



Market insights

Second quarter 2023



BOK Financial Investment Management

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Investment advisory and consulting

Research and analytics that build the foundation for investment services offered by BOK Financial.

- Asset allocation research.
- Manager selection and due diligence.
- Outsourced CIO services.
- Investment consulting.
- Managed accounts.
- Multi-asset solutions.

Caval Hill Investment Management
Asset management

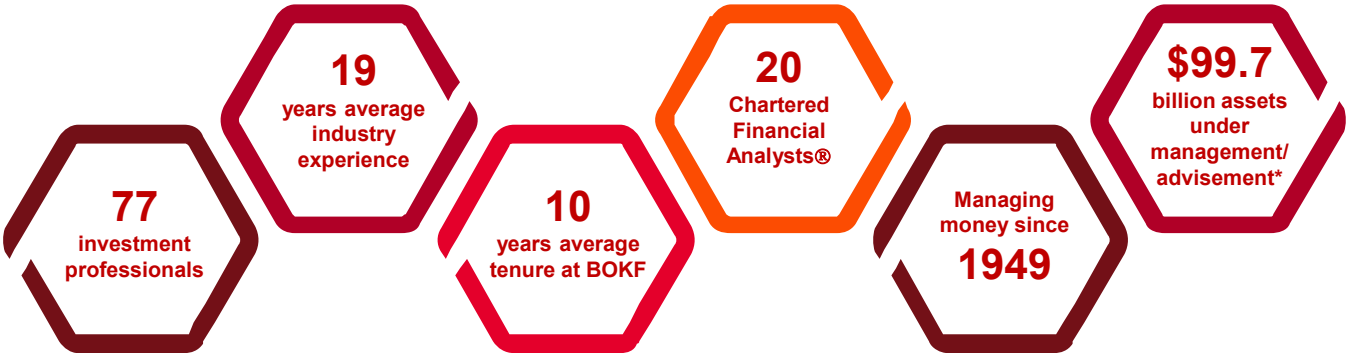
A registered investment advisor and subsidiary of BOKF, NA. Fundamental and quantitative research across the capital markets.

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- Tax-free fixed income.
- Cash management.
- Domestic equity.
- Energy.
- Opportunistic strategies.

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- Real assets.
- Hedge funds.
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- Liquid alternatives.



*The Investment Management team is part of the BOK Financial Wealth Management division, which had \$99.7 billion in assets under management and custody as of 12/31/2022.

Key points

1

Following a growth rebound in the second half of 2022, we expect growth to decelerate significantly as the Federal Reserve's rate hikes impact financial conditions.

2

Consumers continue to support economic growth as they benefit from a strong job market and excess COVID-era stimulus savings.

3

Financial markets have consistently underestimated the stickiness of inflation. The Federal Reserve will likely hold financial conditions tight to ensure inflation slows.

4

Equity markets appear to be pricing in a soft landing or the near miraculous no-landing, even as EPS estimates and margins are falling.

5

An economic recession is not priced into financial markets, and with limited upside to current equity valuations, we remain cautious on equities. Fixed-income markets offer pockets of opportunity.

Base case outlook



Economy

Economic growth continues to slow, and recession odds increase.

Risks: Russia-Ukraine war expands, tighter lending standards slow growth significantly.



Policy

The Federal Reserve is nearing the end of its tightening cycle. Fiscal policy support is unlikely.

Risk: Persistent inflation takes rates higher, debt ceiling talks break down.



Markets

Bond markets offer attractive yield but low spreads. Equities remain volatile as earnings are a risk.

Risk: The potential for a global recession leads to earnings collapse.



State of the economy

1

Economic deceleration

2

Strong consumer

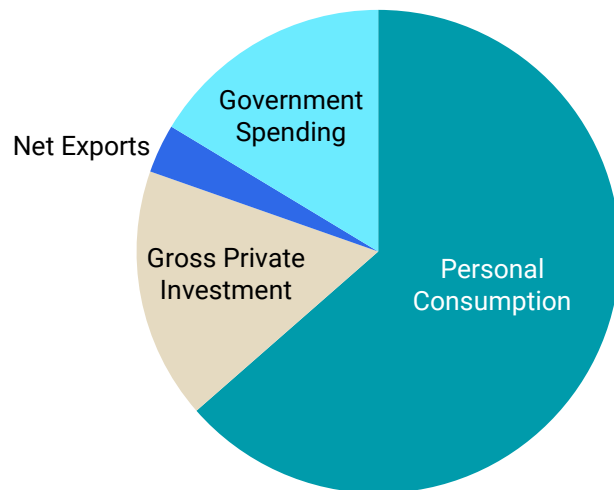
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Sticky inflation

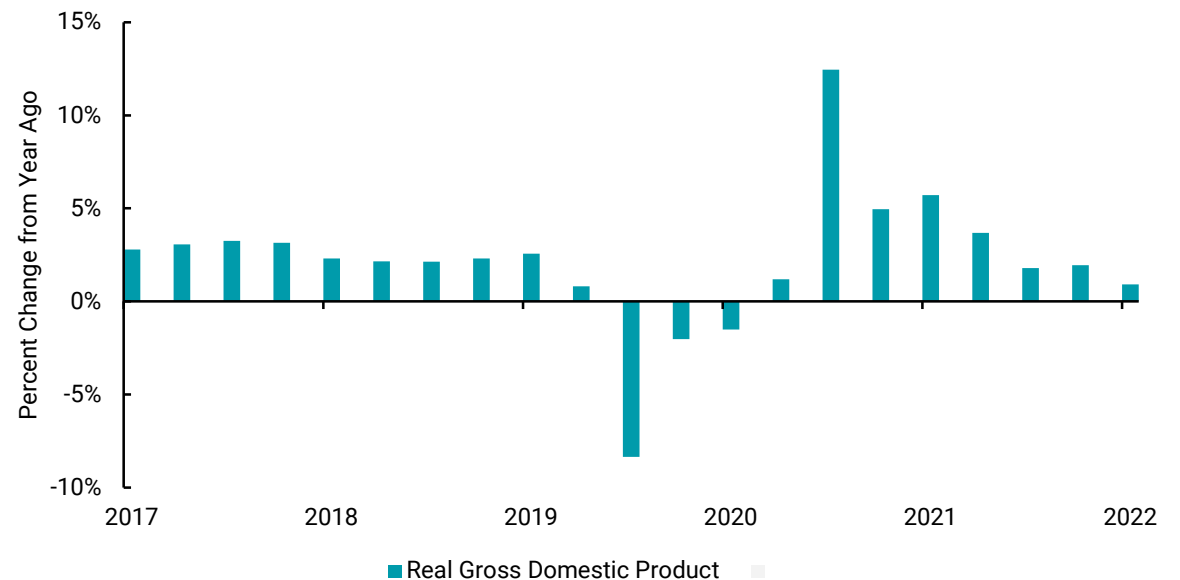
GDP - Cool the economy to stop inflation

- Growth re-accelerated beginning in the summer of 2022 despite the Federal Reserve raising rates.
- A strong jobs market and excess COVID savings fueled consumer spending, buoying the economy.
- GDP growth should decelerate significantly in 2023 as Fed tightening impacts the economy with a lag and as excess consumer savings is depleted.

