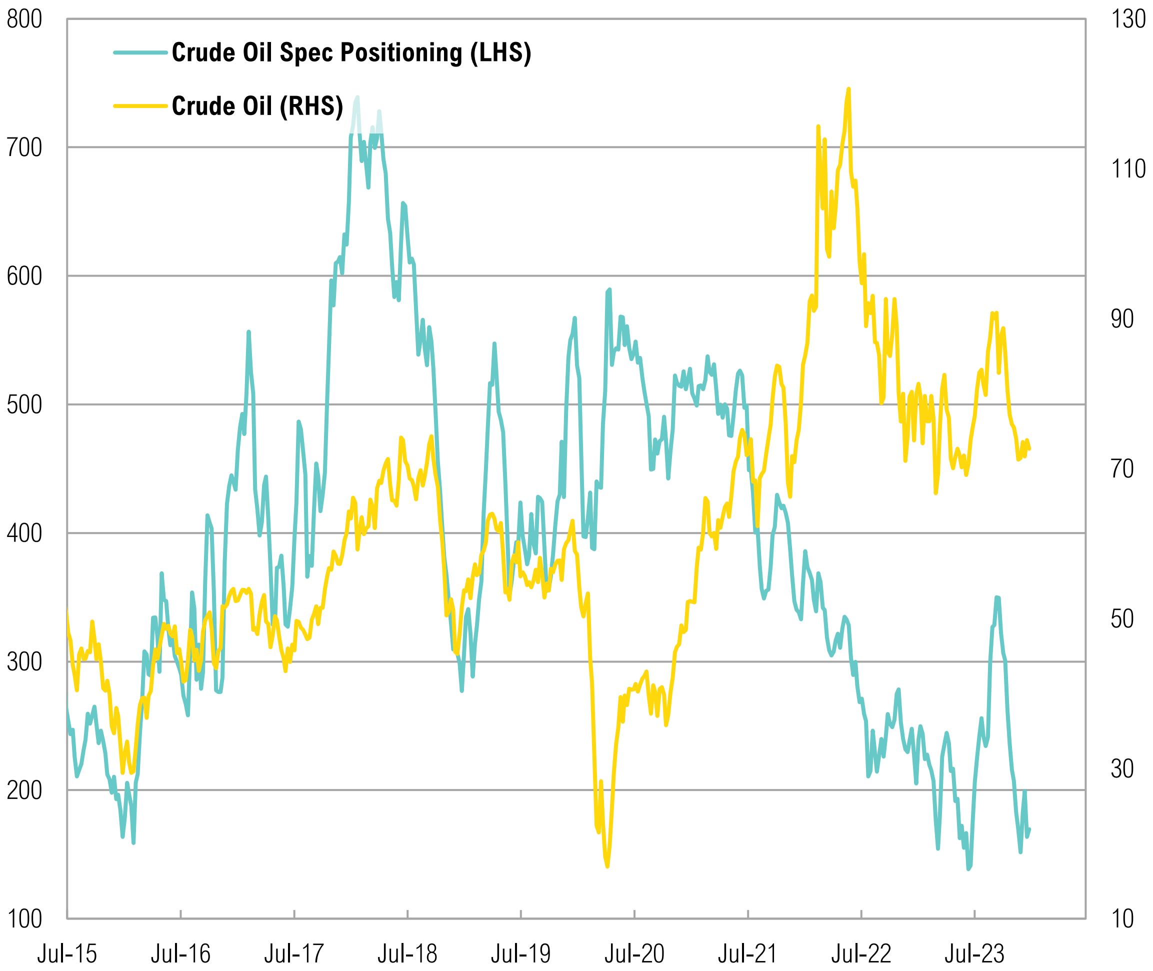
Gasoline inventories saw the largest build in history during the last week of 2023; speculative crude positioning is back at pessimistic levels

U.S. Gasoline Inventories, Millions of Barrels



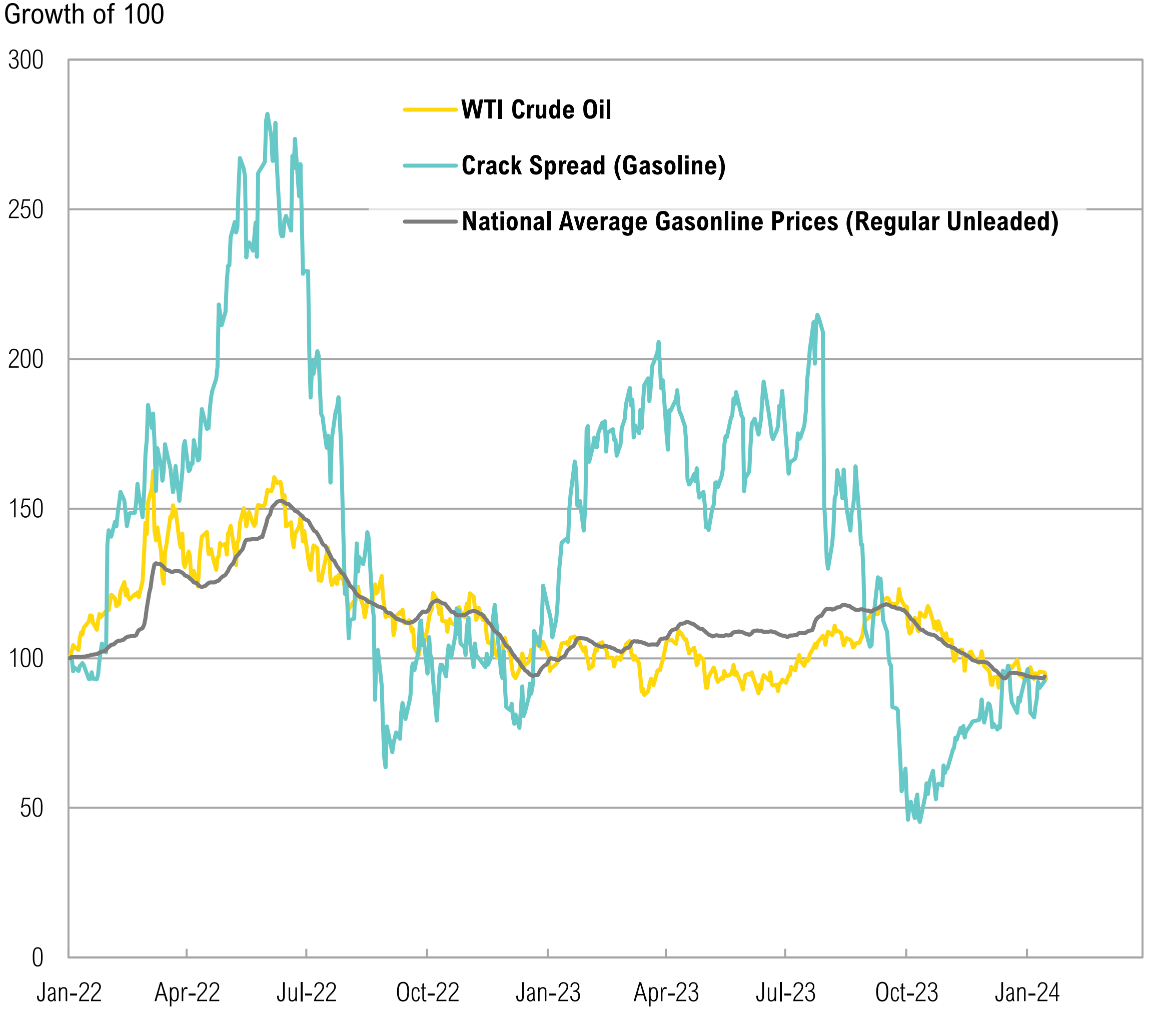
Spec Open Interest, Thousands

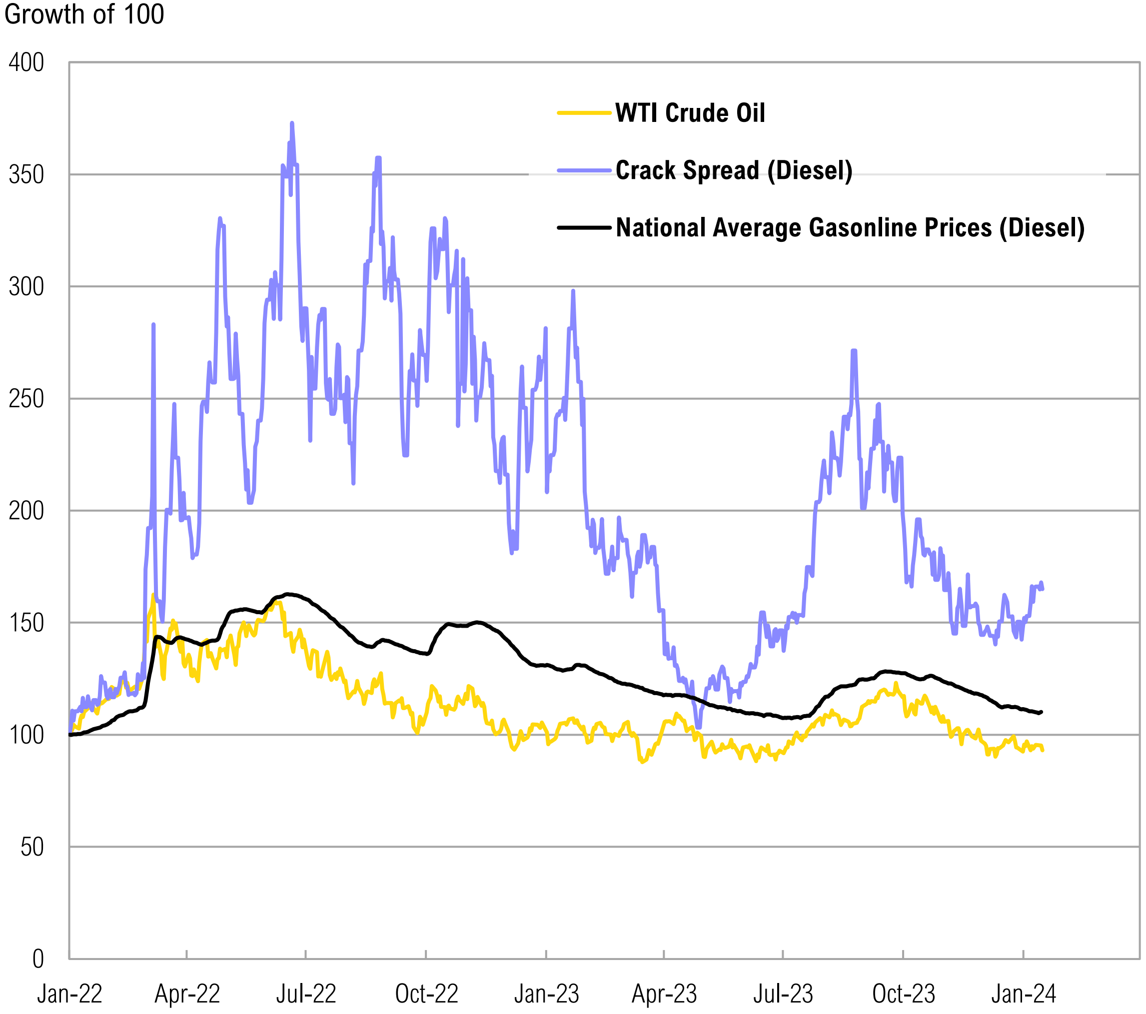
Crude Oil 1st Futures Price, $



Source: Bloomberg, SpringTide

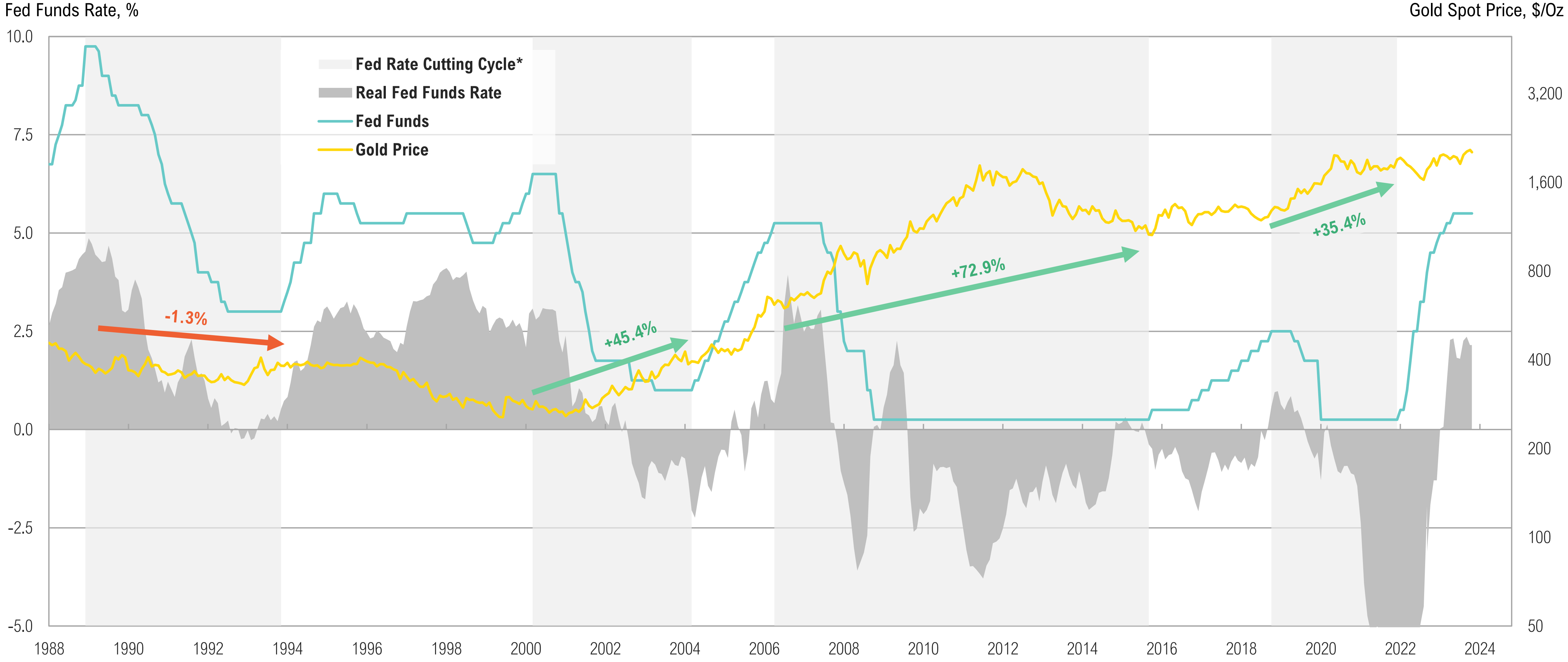
Gasoline crack spreads are up to $17/barrel from to $9/barrel in Q3, while diesel remains elevated at ~$33/barrel; despite crack spreads being ~30% lower y/y, gasoline inventories continue to build (= lower prices at the pump)