Composition of GDP

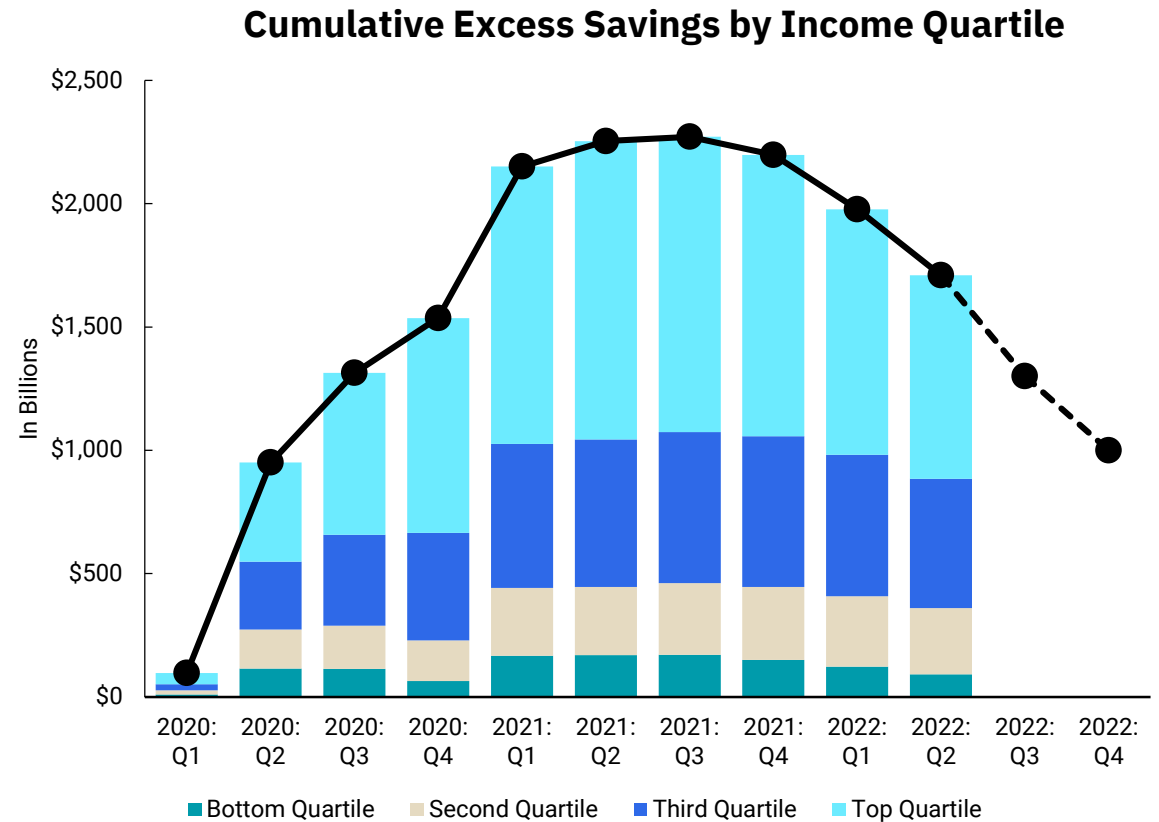


Real Gross Domestic Product



Consumer - Excess savings being spent

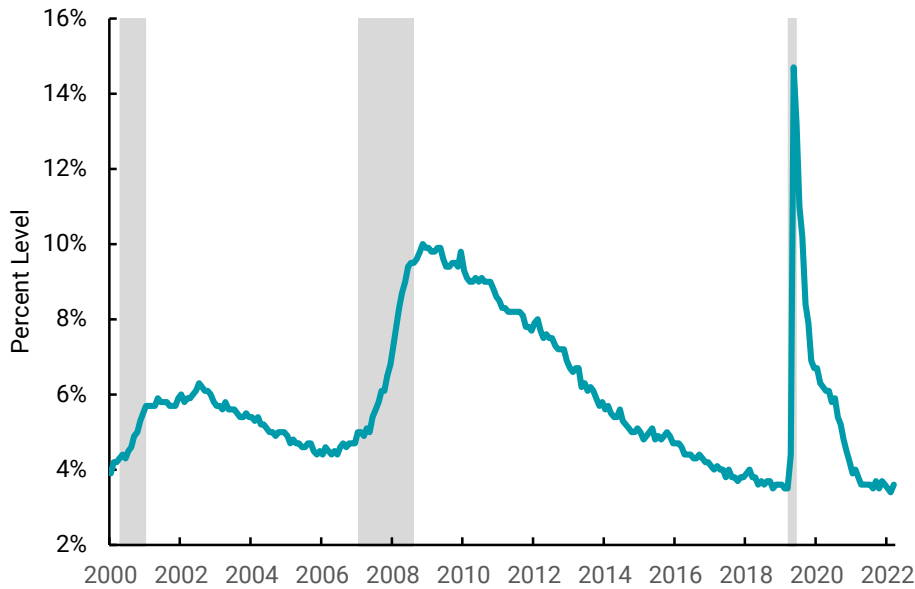
- At its peak, consumers had over \$2 trillion in excess savings.
- The lower end of U.S. incomes have spent all stimulus and are increasing credit card debt.
- As we approach mid-2023, excess savings are likely to be depleted.
- A slowing consumer is one factor that may lead to a decelerating economy in 2023.



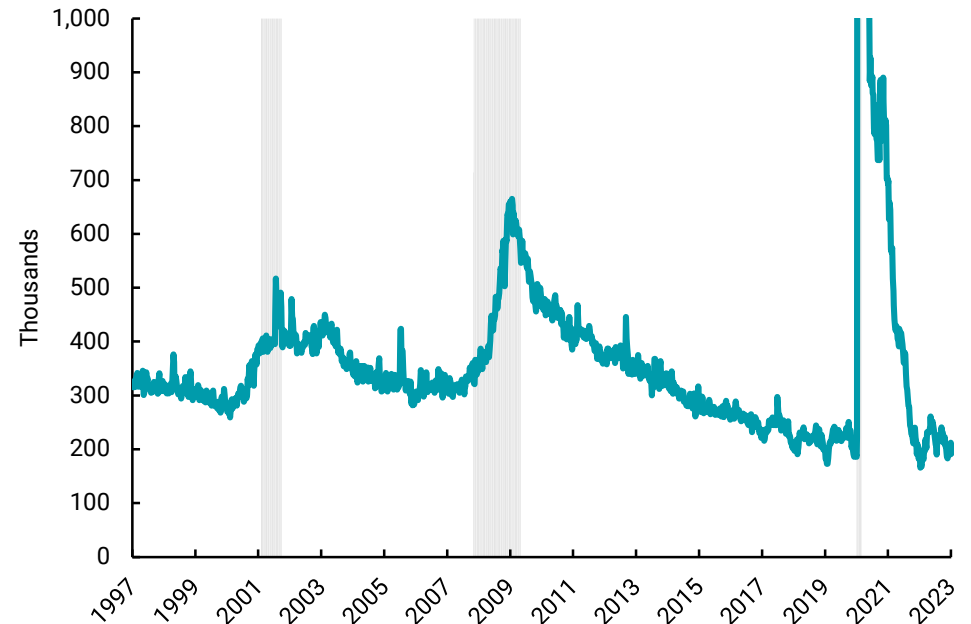
Consumer - Job market

- The labor market remains white-hot with unemployment near 50-year lows.
- An unbalanced labor market, with more demand than supply, has led to wage gains that have fueled inflation.
- Demand remains particularly strong in services where many businesses still have not returned to pre-COVID staffing levels.

U.S. Unemployment Rate



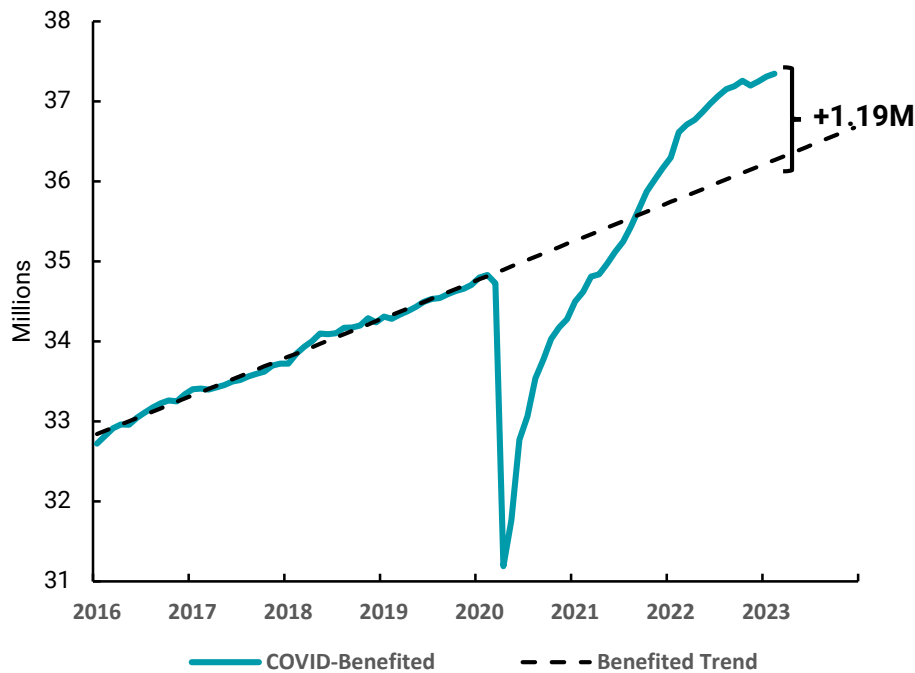
U.S. Initial Jobless Claims



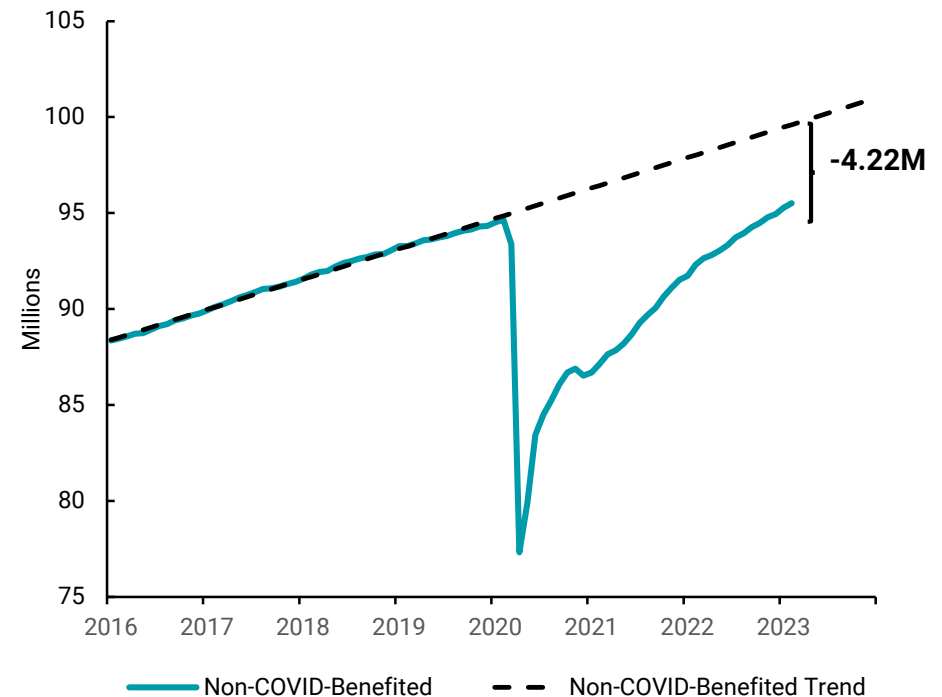
Consumer - Job market is bifurcated

- Recent layoff announcements have been primarily in COVID- benefited sectors where employment remains above trend.
- Businesses that did not benefit from COVID remain below trend, which puts upward pressure on wages and drives inflation higher.

U.S. Payroll Employment COVID Benefited Sectors



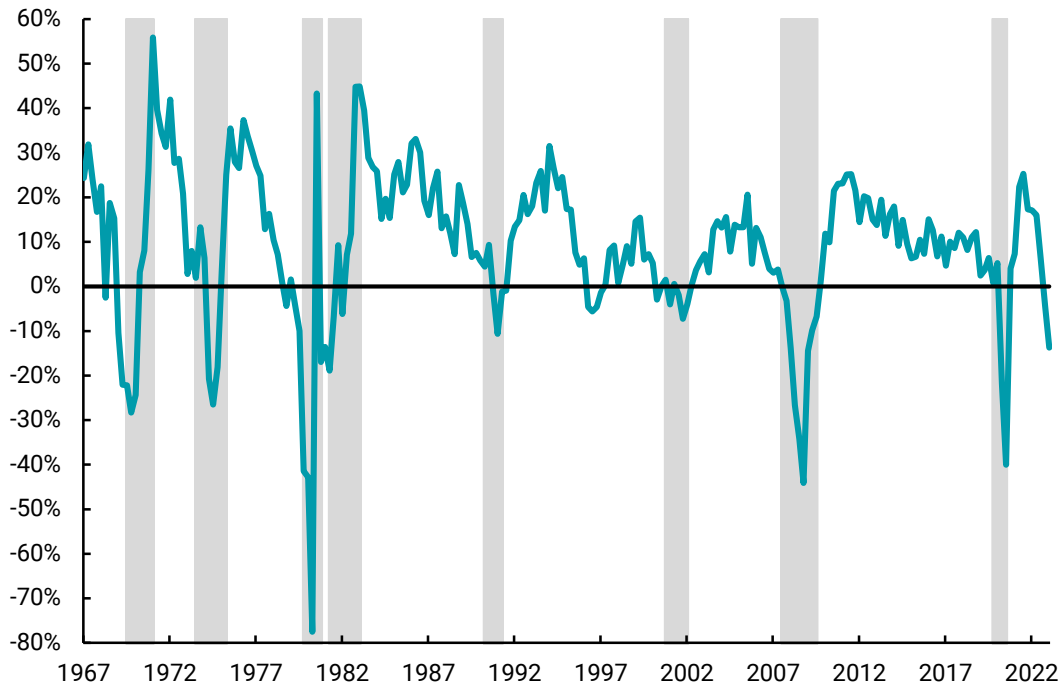
U.S. Payroll Employment Non-Benefited Sectors



Consumer - Liquidity declining

- As consumers spend down their excess savings, they're replacing that spending with credit cards.
- U.S. banks are becoming less willing to lend to consumers.
- Tighter access to credit is associated with past recessions.