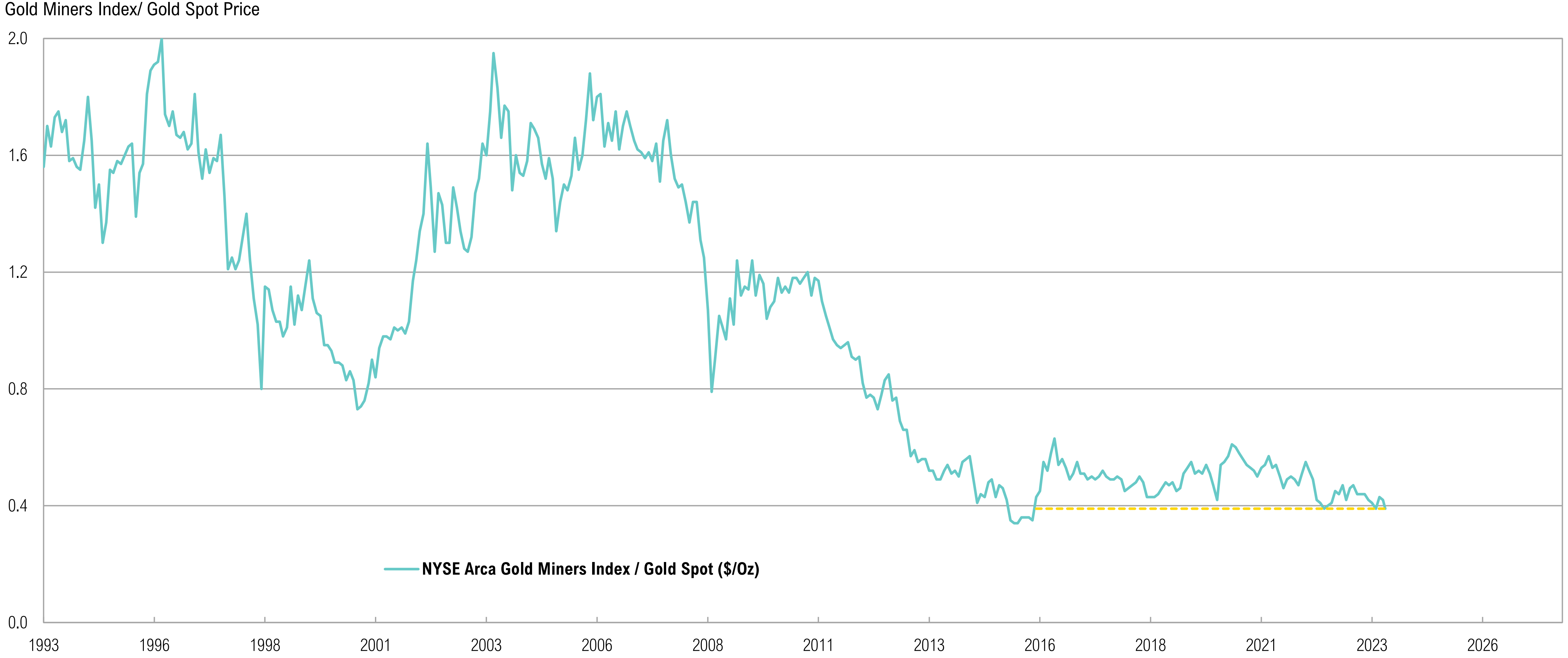
Source: Bloomberg

The end of hiking cycles has tended to be positive for gold as the prospects of rate cuts reduce opportunity cost and the Fed tends to cut into a deteriorating deficit



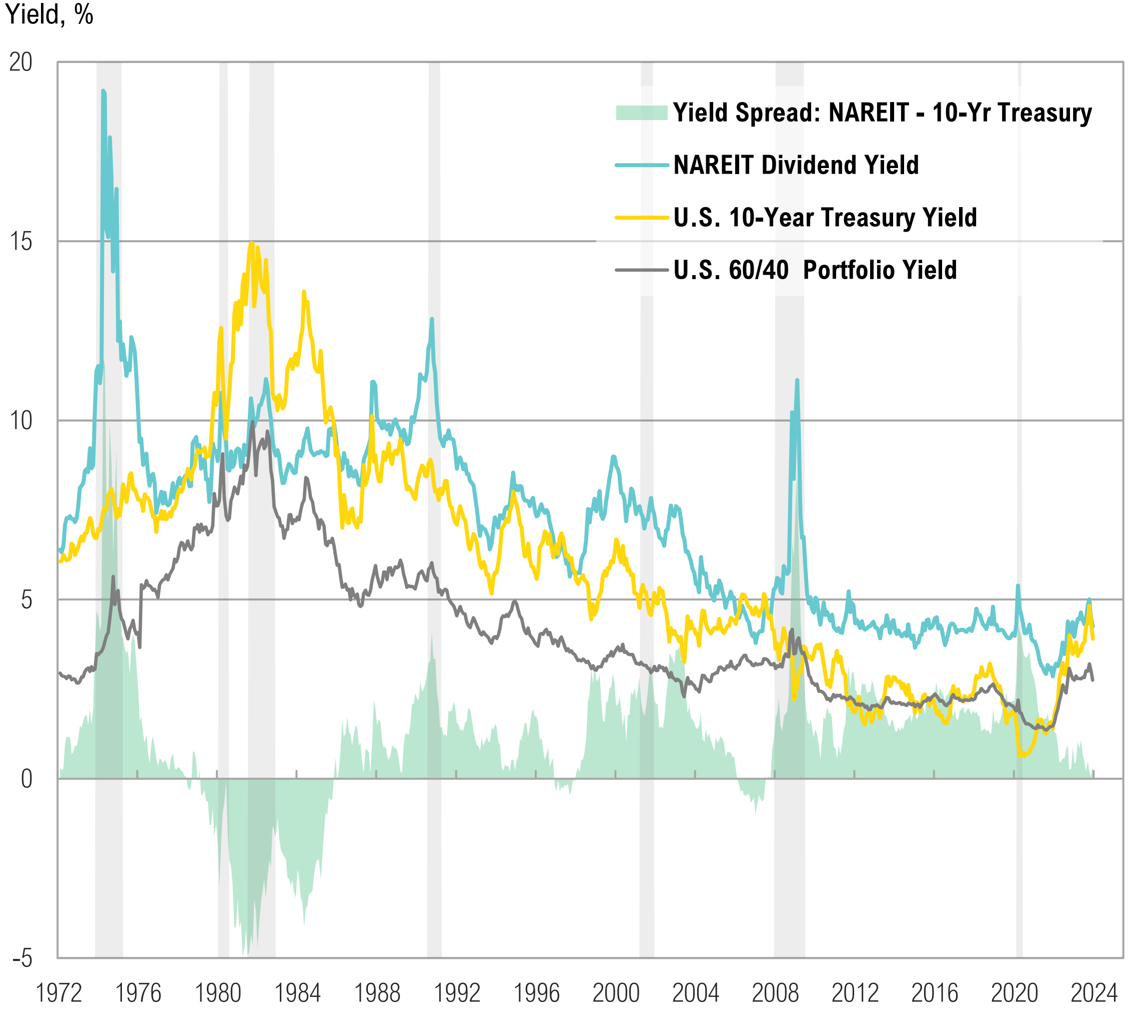
Source: Bloomberg. *Fed rate cutting cycle defined as period from last rate hike of a cycle to the first-rate hike of the next cycle. 1994 hiking cycle has been excluded. As of 1/17/2023.

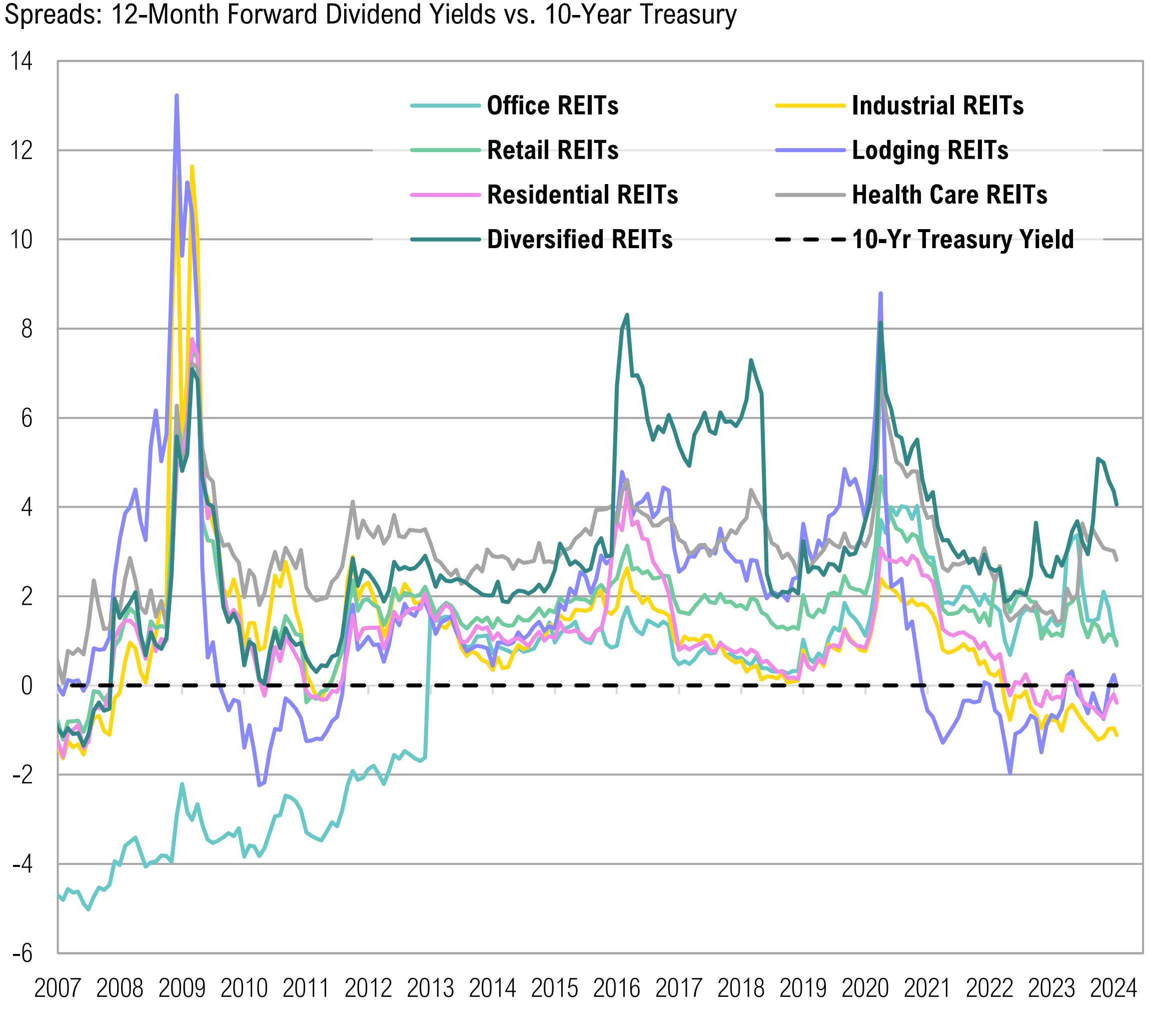
Gold producers remain disconnected from the underlying metal, partially for good reasons (rising costs, country risks etc.), but should provide leveraged upside if gold decisively breaks out



Source: Bloomberg

After a strong Q4, U.S. REITs have rallied 22% off 2022 lows; however, they still look wholly unattractive on a relative yield basis, despite looking more attractive on an absolute basis

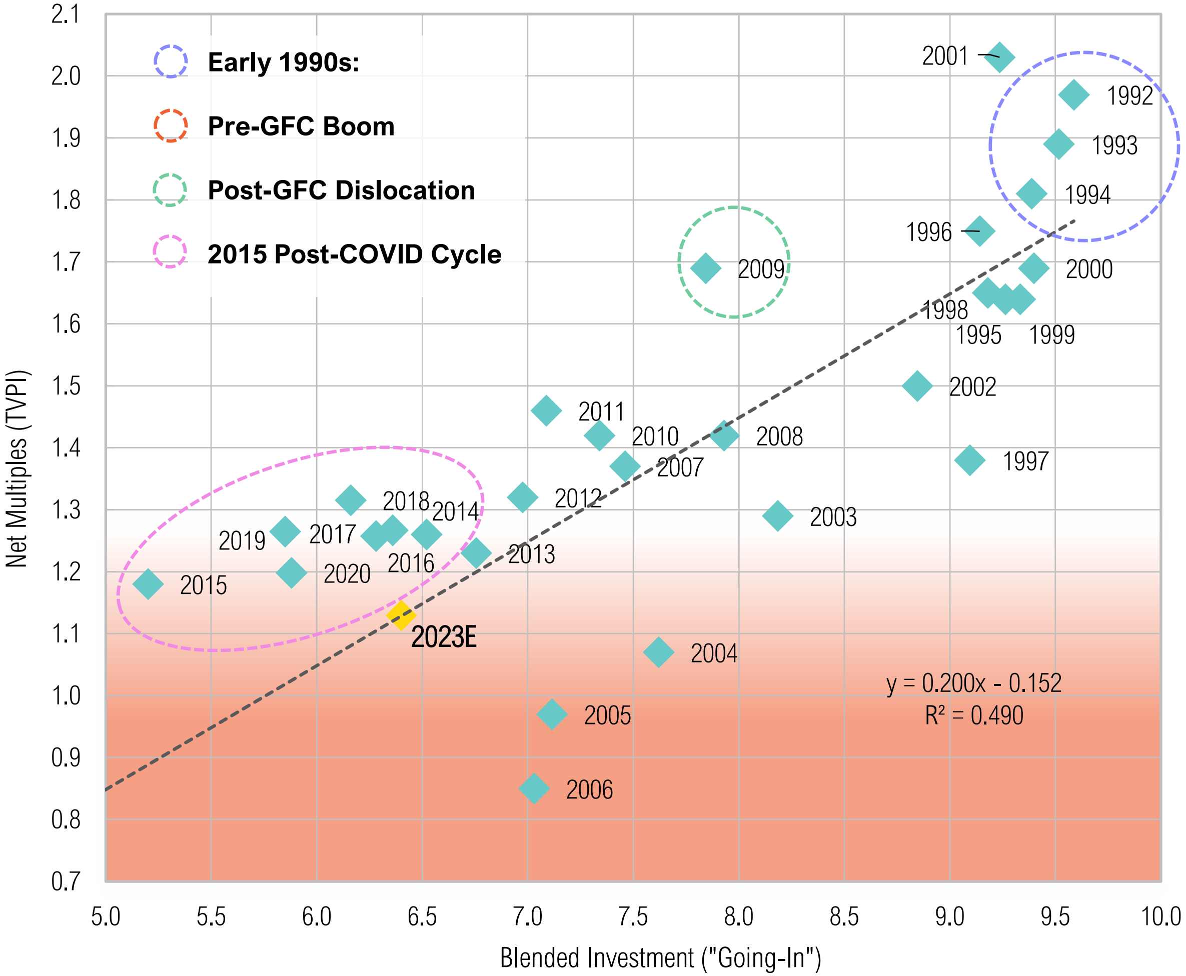




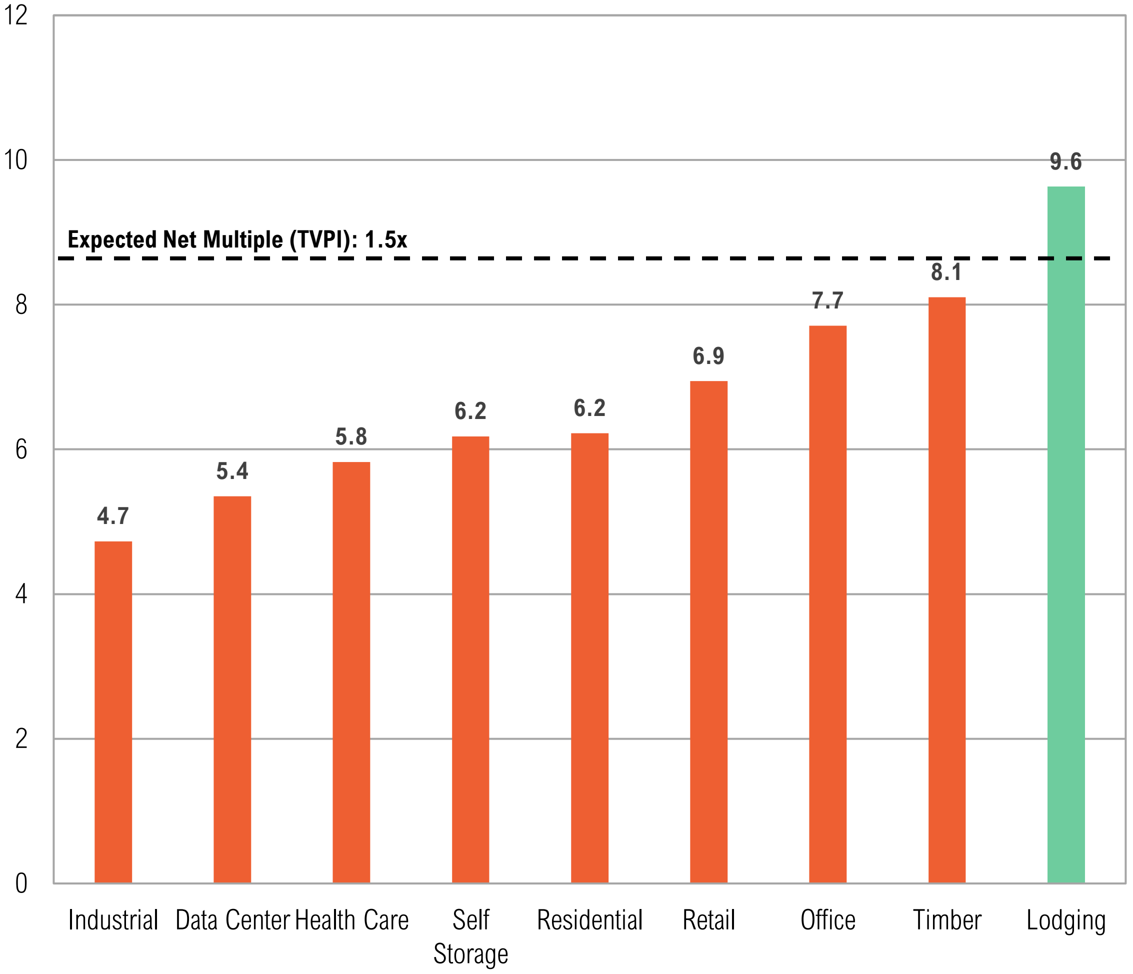
Source: Bloomberg, NAREIT.