U.S. Bank Willingness to Lend to Consumers



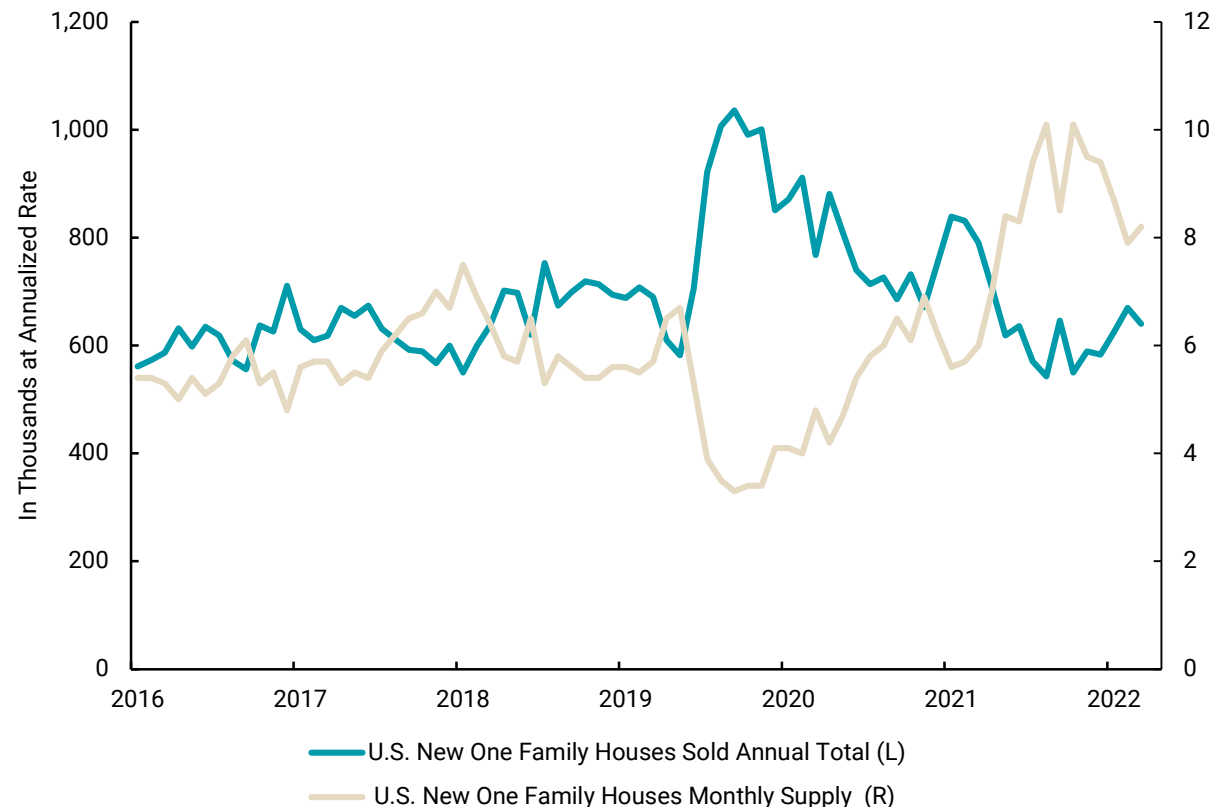
Credit Card Balances



Investment – Housing is a wildcard

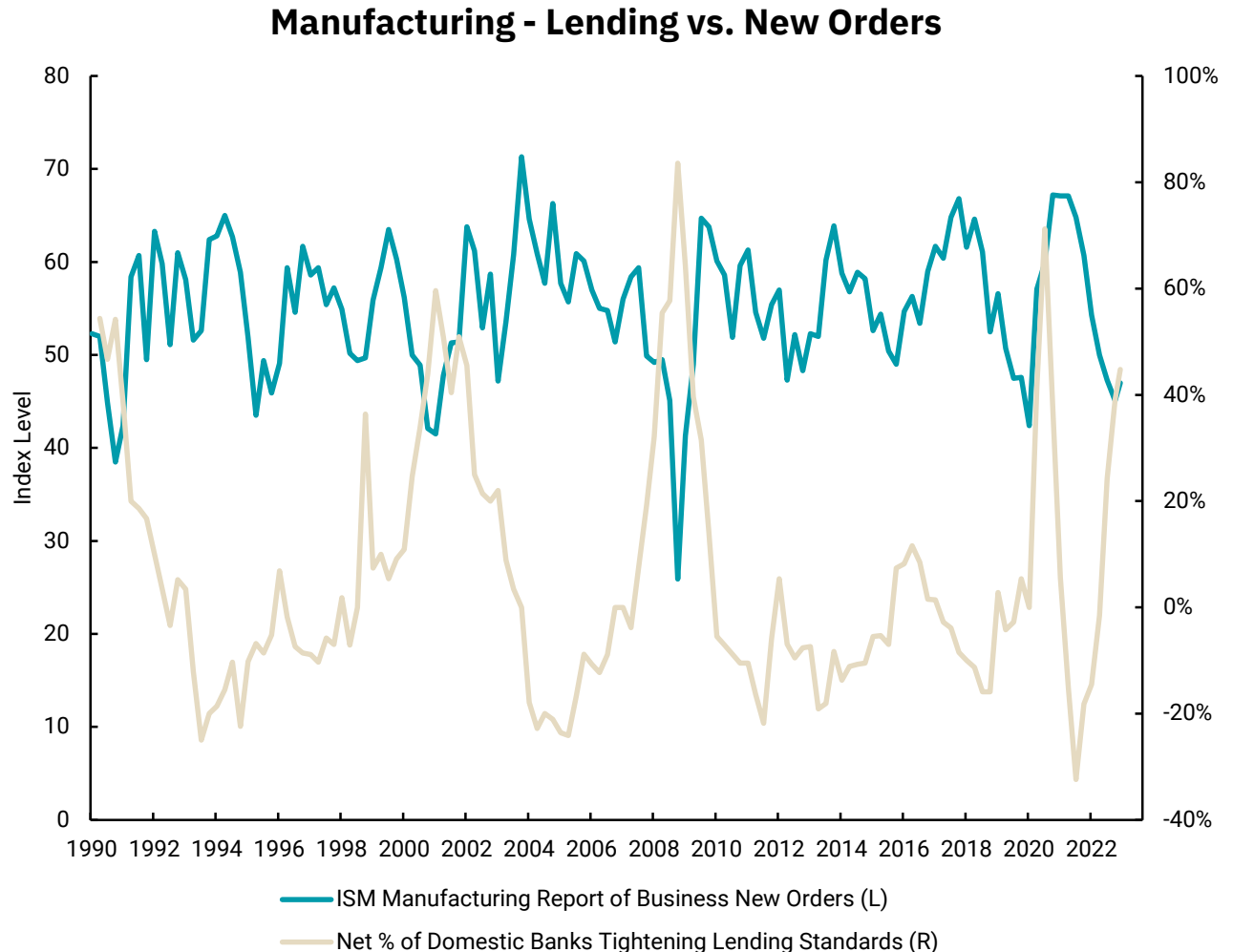
- Investment, a key component of GDP, is also showing signs of slowing. The ISM manufacturing PMI is now below 50.
- As manufacturing slows, so does the demand for labor, and the tight labor market may weaken as manufacturing slows.
- A slowdown in manufacturing, coupled with a slowing of the housing market is another headwind to growth in 2023.

U.S. New One Family Houses Sold Annual Total vs. U.S. New One Family House Sold Monthly Supply



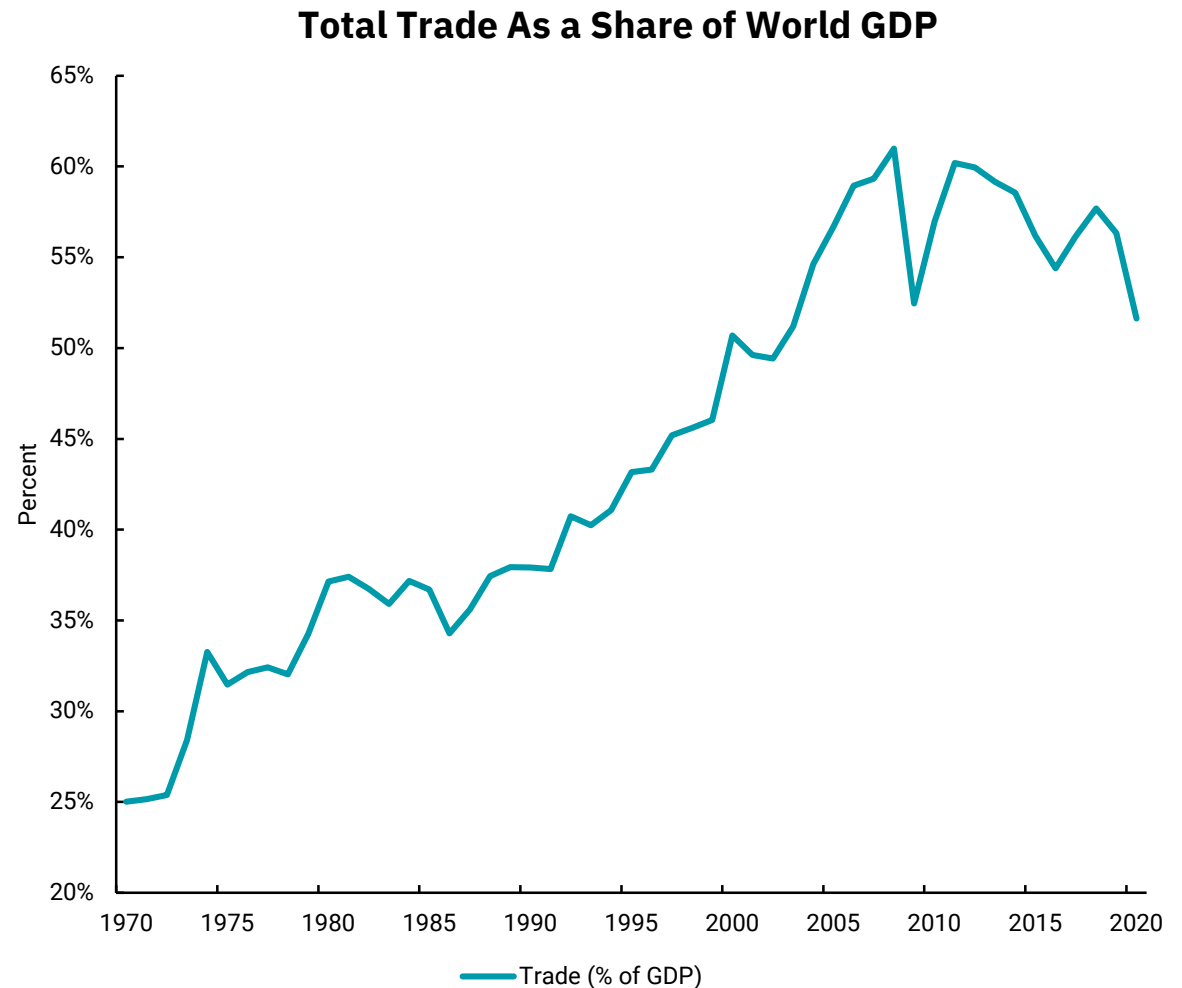
Investment – Banks see more risk

- Lending to manufacturers is also slowing. With banks concerned about a slowdown, banks are tightening lending standards for commercial and industrial loans.
- CEO confidence is approaching a low, and as a result, new investments may be deferred.
- Economic activity associated with new investments is likely to slow, another headwind to economic growth.