Implied cap rates still suggest muted returns, but the opportunity set is improving from a valuation perspective

Going-In Cap Rates vs. Net Multiples



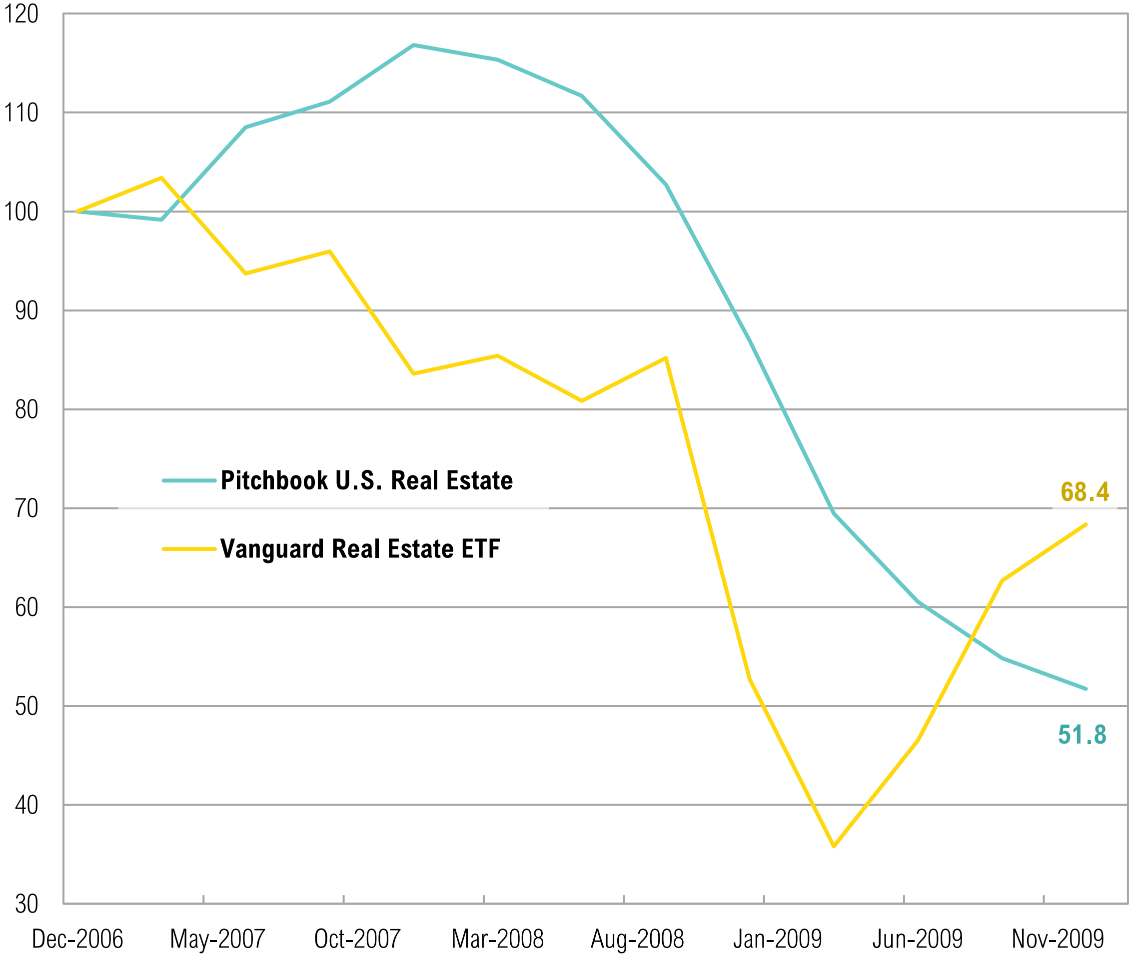
Implied Cap Rate, %



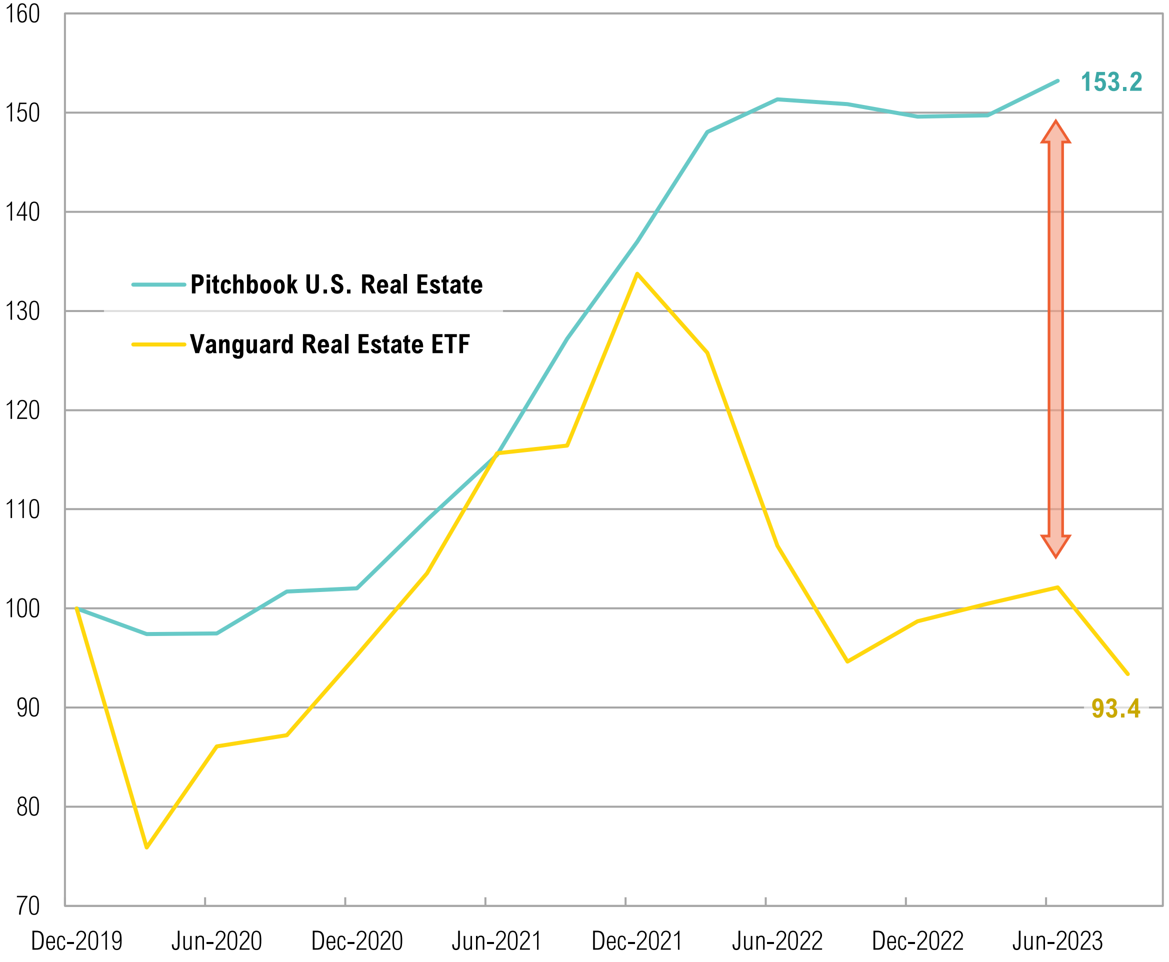
Source: Bloomberg, CBRE, Pitchbook. Returns as of most recent daily close. Returns for periods longer than 1 year are annualized. Cap rate estimate as of 9/30/2023.

Private real estate funds have not sufficiently marked down properties

Growth of 100, GFC



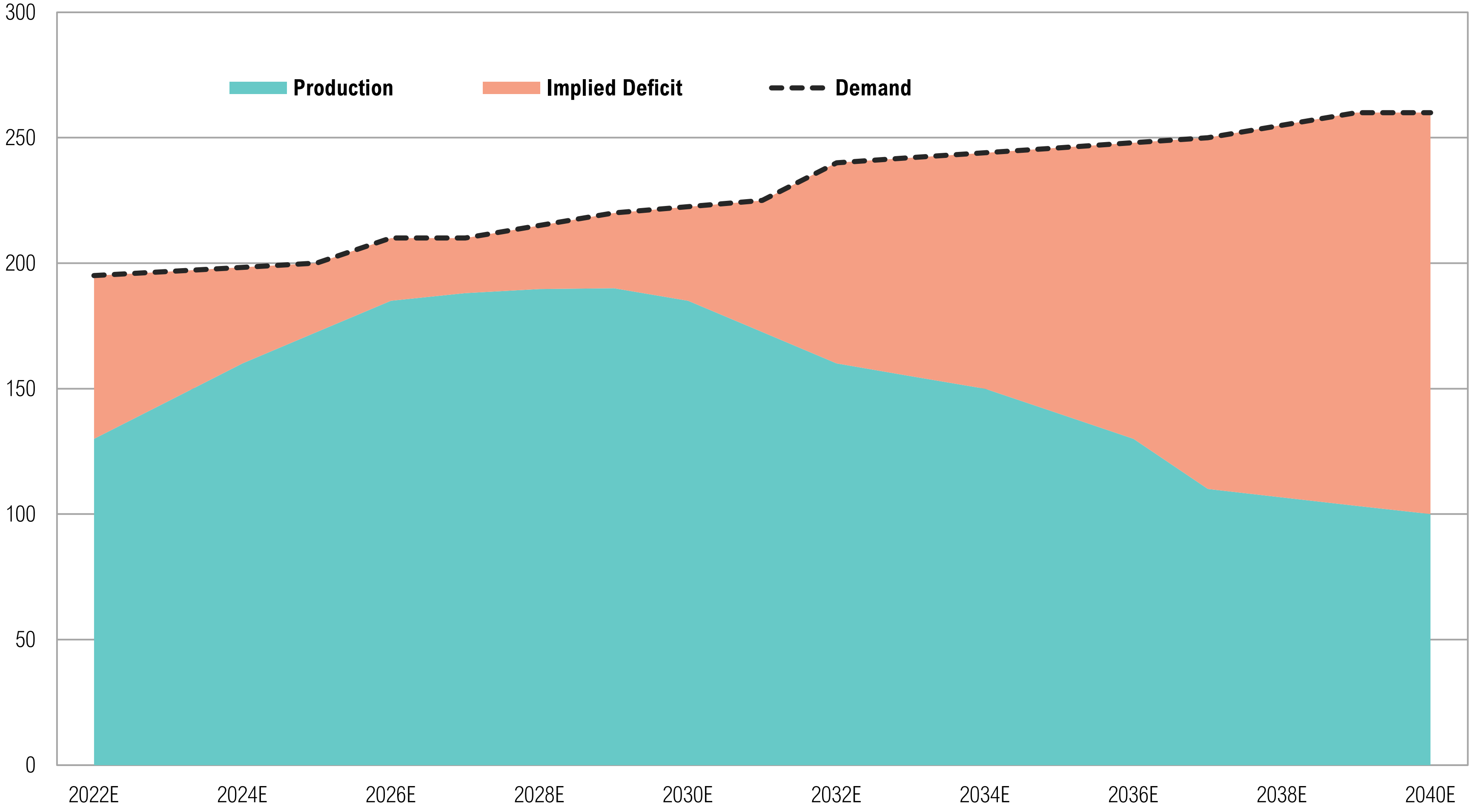
Growth of 100, Current



Source: Pitchbook, Bloomberg. U.S. Real Estate returns as of 6/30/2023.

At COP28, 20 countries pledged to triple their nuclear energy by 2050, recognizing its role in achieving net-zero emissions; long-term forecast point to uranium demand outpacing supply over the next two decades

Estimated Uranium Supply & Demand, Million Pounds of U_3O_8*



Key takeaways from COP28 include renewed interest in nuclear as its role in the net zero goal becomes more important.

20 nations, including the United States, the UK, France, the Netherlands, Sweden, and the UAE have committed to triple nuclear energy capacity by 2050.

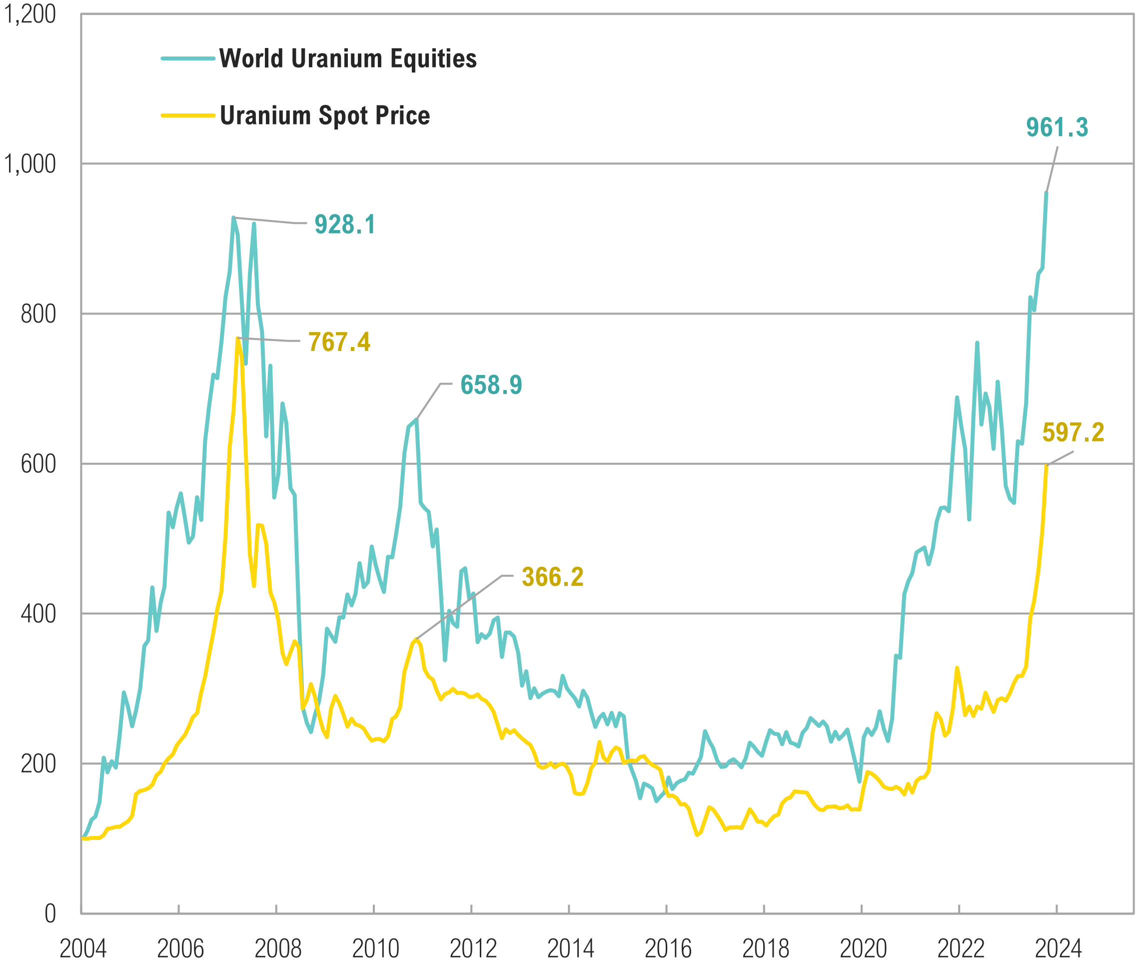
Further, nuclear was named as a zero- and low-emission technology in the United Nations Framework Convention on Climate Change, released on December 13.