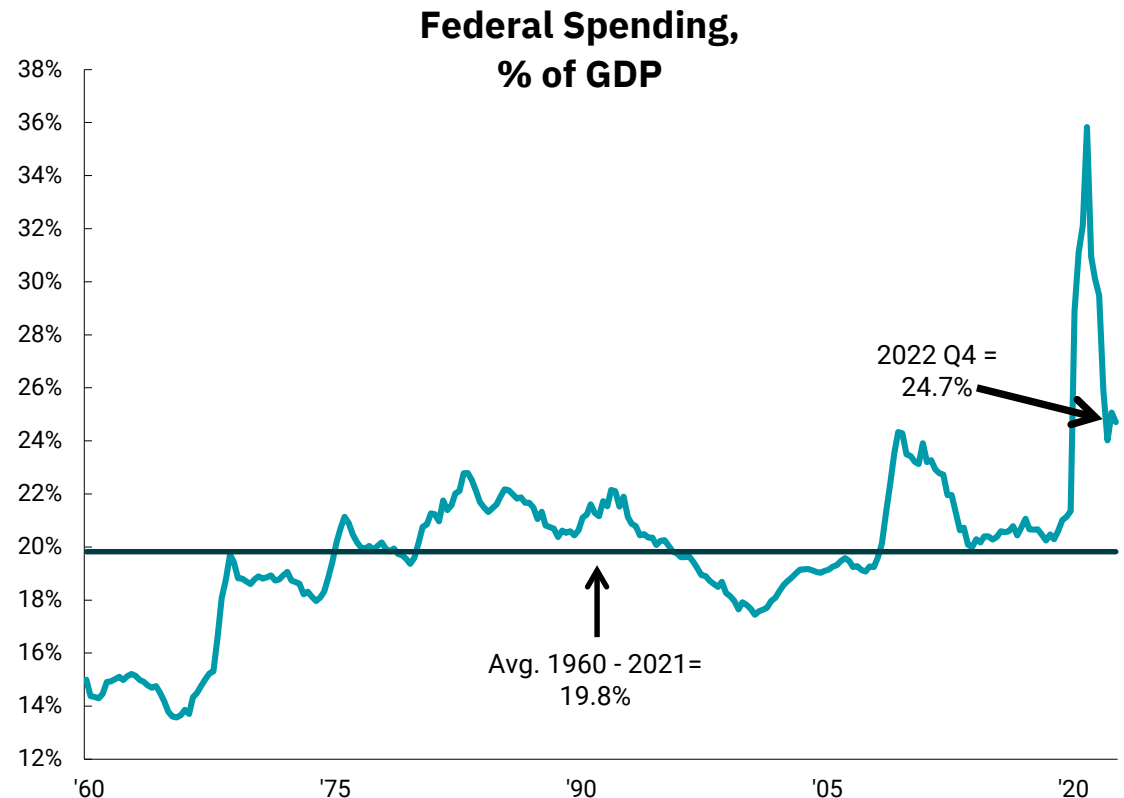
Net exports – Deglobalization

- The Russian invasion of Ukraine marks Europe's first large-scale ground war since WW2.
- President Putin and President Xi have pledged to deepen their strategic cooperation.
- Globalization, a theme present since the end of the Cold War, may have peaked.
- The United States is assessing its ability to reshore key technologies, including semiconductors and advanced technology, fueling a burgeoning trade war with China.



Government - Spending as a share of GDP

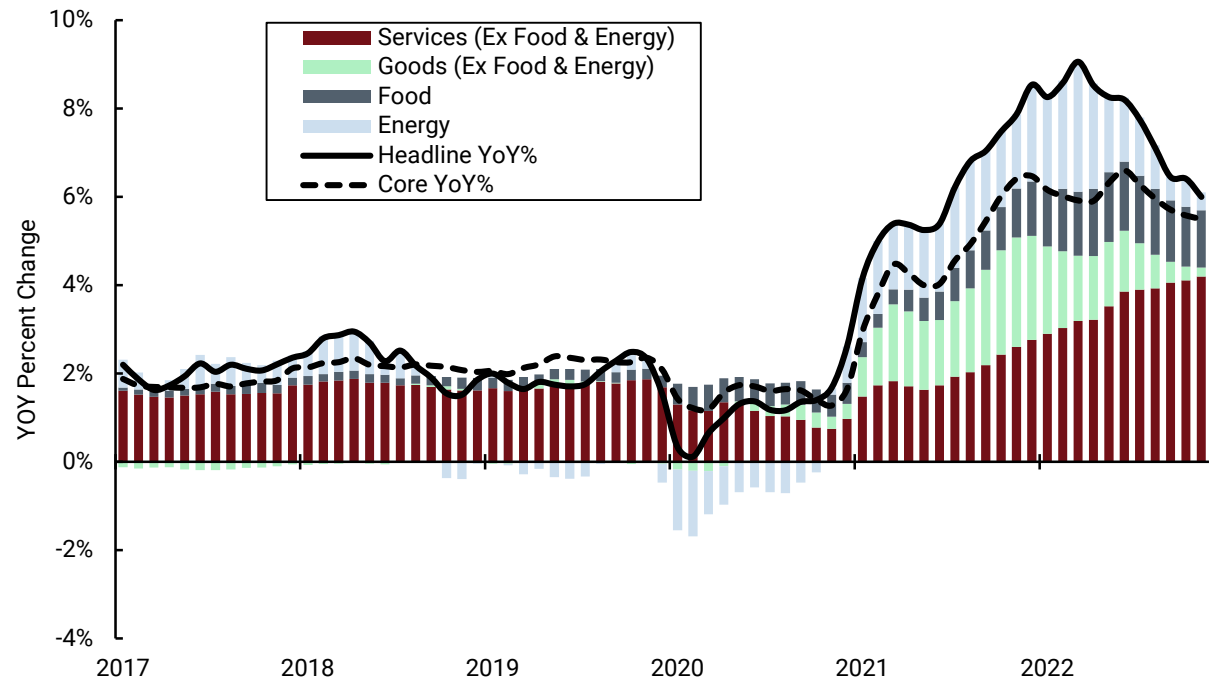
- Periods of economic stress commonly result in increased spending by the federal government.
- The increase in spending as a result of the pandemic was unprecedented.
- While spending has declined, it is still near the peak of spending during the Great Recession of 2008-2009.
- This ratio can be reduced by either reducing spending while GDP remains constant or holding spending constant while GDP grows.
- A decline in government spending may prove to be a drag on GDP in 2023.



CPI remains elevated

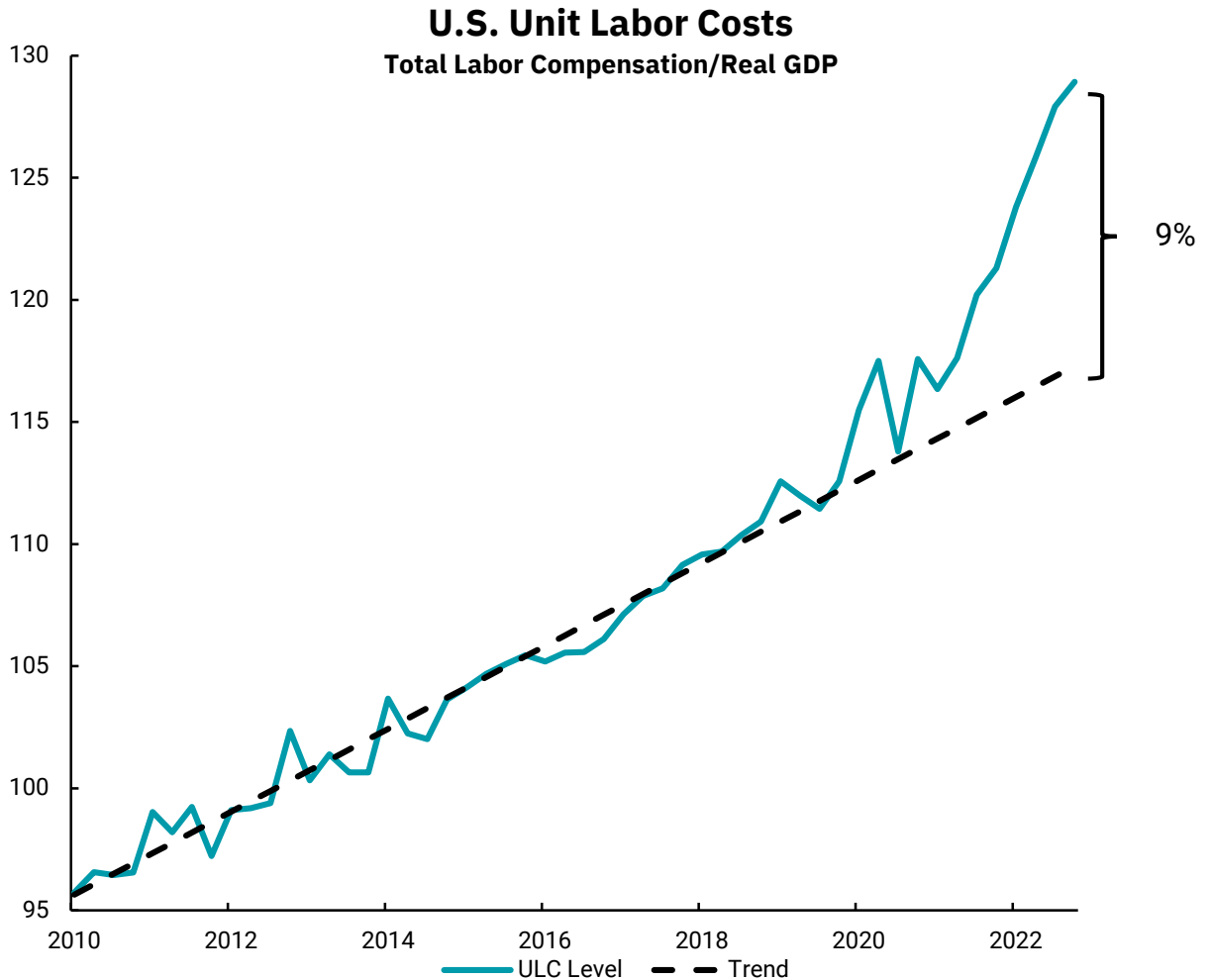
- Headline inflation is moderating but remains well above prior peaks in the past 30 years.
- Core inflation remains uncomfortably high, with wage pressure driving higher prices.
- The Federal Reserve remains committed to its 2% inflation target, and rates are running well above that level.
- The Fed will maintain its hawkish view until both current inflation abates and inflation expectations cool.