REVISED ADVANCE VERSION

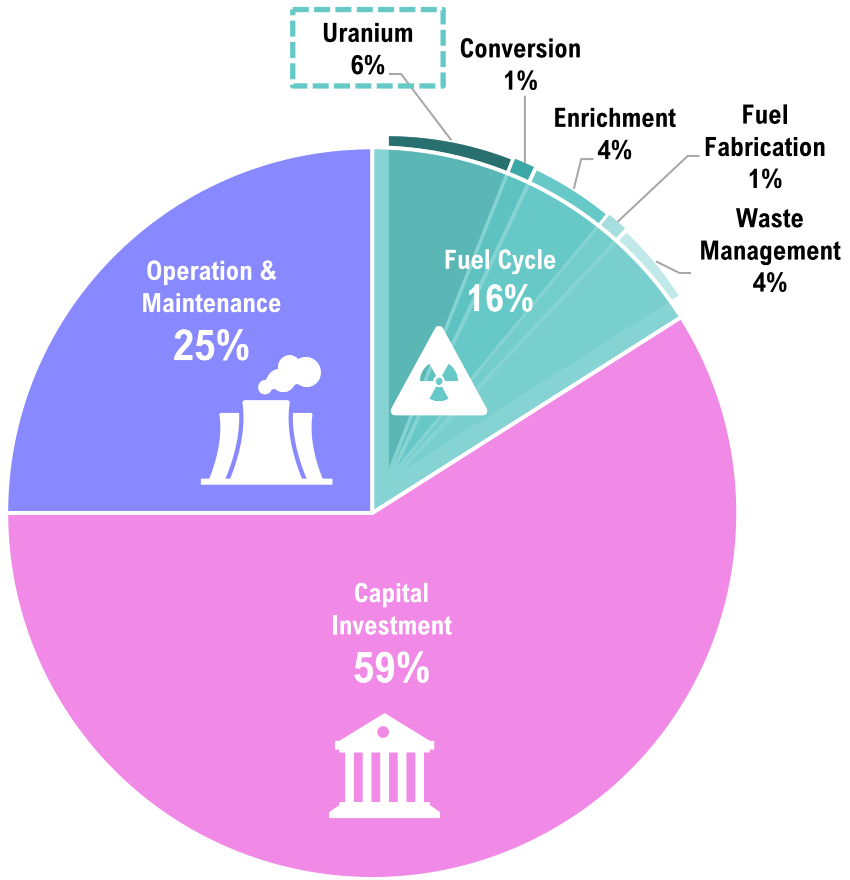
Source: Bloomberg, United Nations, U.S. Department of Energy. *World Nuclear Association estimate, as Q2 2023.

Uranium stocks hit new highs following a spike in prices due to supply shortfalls from the world's largest producer; effects on demand should be minor, as uranium prices contribute little to total nuclear costs

Growth of 100



Estimated Nuclear Electricity Generation Cost Breakdown*



Source: Bloomberg, *Estimate as per IEA/NEA 2010 projections, and assumes a discount rate of 5%.

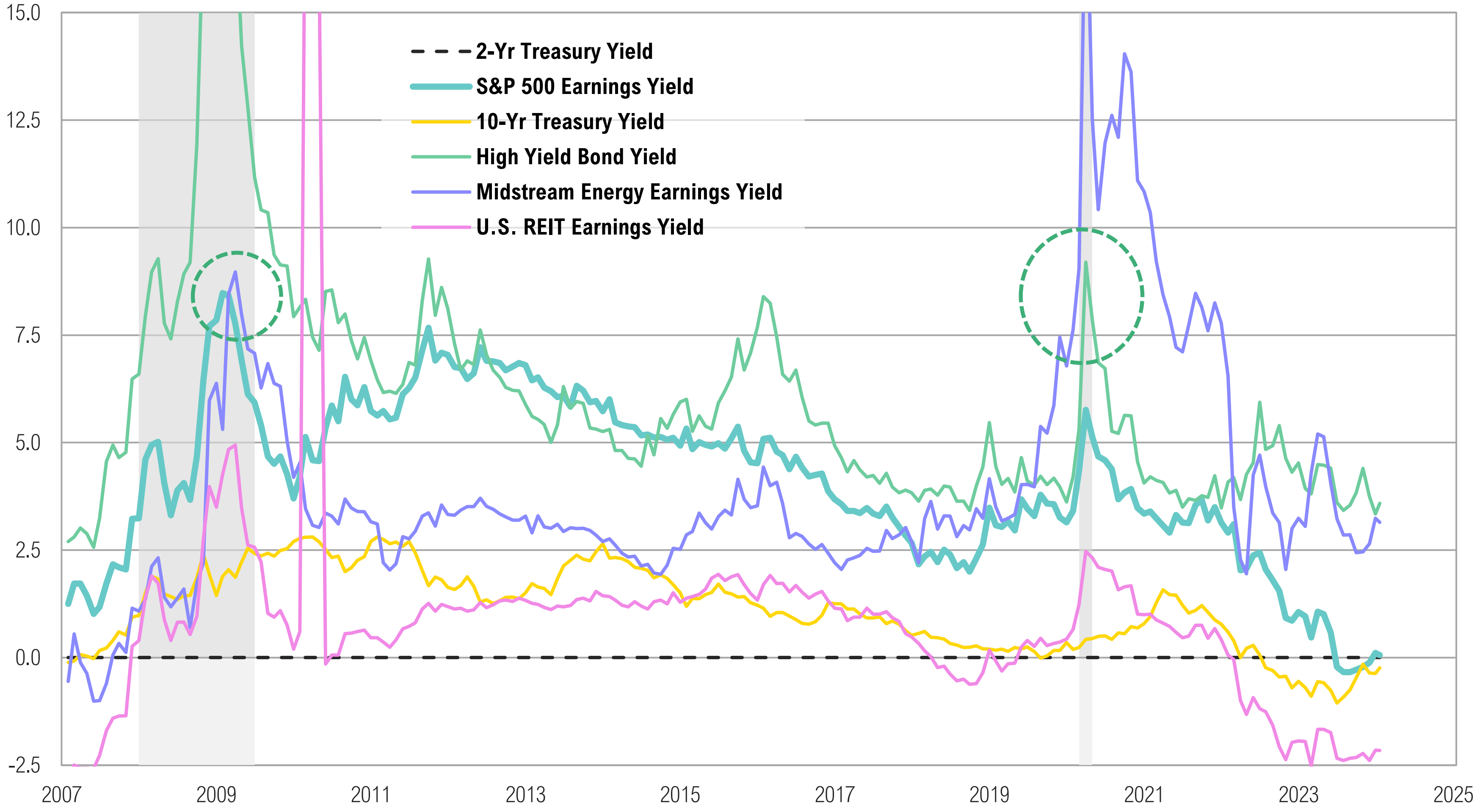
“

There is no better teacher than history in determining the future. There are answers worth billions of dollars in a history book.

Charlie Munger (1924 – 2023)

Despite yields falling ~80bps over the past two months, the attractiveness of most asset classes hasn't materially improved relative to the 2-year Treasury yield

Yield Spreads vs. 2-Year Treasury, %



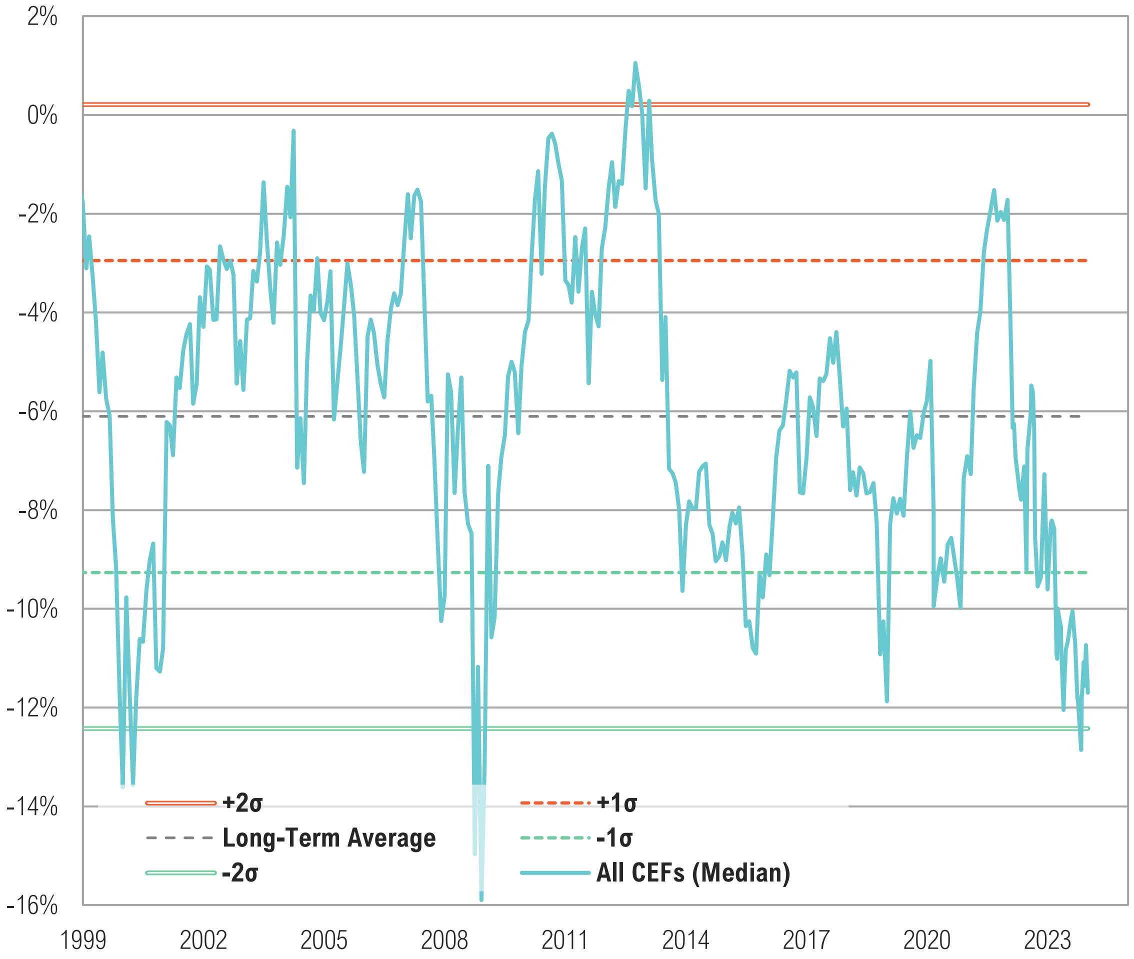
Current Yield:

- 2-Year Treasury: 4.32%
- 10-Year Treasury: 4.09%
- U.S. High Yield Bonds: 7.91%
- S&P 500: 4.39%
- Midstream Energy: 7.48%
- U.S. REITs: 2.17%

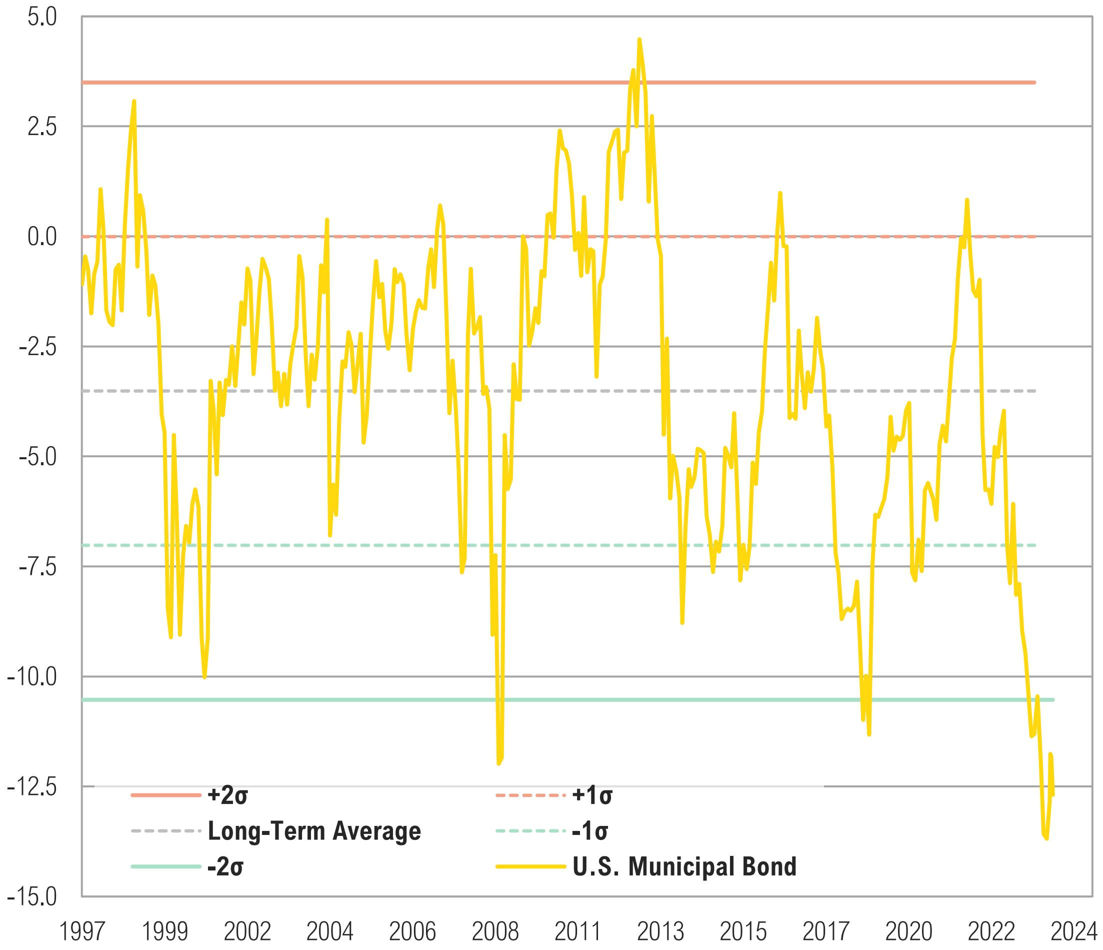
Source: Bloomberg

Median CEF discounts remain wide at -11.7%; U.S. Muni CEFs are trading at a compelling 12.7% discount to NAV, but relative muni yields are less enticing

Median Premium/Discount to Net Asset Value, %

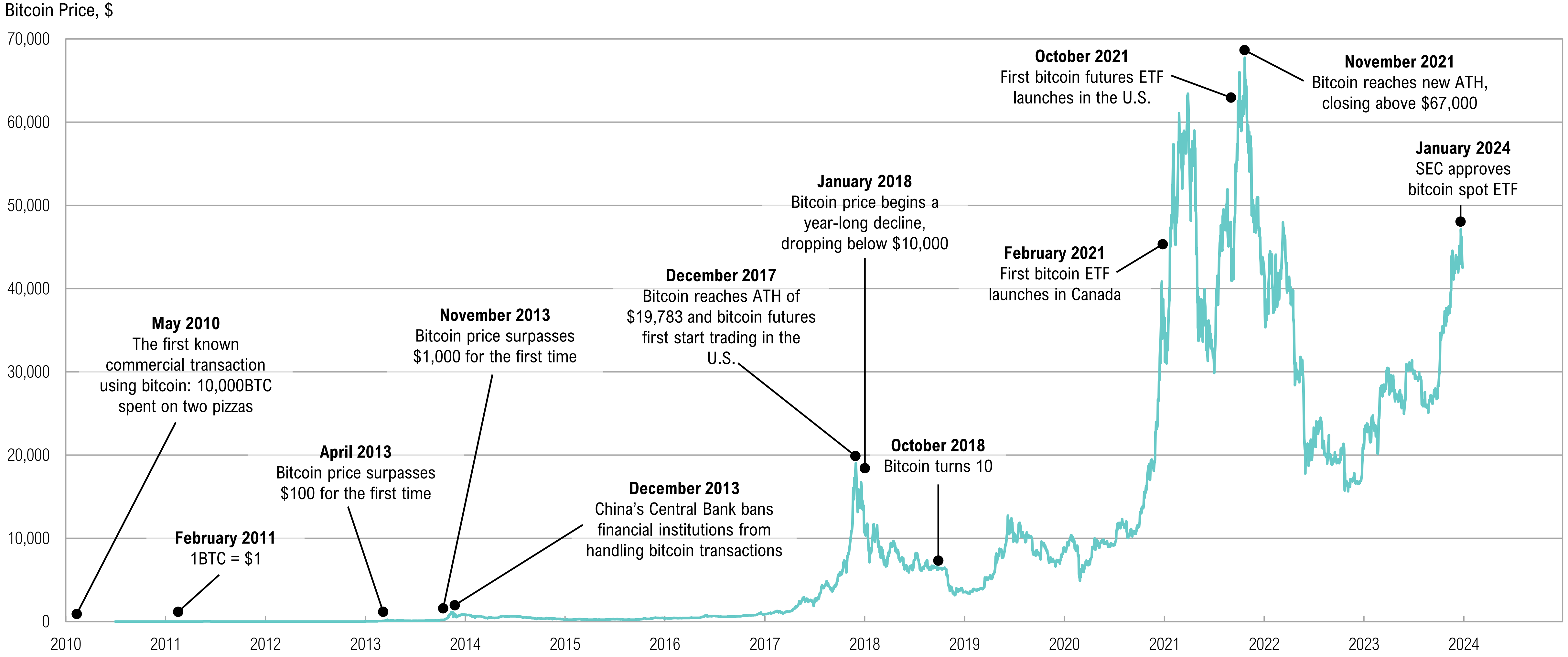


Average Premium/Discount to Net Asset Value



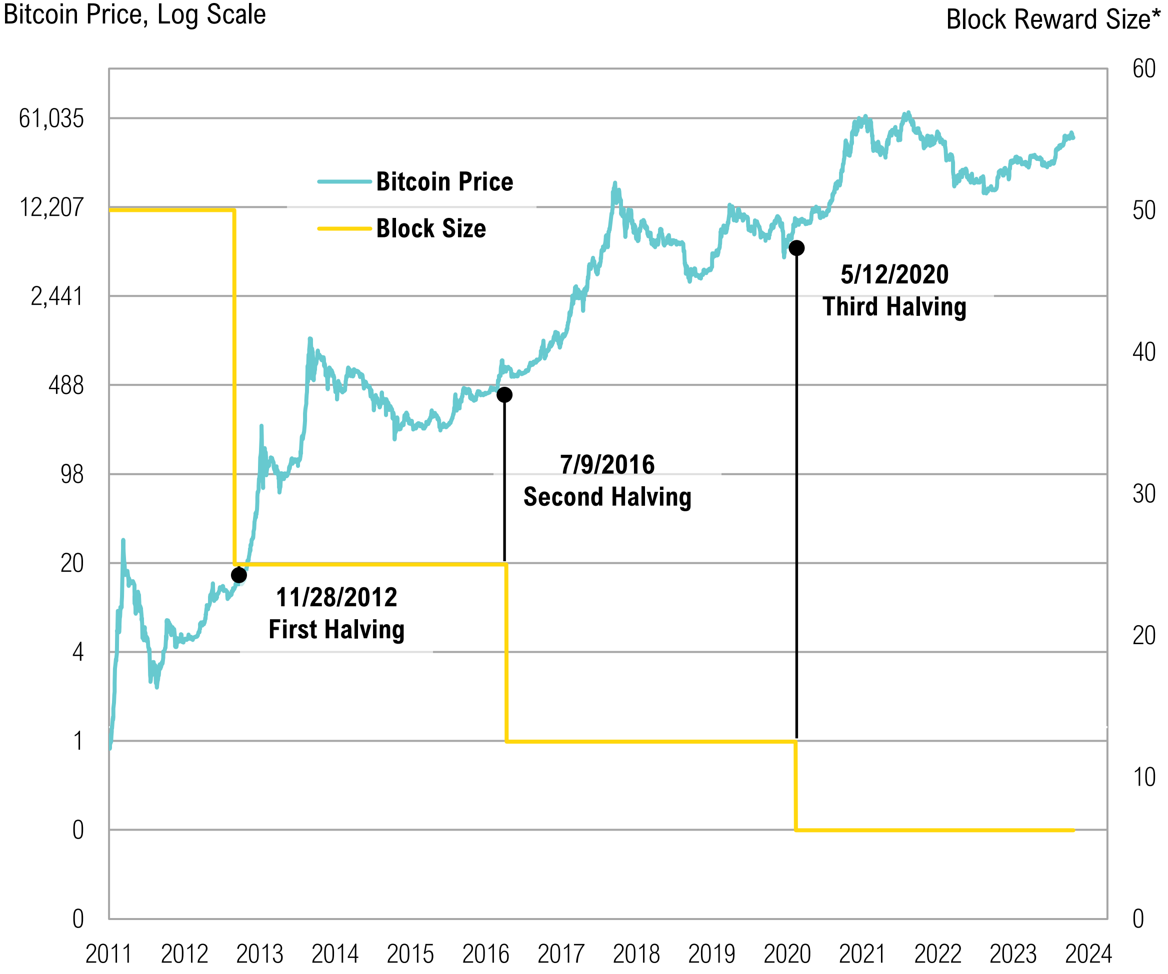
Source: Bloomberg

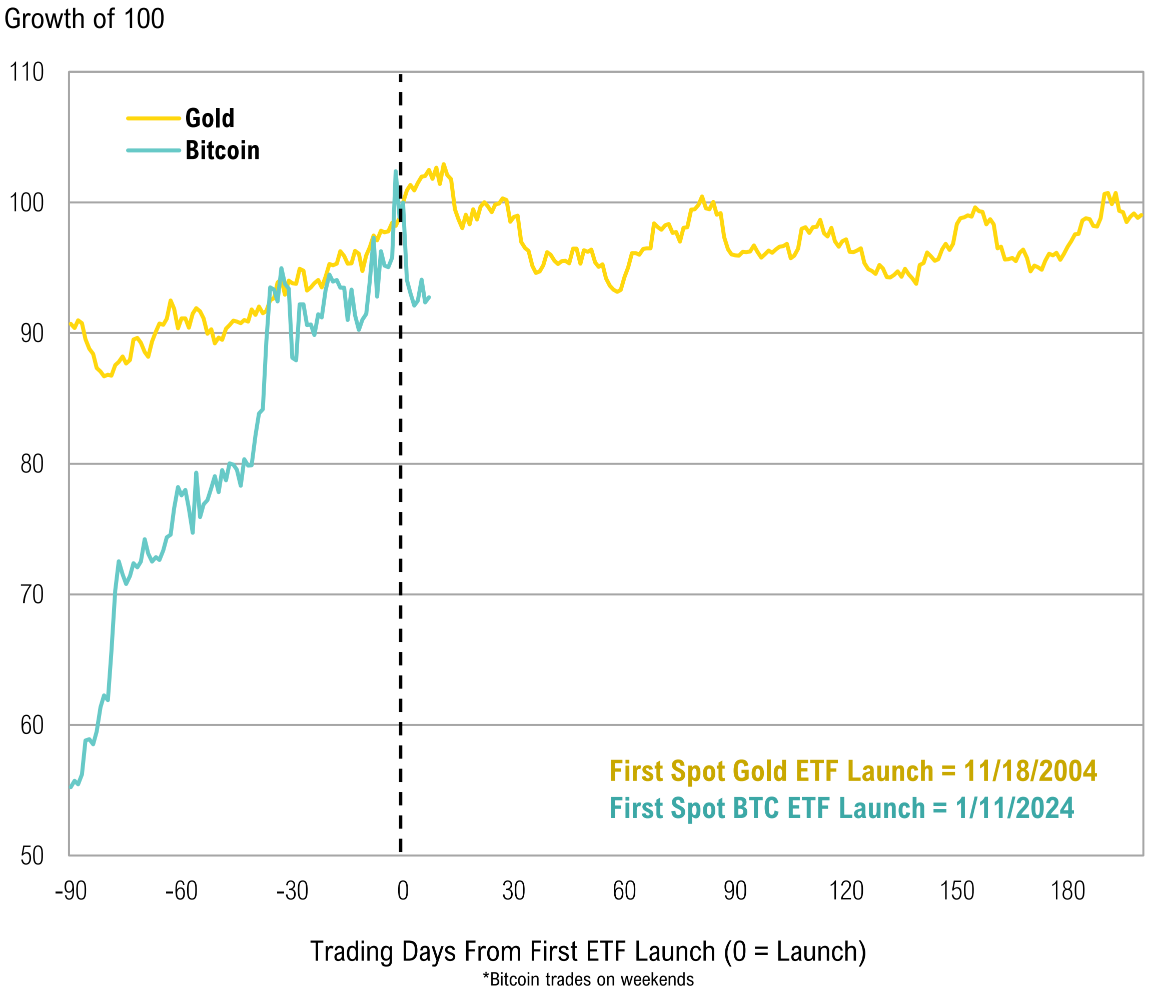
Historically, major bitcoin product launches have ended in 'sell the news'—a trend that seems to be repeating with the recent launch of bitcoin spot ETFs



Source: Bloomberg, Various. As of 1/15/2023.

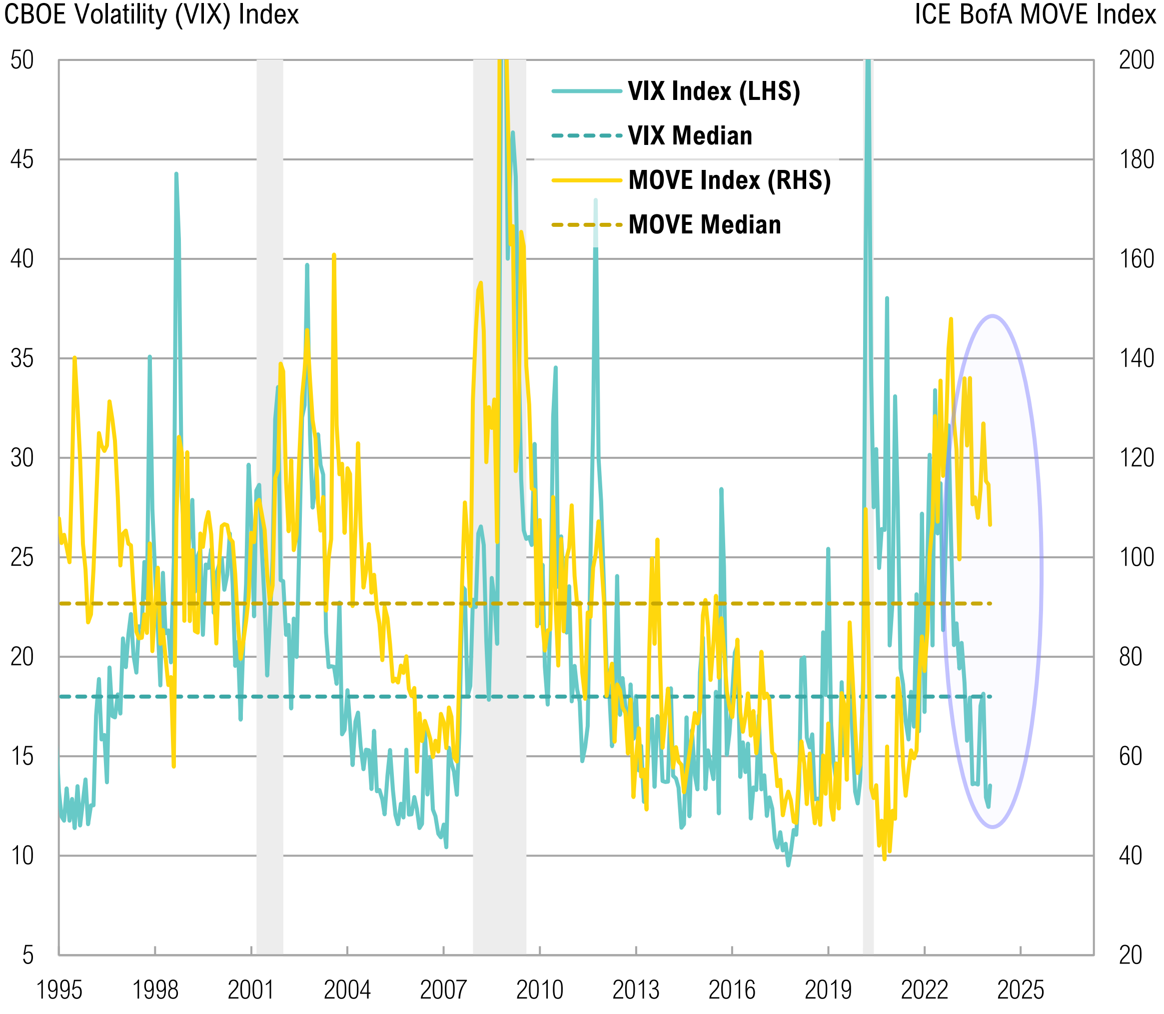
The price of bitcoin tends to increase after each halving event, the next which is likely to happen in mid-2024