**Consumer Price Index
Headline vs. Core**



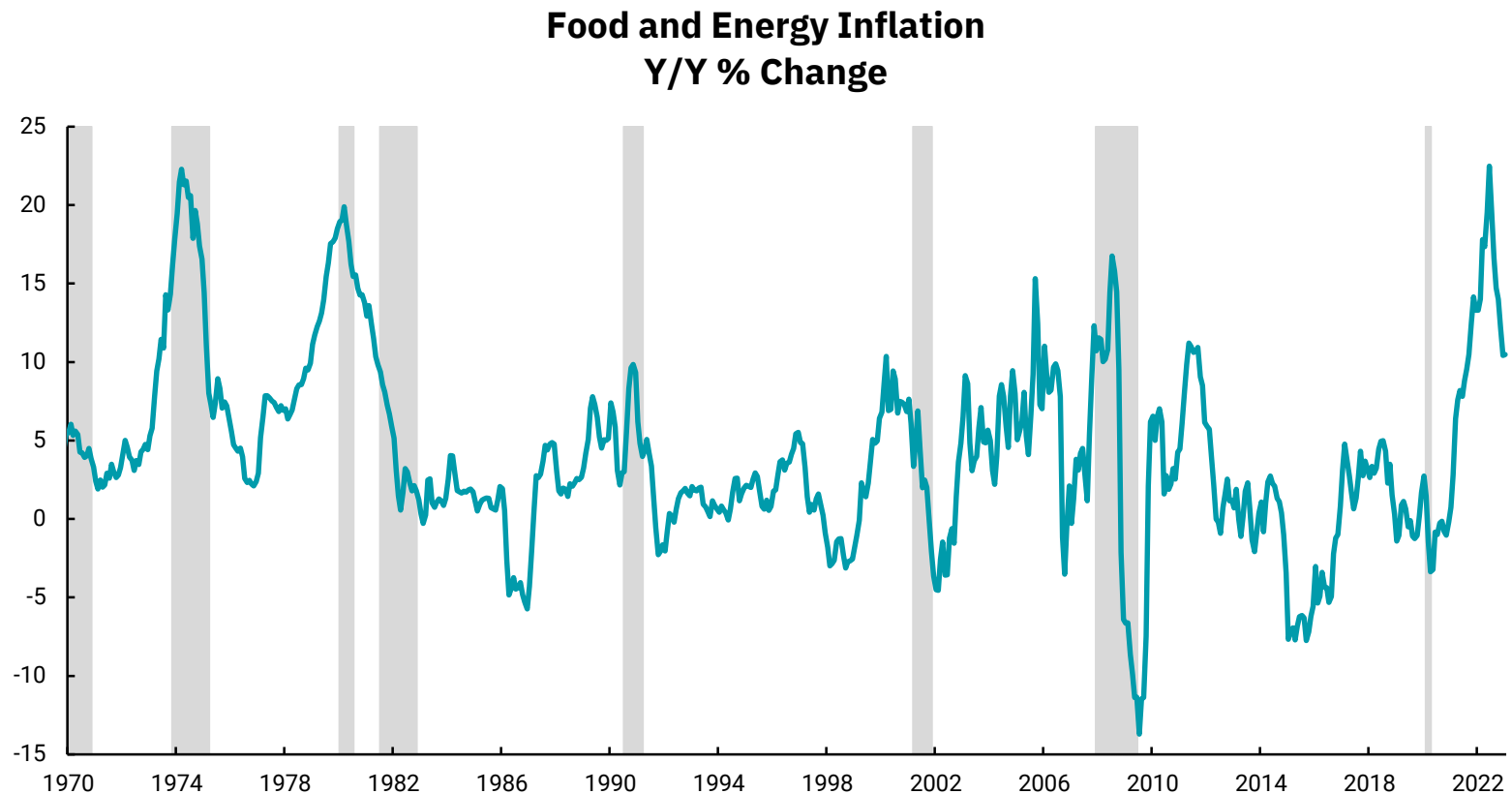
Wages could lead to sticky inflation

- Competition for workers in the job market has led to significant wage increases.
- At the same time, productivity has been negative, increasing unit labor costs.
- Higher unit labor costs mean companies raise prices or reduce margins, either of which is a drag on economic growth.
- The Federal Reserve will likely maintain tight financial conditions to stop a wage-price spiral.



Economy and inflation history

- Significant spikes in food and energy have historically led to a recession, without exception.
- Though commodity prices have fallen, risks remain in energy markets as Russian oil and gas supply is uncertain.
- Risk also remains in food commodities as both Russia and Ukraine are substantial food exporters.