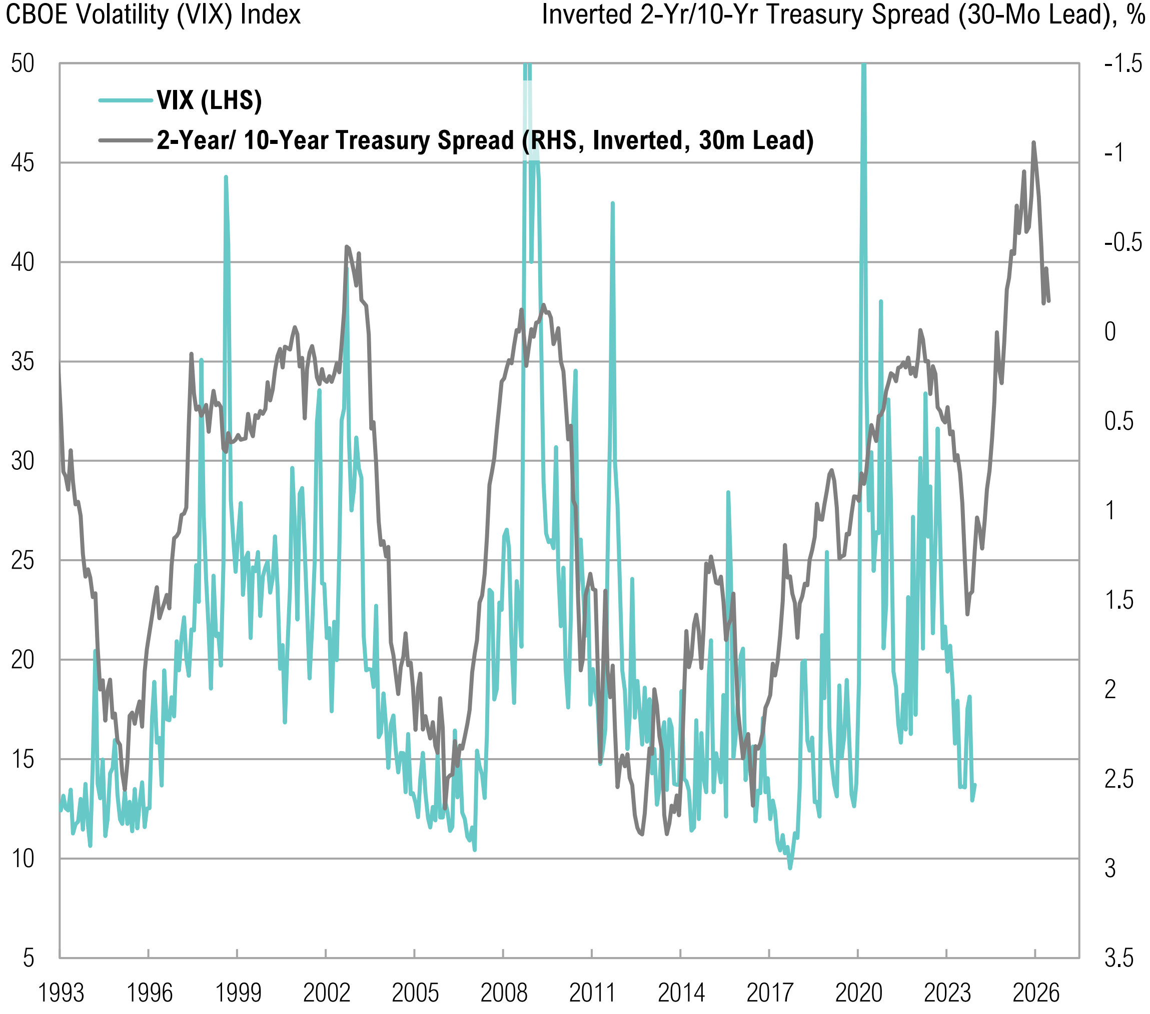




Source: Bloomberg, Bitcoin Visuals. *Reward started at 50BTC and halves every 210,000 blocks. The block reward is how new bitcoin is 'minted' or brought into the economy. Halving is programmed into bitcoin's code and occurs every four years to control inflation by reducing the rate at which new bitcoins are created. If there are fewer bitcoins available, and demand stays the same or increase, the value of bitcoin is likely to increase. As of 1/15/2024.

The implied bond market volatility (MOVE) still isn't showing the same level of composure as equities (VIX) and it's unlikely that both markets are correct; 2s10s spread has historically lead equity volatility by 30 months





Source: Bloomberg

> The shock of the rate increase recently has put a damper on banking deals and capital market deals. And that is because everybody doesn't really know what their cost of financing is. The minute the Federal Reserve has concretely signalled that they've stopped raising rates, let alone the point at which they first do a rate cut, these markets will take off.

James Gorman, *Morgan Stanley Outgoing CEO*

Even if not base case, returns during periods of stress (stagflation, bubble unwinds, banking crisis) *contrast so starkly* with the last 10-14 years that they should be considered

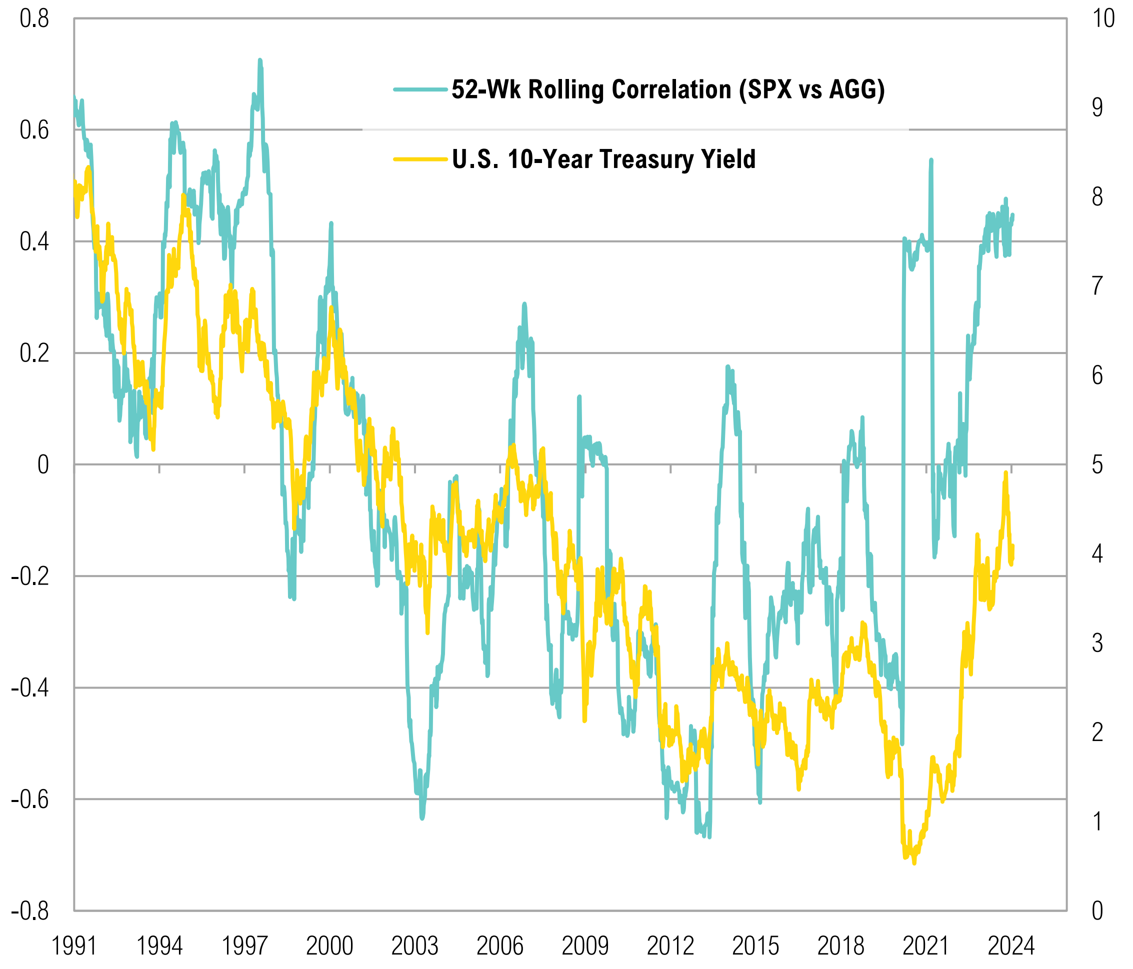
1970s Stagflation				Tech Bubble					GFC				**	23Q4
1972	1973	1974	1975	1999	2000	2001	2002	2003	2007	2008	2009	2010	Geo. Avg.	10 Yrs
Gold 48.3%	Gold 73.5%	Gold 67.0%	U.S. Small Cap 52.8%	EM Stocks 57.6%	Midstrm Energy 45.7%	Midstrm Energy 43.7%	Commodities 25.9%	EM Stocks 55.8%	EM Stocks 39.4%	U.S. Interm Bds 5.2%	EM Stocks 78.5%	Midstrm Energy 35.9%	Gold 19.7%	U.S. Large Cap 11.8%
Commodities 37.0%	Commodities 58.4%	Commodities 9.8%	U.S. Large Cap 37.2%	Intl Dev Stocks 27.0%	Commodities 31.8%	U.S. REITs 12.8%	Gold 24.0%	U.S. Small Cap 47.3%	Gold 31.6%	Intl Dev Bonds 4.4%	Midstrm Energy 76.4%	U.S. REITs 28.5%	Midstrm Energy 14.6%	U.S. REITs 7.6%
Intl Dev Stocks 30.1%	U.S. REITs 20.2%	Cash 8.0%	Intl Dev Stocks 32.3%	Commodities 24.3%	U.S. REITs 26.8%	U.S. Interm Bds 8.4%	Intl Dev Bonds 22.4%	Midstrm Energy 44.5%	Commodities 16.2%	U.S. Muni Bds 4.2%	U.S. HY Bonds 58.2%	Gold 27.7%	Commodities 13.3%	U.S. Small Cap 7.2%
Midstrm Energy 20.3%	Cash 7.3%	EM Stocks 6.0%	Midstrm Energy 27.1%	U.S. Small Cap 21.3%	U.S. Interm Bds 11.6%	U.S. Muni Bds 5.5%	U.S. Interm Bds 10.3%	Intl Dev Stocks 38.6%	Midstrm Energy 12.7%	Gold 3.4%	Intl Dev Stocks 31.8%	U.S. Small Cap 26.9%	U.S. REITs 8.2%	Gold 5.6%
U.S. Large Cap 19.0%	Intl Dev Bonds 6.9%	U.S. REITs 4.8%	U.S. 60/40 24.7%	U.S. Large Cap 21.0%	U.S. Muni Bds 8.2%	U.S. HY Bonds 5.3%	U.S. Muni Bds 8.7%	U.S. REITs 36.7%	Intl Dev Stocks 11.2%	Cash 1.8%	U.S. REITs 28.6%	EM Stocks 18.9%	EM Stocks 5.9%	U.S. 60/40 5.5%
U.S. REITs 17.4%	U.S. HY Bonds 6.8%	U.S. Interm Bds 4.1%	U.S. HY Bonds 16.4%	U.S. 60/40 12.2%	Cash 6.1%	Cash 4.1%	U.S. REITs 3.6%	U.S. HY Bonds 29.0%	Intl Dev Bonds 11.0%	U.S. 60/40 -21.6%	Gold 27.6%	Commodities 16.8%	Intl Dev Bonds 5.9%	U.S. HY Bonds 4.6%
U.S. 60/40 12.2%	Midstrm Energy 5.8%	Intl Dev Bonds 2.9%	U.S. REITs 14.1%	Cash 4.8%	U.S. 60/40 -1.1%	U.S. Small Cap 2.5%	Cash 1.7%	U.S. Large Cap 28.7%	U.S. Interm Bds 7.0%	U.S. HY Bonds -26.2%	U.S. Small Cap 27.2%	U.S. HY Bonds 15.1%	U.S. Interm Bds 5.6%	Intl Dev Stocks 4.3%
Intl Dev Bonds 9.4%	U.S. Muni Bds 4.8%	U.S. Muni Bds -5.6%	Intl Dev Bonds 8.7%	U.S. HY Bonds 2.4%	EM Stocks -1.6%	Gold 1.4%	U.S. HY Bonds -1.4%	Commodities 24.0%	U.S. 60/40 6.2%	U.S. Small Cap -33.8%	U.S. Large Cap 26.5%	U.S. Large Cap 15.1%	U.S. HY Bonds 5.0%	EM Stocks 2.7%
U.S. Small Cap 4.4%	U.S. Interm Bds 3.3%	U.S. 60/40 -14.6%	Cash 5.9%	Gold 1.2%	U.S. Small Cap -3.0%	EM Stocks -2.6%	Midstrm Energy -3.4%	Gold 21.7%	U.S. Large Cap 5.5%	Commodities -35.6%	Commodities 18.9%	U.S. 60/40 12.2%	U.S. Muni Bds 4.1%	U.S. Muni Bds 2.2%
Cash 4.2%	EM Stocks 3.3%	U.S. HY Bonds -17.2%	U.S. Interm Bds 5.6%	U.S. Muni Bds 0.6%	Intl Dev Bonds -3.9%	U.S. 60/40 -3.3%	EM Stocks -6.2%	Intl Dev Bonds 19.4%	U.S. Muni Bds 4.8%	Midstrm Energy -36.9%	U.S. 60/40 18.5%	Intl Dev Stocks 7.8%	Cash 3.8%	Midstrm Energy 1.9%
U.S. HY Bonds 3.5%	U.S. 60/40 -7.7%	U.S. Small Cap -19.9%	U.S. Muni Bds 4.6%	U.S. Interm Bds -0.8%	U.S. HY Bonds -5.9%	Intl Dev Bonds -3.7%	U.S. 60/40 -9.5%	U.S. 60/40 18.6%	Cash 4.8%	U.S. Large Cap -37.0%	Intl Dev Bonds 7.5%	U.S. Interm Bds 6.6%	U.S. 60/40 2.7%	U.S. Interm Bds 1.8%
U.S. Muni Bds 3.2%	Intl Dev Stocks -10.7%	Midstrm Energy -20.8%	Commodities -0.8%	U.S. REITs -4.6%	Gold -6.3%	U.S. Large Cap -11.9%	Intl Dev Stocks -15.9%	U.S. Muni Bds 4.4%	U.S. HY Bonds 1.9%	U.S. REITs -38.0%	U.S. Muni Bds 7.2%	Intl Dev Bonds 4.9%	U.S. Small Cap 2.1%	Cash 1.2%
U.S. Interm Bds 2.4%	U.S. Large Cap -14.7%	Intl Dev Stocks -25.4%	EM Stocks -12.9%	Midstrm Energy -7.8%	U.S. Large Cap -9.1%	Commodities -19.5%	U.S. Small Cap -20.5%	U.S. Interm Bds 4.1%	U.S. Small Cap -1.6%	Intl Dev Stocks -43.4%	U.S. Interm Bds 5.9%	U.S. Muni Bds 3.1%	Intl Dev Stocks 0.2%	Commodities -1.1%
EM Stocks -27.2%	U.S. Small Cap -30.9%	U.S. Large Cap -26.5%	Gold -25.2%	Intl Dev Bonds -8.8%	Intl Dev Stocks -14.2%	Intl Dev Stocks -21.4%	U.S. Large Cap -22.1%	Cash 1.0%	U.S. REITs -16.8%	EM Stocks -53.3%	Cash 0.1%	Cash 0.1%	U.S. Large Cap -0.3%	Intl Dev Bonds -1.3%

- U.S. 60/40
- U.S. Large Cap
- U.S. Small Cap
- Intl Dev Stocks
- Emerging Stocks
- U.S. Municipal Bonds
- U.S Int-Term Bonds
- U.S. High Yield Bds
- Intl Dev Bonds
- U.S. REITs
- Commodities
- Gold
- Midstream Energy
- Cash

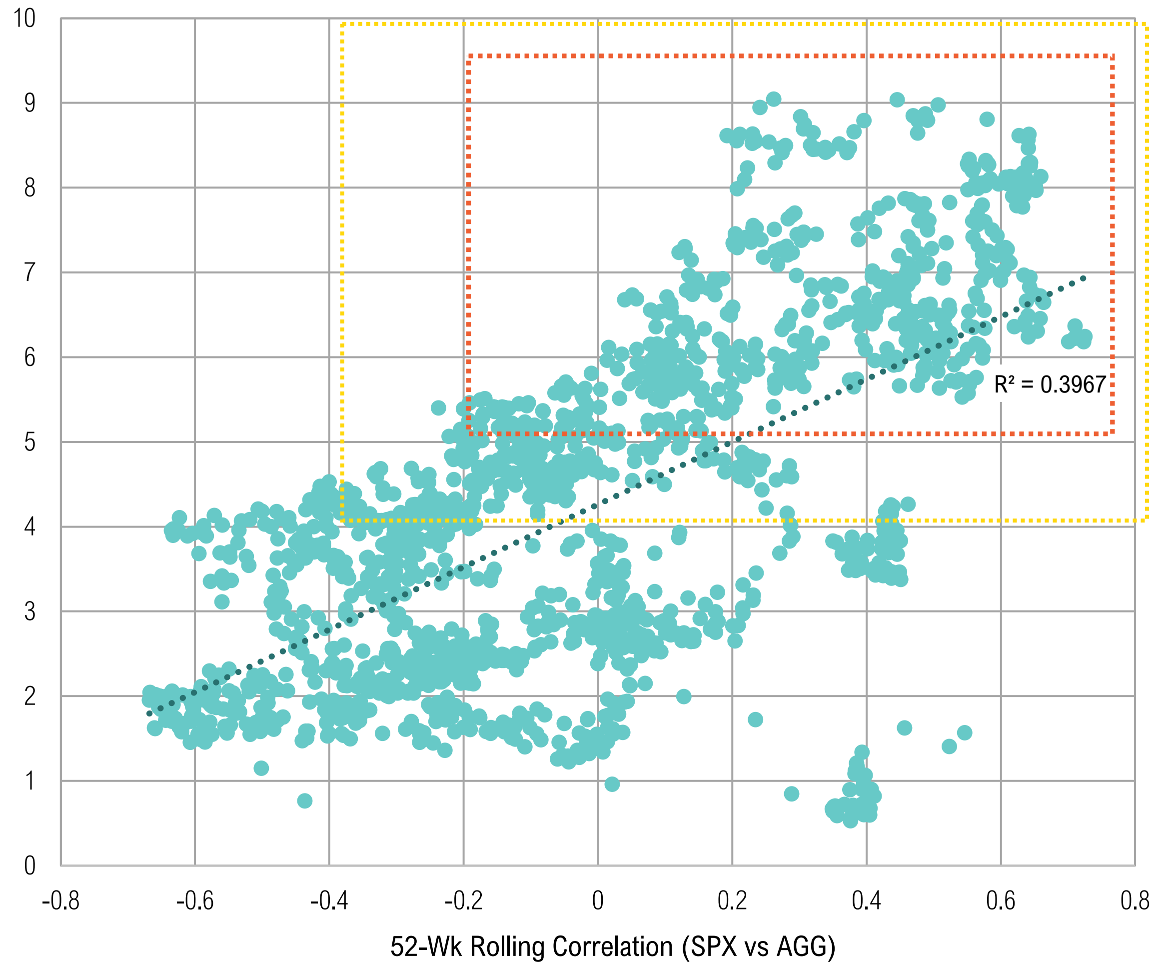
Source: Bloomberg, SpringTide. See disclosures for asset class, index and portfolio definitions. Returns are gross of fees. It is not possible to invest directly in an index. **Geometric average calculated on the years included to the left. Returns for periods longer than 1 year are annualized.

Stocks and bonds have remained correlated despite volatility in bonds yields, but yields and correlations are at a key inflection point (~4%)

52-Wk Rolling Correlation (SPX vs AGG) U.S. 10-Year Treasury Yield, %

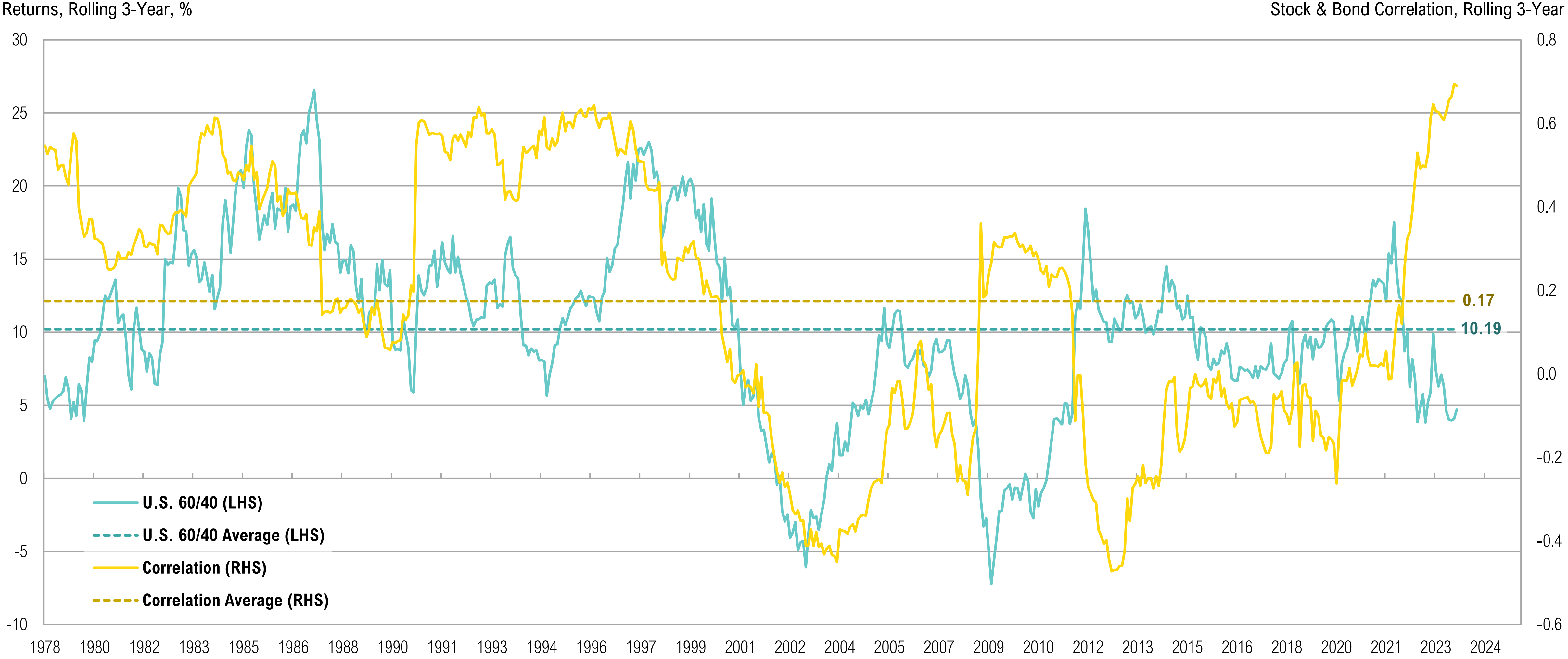


U.S. 10-Year Treasury Yield, %



Source: Bloomberg, SpringTide.

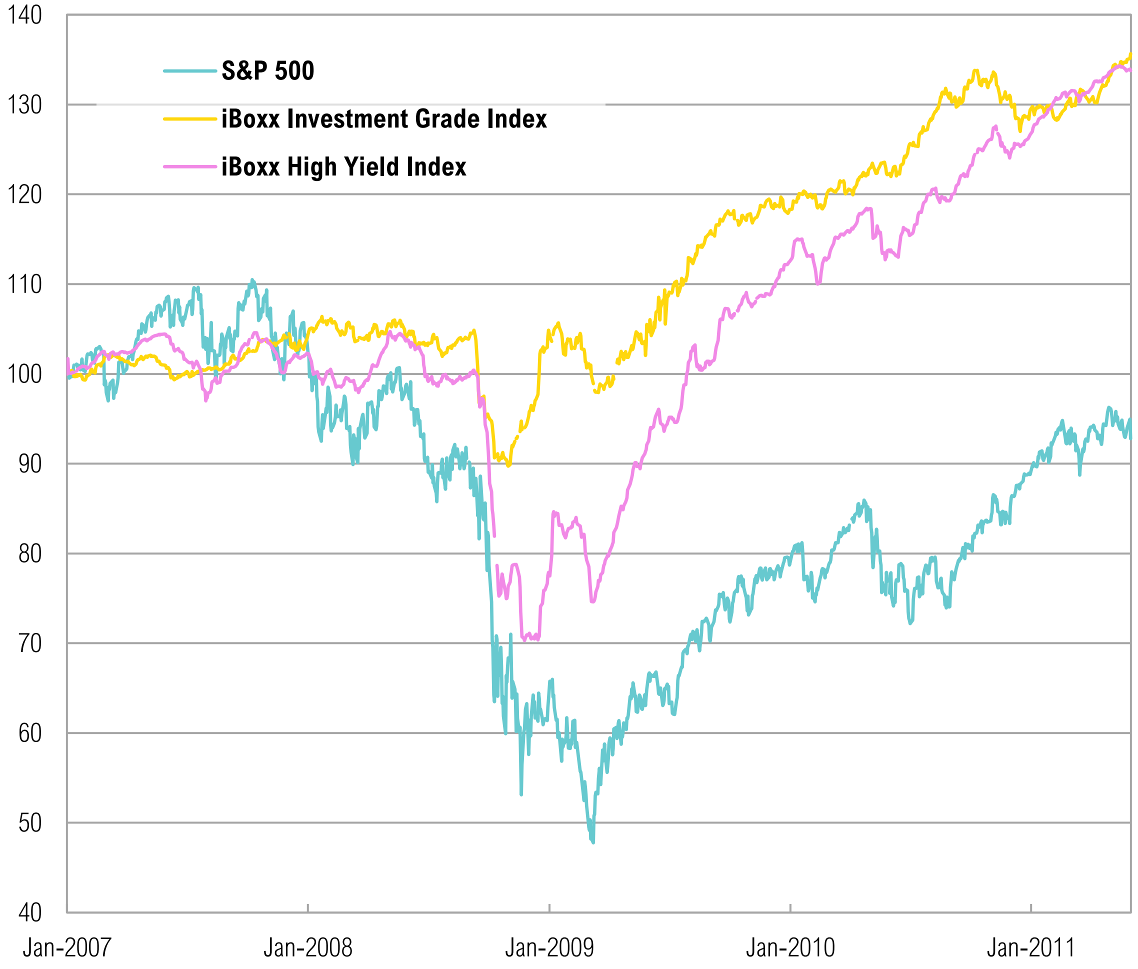
The near record-high correlation between stocks and bonds means higher yields could hurt stocks and vice versa



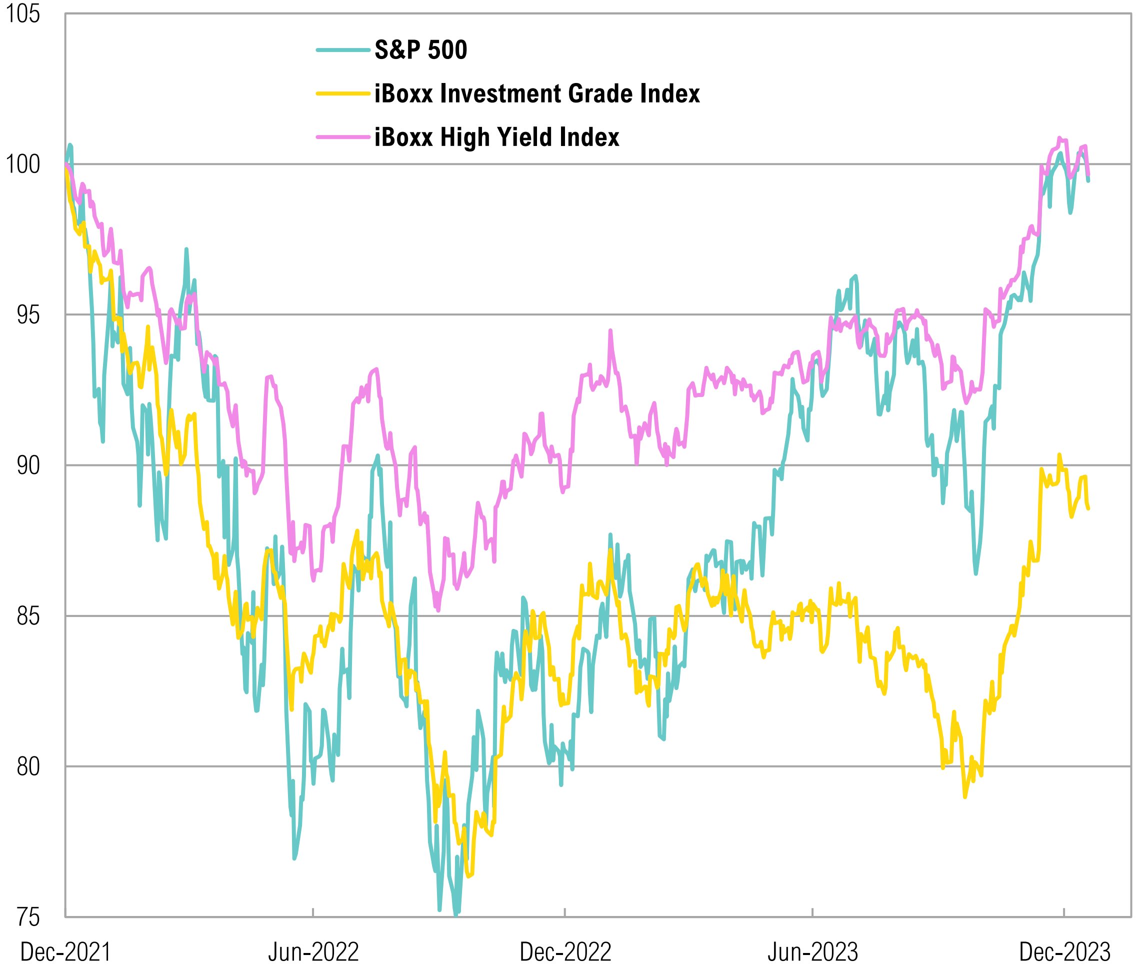
Source: Bloomberg. U.S. 60/40 consists of 60% S&P 500 TR Index and 40% Bloomberg U.S Aggregate Bond TR Index.