Policy response

1

Tight monetary policy

2

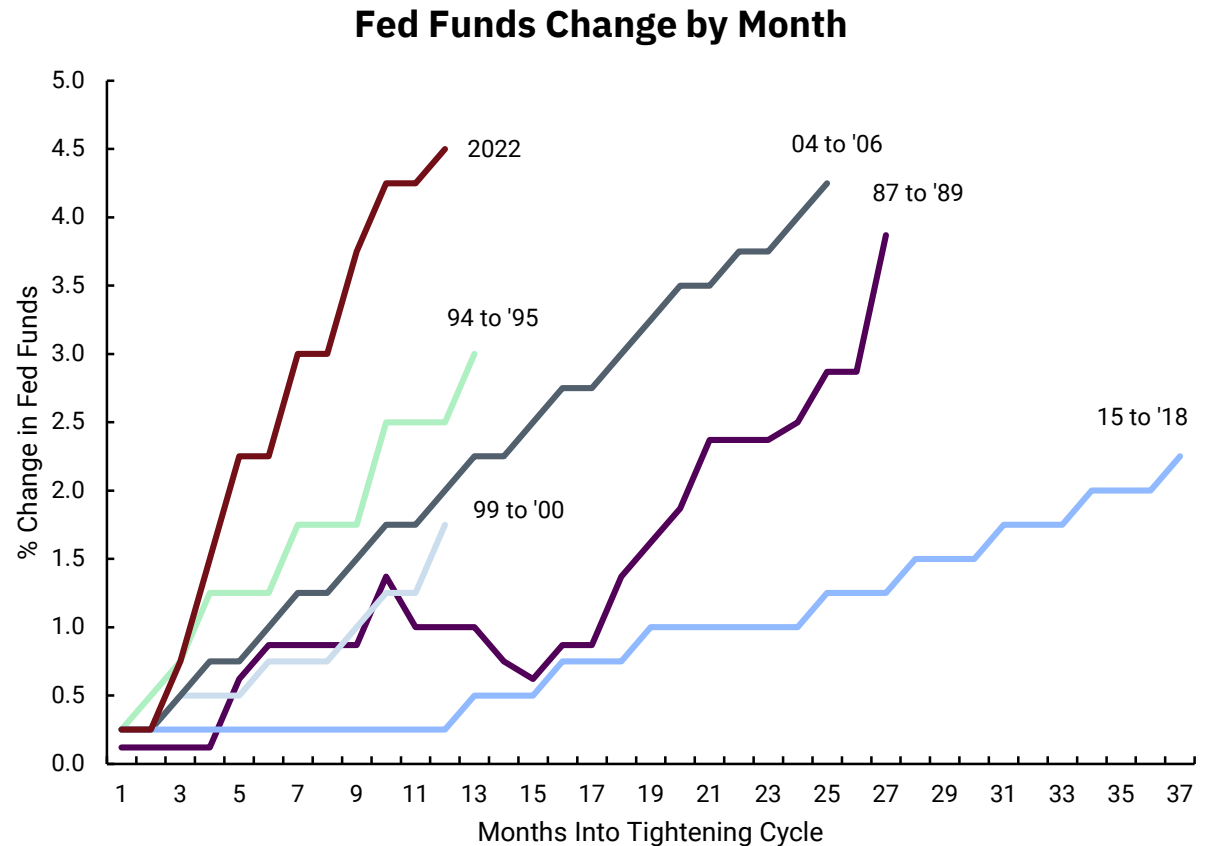
Minimal fiscal support

3

Impact of prior deficits

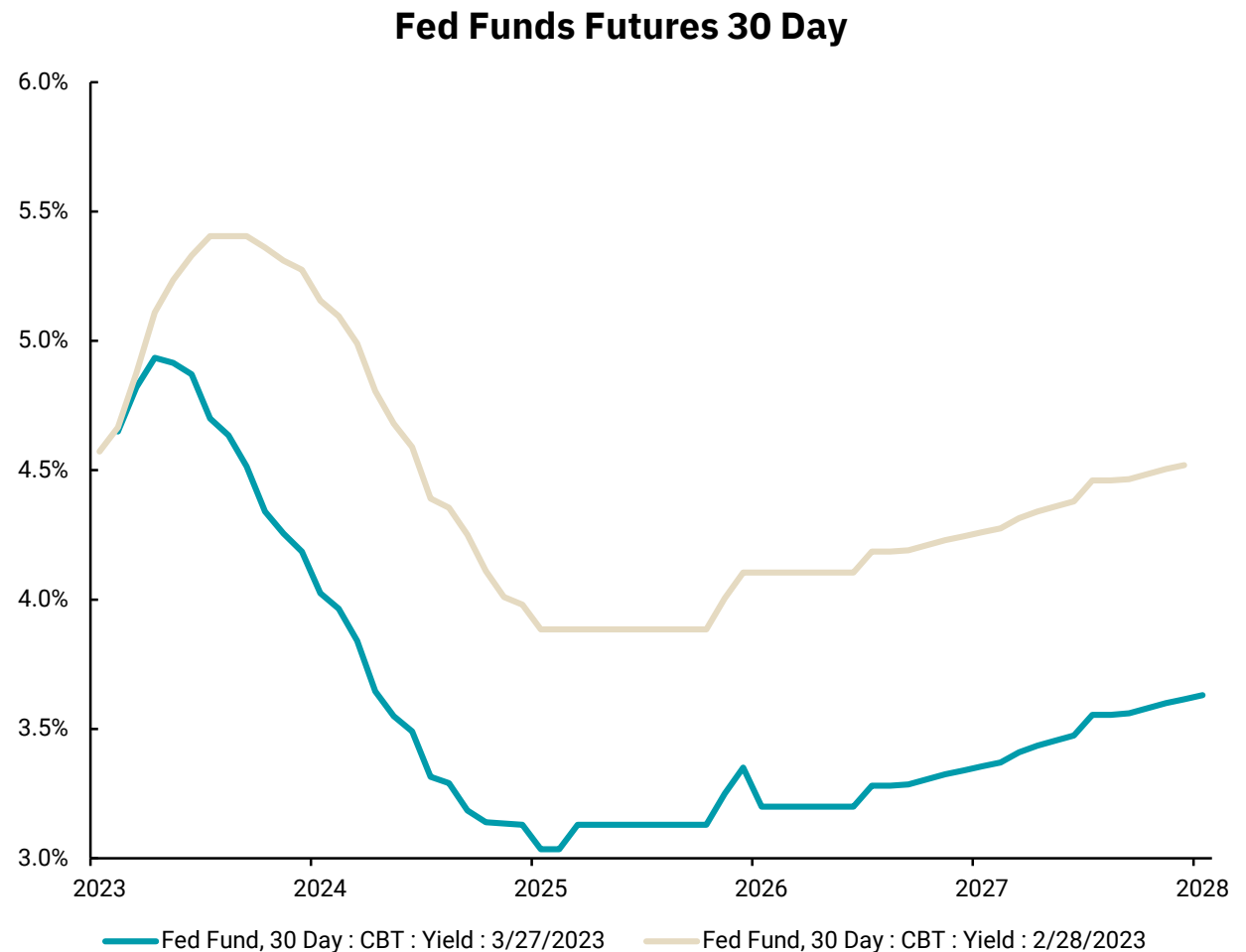
Rising rates may stifle demand

- Financial conditions have tightened faster than they have in 40 years.
- The Federal Reserve has now raised rates to 4.75-5%
- Despite rate increases, economic growth remains hot, and inflation remains above target.



Financial system unrest reduced rate expectations

- As inflation continues to surprise to the upside, bond markets had repriced for higher expected Fed Funds rates.
- The closing of Silicon Valley Bank and Signature Bank materially shifted the markets rate outlook.
- The fed funds futures market now expects rate cuts in the second half of 2023.
- Inflation remains hot which may limit rate reductions by the Fed.



Inflation expectations are key metric

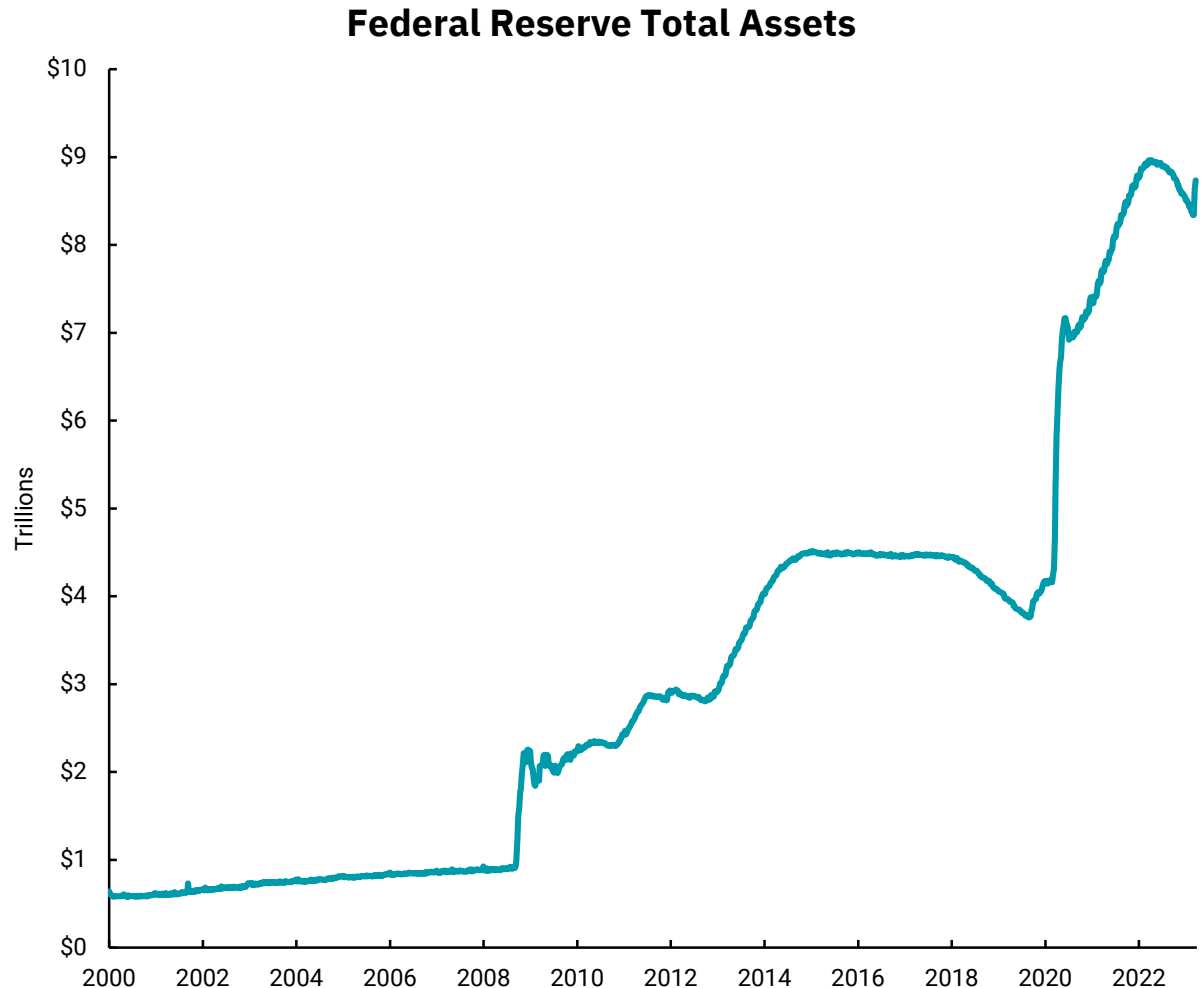
- As the Federal Reserve began its tightening cycle, inflation expectations stalled and turned lower.
- Recent data on expectations has been very volatile.
- The Fed fears losing control of inflation expectations as that would create a significant monetary challenge.