Credit tends to lead equities on the way out of bear markets; the rally in credit post Fed pivot continues to point to a more constructive outlook

Growth of 100, 1/1/2007 – 5/31/2011

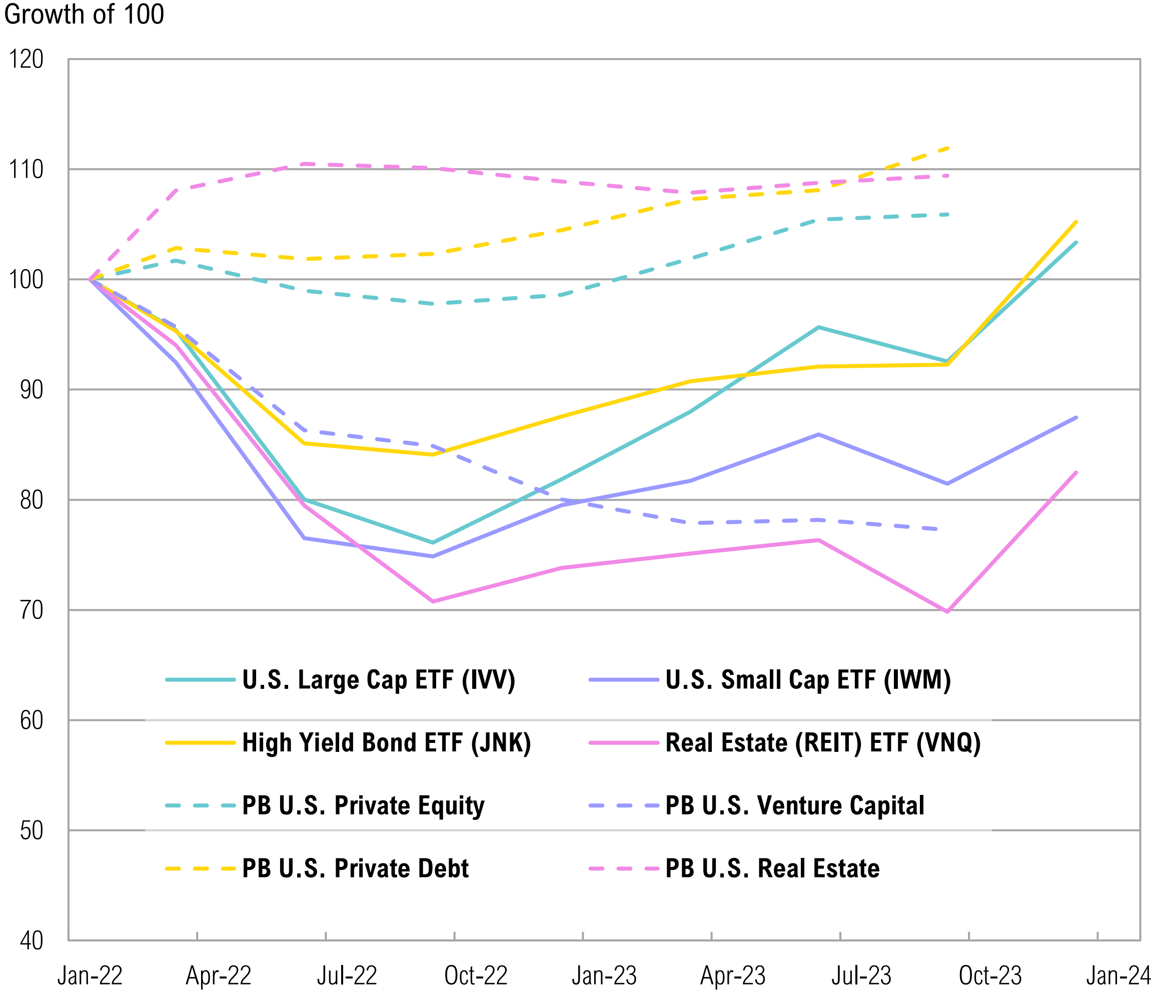


Growth of 100, 1/1/2022 – 1/17/2024



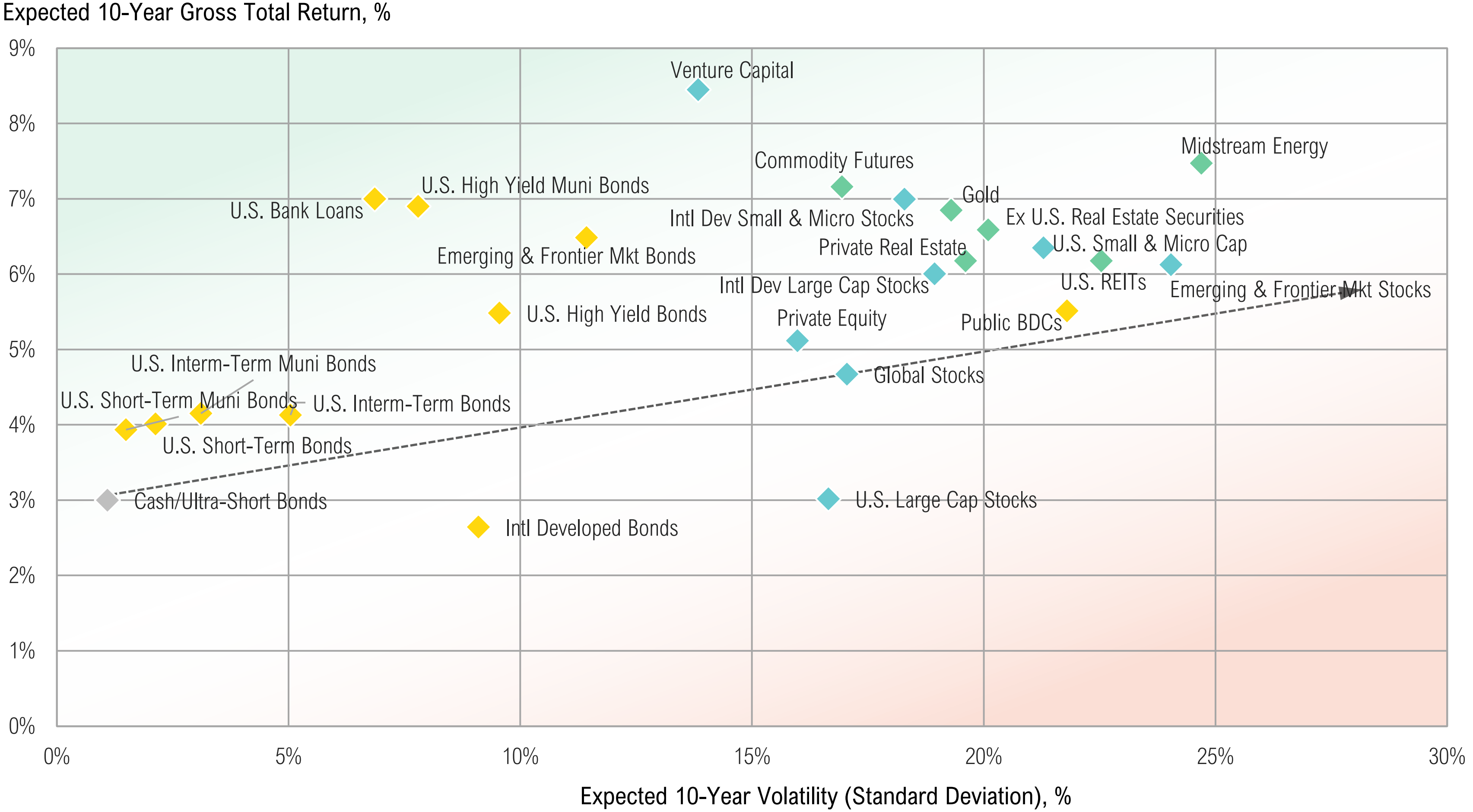
Source: Bloomberg

Outside of venture and debt, private market funds have disconnected from public market returns



Source: Pitchbook, Bloomberg; Private market data as of 9/30/2023. Large Cap ETF = IVV; Small Cap ETF = IWM; High Yield ETF = JNK; REIT ETF = VNQ. Portfolio weights for portfolio include 40% PE/Large Cap, 10% VC/Small Cap, 20% PRE/REITs, 30% Private Debt/High Yield.

Expected 10-year returns for both stocks and bonds fell as equities rallied and yields fell; muni bonds are no longer attractive on an after-tax basis



	Δ vs. Last Qtr Exp Rets (10 Yr)	12/31/2023 Exp Rets (10 Yr)
Equity		
U.S. Large Cap Stocks	-1.0%	3.0%
U.S. Small & Micro Cap	-0.5%	6.3%
Intl Dev Large Cap Stocks	-0.4%	6.0%
Intl Dev Small & Micro Stocks	0.0%	7.0%
Emerging & Frontier Mkt Stocks	-1.1%	6.1%
Global Stocks	-0.8%	4.7%
Private Equity	-1.0%	5.1%
Venture Capital	-0.5%	8.4%
Fixed Income & Credit		
U.S. Interm-Term Muni Bonds†	-1.8%	4.2%
U.S. Short-Term Muni Bonds†	-1.7%	3.9%
U.S. High Yield Muni Bonds†	-1.1%	6.9%
U.S. Interm-Term Bonds	-0.7%	4.1%
U.S. Short-Term Bonds	-0.8%	4.0%
U.S. High Yield Bonds	-1.4%	5.5%
U.S. Bank Loans	0.1%	7.0%
Intl Developed Bonds	-0.6%	2.6%
Emerging & Frontier Mkt Bonds	-1.3%	6.5%
Public BDCs	0.3%	5.5%
Private Credit	-1.4%	7.5%
Real Assets & Infrastructure		
U.S. REITs	-0.8%	6.2%
Ex U.S. Real Estate Securities	-0.4%	6.6%
Private Real Estate	-0.8%	6.2%
Commodity Futures	-0.2%	7.2%
Midstream Energy	-0.3%	7.5%
Gold	0.0%	6.9%
Private Energy & Infrastructure	-0.3%	9.3%
Opportunistic		
Long-Short Equity	-0.5%	5.5%
Relative Value	-0.4%	7.0%
Closed-End Funds	-0.8%	7.8%
Global Macro	-0.6%	5.4%
Insurance-Linked Securities	0.0%	6.9%
Digital Assets	-0.7%	6.0%
Cash & Cash Equivalents		
Cash & Cash Equivalents	0.0%	3.0%

[3] Estimated returns include impact of currency adjustment
† Reported on a taxable-equivalent basis assuming 35% marginal tax rate.

Source: Bloomberg, CA, Pitchbook, Morningstar, NAREIT, SpringTide calculations.

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Asset Class	Benchmark	Index	Start Date	End Date	Data Source
U.S. Large Cap Stocks	S&P 500 Index	S&P 500 TR Index	01/31/1970	n/a	Bloomberg, Ibbotson Associates, NYU/Stern
		IA SBBI US Large Stock TR Index	01/31/1926	12/31/1969	
		NYU/Stern S&P 500 TR	01/31/1920	12/31/1925	
U.S. Small & Micro Cap	Russell 2000 TR Index	Russell 2000 TR Index	01/31/1979	n/a	Bloomberg, Ibbotson Associates, SpringTide
		IA SBBI US Small Stock TR Index	01/31/1926	12/31/1978	
		SpringTide U.S. Small & Micro Cap Premium-Based Extension	01/31/1920	12/31/1925	
Intl Dev Stocks	MSCI EAFE NR Index	MSCI EAFE NR Index	01/31/1970	n/a	MSCI, NYU/Stern
		NYU/Stern Developed World Indices	01/31/1920	12/31/1969	
EM & Frontier Stocks	MSCI Emerging Markets NR Index	MSCI Emerging Markets NR Index	01/31/2001	n/a	MSCI, NYU/Stern
		NYU/Stern Emerging World Index (Price)	01/31/1920	12/31/2000	
Global Stocks	MSCI ACWI NR Index	MSCI ACWI NR Index	01/31/2001	n/a	MSCI, NYU/Stern
		NYU/Stern All World Index (Price)	01/31/1920	12/31/2000	
Venture Capital	Cambridge Venture Capital	Cambridge Venture Capital	01/01/1981	n/a	Cambridge, SpringTide
		SpringTide Venture Capital Premium-Based Extension	01/31/1920	12/31/1980	
U.S. Muni Bonds	Bloomberg Municipal 1-10Y Blend 1-12Y TR Index	Bloomberg Municipal 1-10Y Blend 1-12Y TR Index	07/31/1993	n/a	Bloomberg
		USA Municipal AAA Bonds Total Return Index (TRUSAMUM)	01/31/1920	06/30/1993	
U.S. Long-Term Bonds	Bloomberg US Long Gov/Corp TR Index	Bloomberg US Long Gov/Corp TR Index	02/28/1999	n/a	Bloomberg, NYU/Stern
		NYU/Stern US 30Yr Government Bond TR Index	01/31/1920	01/31/1999	
U.S. Interm-Term Bonds	Bloomberg US Aggregate Bond TR Index	Bloomberg US Aggregate Bond TR Index	01/31/1976	n/a	Bloomberg, NYU/Stern
		NYU/Stern US Total Return AAA Corporate Bond Index	01/31/1920	12/31/1975	
U.S. High Yield Bonds	Bloomberg US Corporate High Yield TR Index	Bloomberg US Corporate High Yield TR Index	07/31/1983	n/a	Bloomberg, Ibbotson Associates, SpringTide
		IA Bloomberg US HY Corporate Bonds	02/28/1926	06/30/1983	
		SpringTide U.S. High Yield Bonds Premium-Based Extension	01/31/1920	01/31/1926	
Intl Dev Bonds	Bloomberg Global Aggregate ex-USD TR Index	Bloomberg Global Aggregate ex-USD TR Index	01/31/1990	n/a	Bloomberg, NYU/Stern
		NYU/Stern All World ex-USA Government Bond Index	01/31/1920	12/31/1989	
U.S. REITs	MSCI US REIT GR Index	MSCI US REIT GR Index	01/01/1995	n/a	Bloomberg, Winans
		Winans US Real Estate Index (WIREI)	01/01/1920	12/31/1994	
Commodity Futures	Bloomberg Commodity TR Index	Bloomberg Commodity TR Index	01/31/1991	n/a	Bloomberg
		Thompson Jefferies CRB Core Commodity Total Return Index	01/31/1920	12/31/1990	
Midstream Energy	Alerian MLP TR Index	Alerian MLP TR Index	01/31/1996	n/a	Alerian, Bloomberg
		S&P 500 Energy Index	01/31/1946	12/31/1995	
		ExxonMobil Corp (XOM)	01/31/1920	12/31/1945	
Gold	LBMA Gold Price	LBMA Gold Price	02/29/1968	n/a	LBMA, Bloomberg
		New York Spot Bullion	01/31/1920	01/31/1968	
Cash/Ultra-Short Bonds	Bloomberg US T-Bill 1-3 Month TR Index	Bloomberg US T-Bill 1-3 Month TR Index	12/31/1991	n/a	Bloomberg, NYU/Stern
		NYU/Stern USA Total Return T-Bill Index	01/31/1920	11/30/1991	

Asset Class Benchmarks

Asset class performance was measured using the following benchmarks:

U.S. Large Cap Stocks: S&P 500 TR Index

U.S. Small & Micro Cap Stocks: Russell 2000 TR Index

Intl Dev Large Cap Stocks: MSCI EAFE GR Index

Intl Dev Small & Micro Stocks: MSCI EAFE GR Index

Emerging & Frontier Market Stocks: MSCI Emerging Markets GR Index

Global Stocks: MSCI ACWI GR Index

Private Equity: Cambridge Associates U.S. Private Equity

Venture Capital: Cambridge Associates U.S. Venture Capital

U.S. Interm-Term Muni Bonds: Bloomberg Barclays 1-10 (1-12 Yr) Muni Bond TR Index

U.S. High Yield Muni Bonds: Bloomberg Barclays High Yield Muni TR Index

U.S. Interm-Term Bonds: Bloomberg Barclays U.S. Aggregate Bond TR Index

U.S. High Yield Bonds: Bloomberg Barclays U.S. Corporate High Yield TR Index

U.S. Bank Loans: S&P/LSTA U.S. Leveraged Loan Index

Intl Developed Bonds: Bloomberg Barclays Global Aggregate ex-U.S. Index

Emerging & Frontier Market Bonds: JPMorgan EMBI Global Diversified TR Index

Public BDCs: S&P BDC Index

U.S. REITs: MSCI U.S. REIT GR Index

Ex U.S. Real Estate Securities: S&P Global Ex-U.S. Property TR Index

Private Real Estate: Cambridge Associates Real Estate

Commodity Futures: Bloomberg Commodity TR Index

Midstream Energy: Alerian MLP TR Index

Gold: LBMA Gold Price

Long-Short Equity: HFRI Equity Hedge Index

Global Macro: HFRI Macro-CTA Index

Relative Value: HFRI Relative Value Index

Closed-End Funds: S-Network Composite Closed-End TR Index

Insurance-Linked Securities: SwissRe Global Cat Bond TR Index

Digital Assets: MVIS CryptoCompare Digital Assets 25 Index

Cash & Cash Equivalents: Bloomberg Barclays U.S. T-Bill 1-3 Month TR Index

U.S. Short-Term Muni Bonds: Bloomberg Barclays Municipal 1-3 Yr TR Index

U.S. Short-Term Bonds: Bloomberg Barclays U.S. Agg 1-3 Yr TR Index

U.S. 60/40: 60% S&P 500 TR Index 40% Bloomberg Barclays U.S. Aggregate Bond TR Index

Global 60/40: 60% MSCI ACWI GR Index 40% Bloomberg Barclays Global Aggregate Bond TR Index

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