**10-Year U.S. Treasury Inflation-Protected Security
(Implied Inflation Breakeven Rate)**



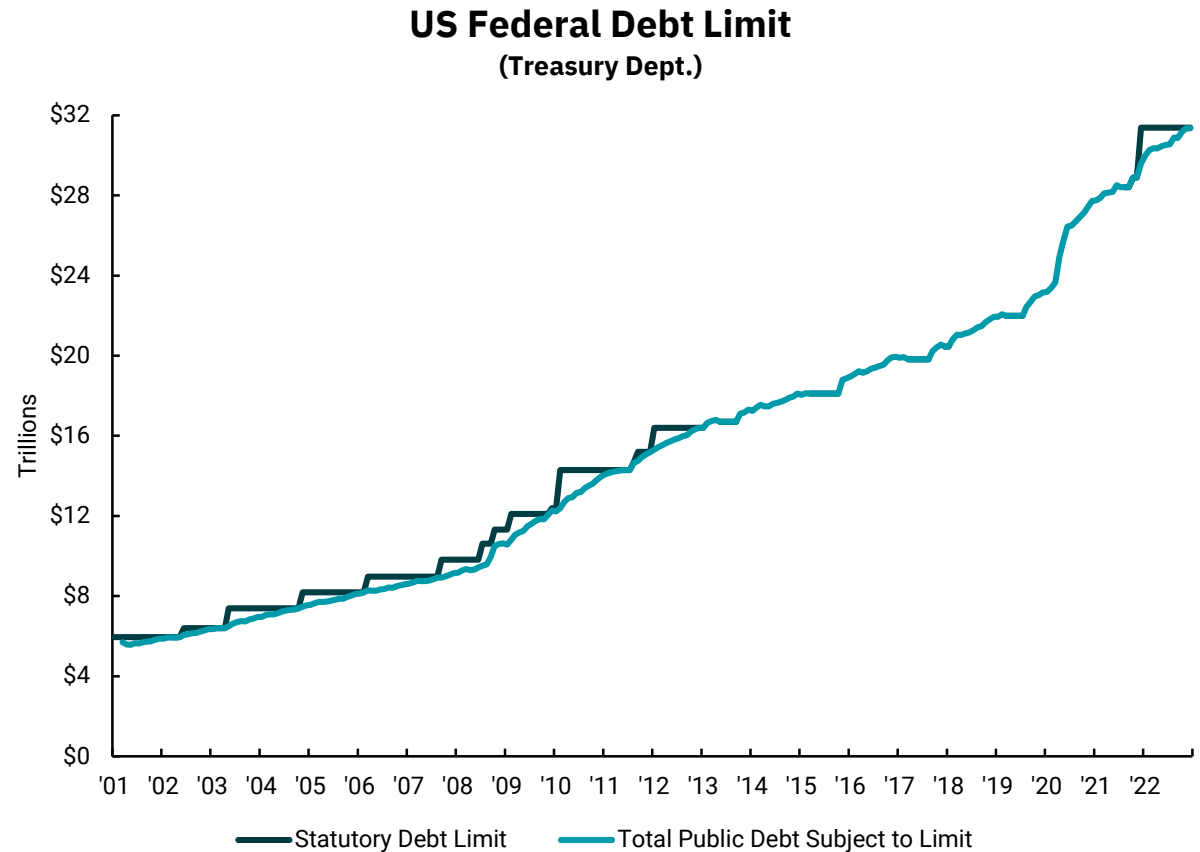
The Fed balance sheet has peaked

- After years of balance sheet expansion dating back to the financial crisis in 2008, the Federal Reserve is shrinking its balance sheet.
- In response to a bank run in March 2023, the Fed increased its lending of reserves, reversing some of its balance sheet declines.
- If inflation remains hot, the Fed may accelerate its balance sheet reduction via bond sales.
- Reducing the size of the Fed's balance sheet is an added risk to financial asset prices.



Federal debt limit over time

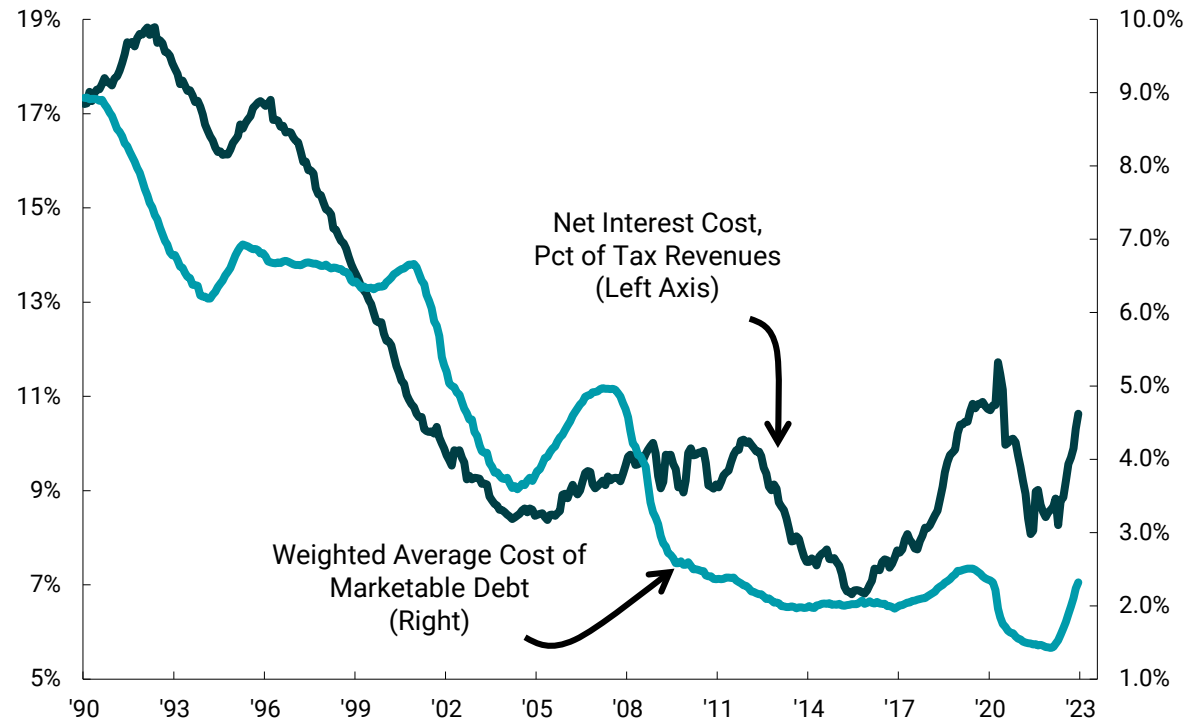
- In mid-January of 2023, we hit the current statutory debt limit of \$31.4 trillion, and the Treasury could run out of cash this summer if the limit is not increased.
- The last balanced budget in Washington was in the fiscal year 2001.
- In addition to setting a dollar limit, past Congresses have set “time” limits on the debt ceiling. These periods are denoted in the chart where there is no line for the statutory debt limit.
- Since 1960, the debt limit has been raised in excess of 70 times, more than once per year.



Debt Ceiling – Deficit politics are back

- As interest rates fell and remained low, the federal government could borrow more money with little budgetary impact.
- Higher inflation has changed this environment. About fifty percent of the outstanding debt will re-price over the next three years.
- This very short maturity schedule helped hold down interest costs when rates were low but now threatens an explosive increase in debt service going forward.

U.S. Treasury Net Interest Cost & Weighted Average Cost of Marketable Debt





Market pulse

1

Higher fixed income yields

2

International markets

3

Equity market valuation

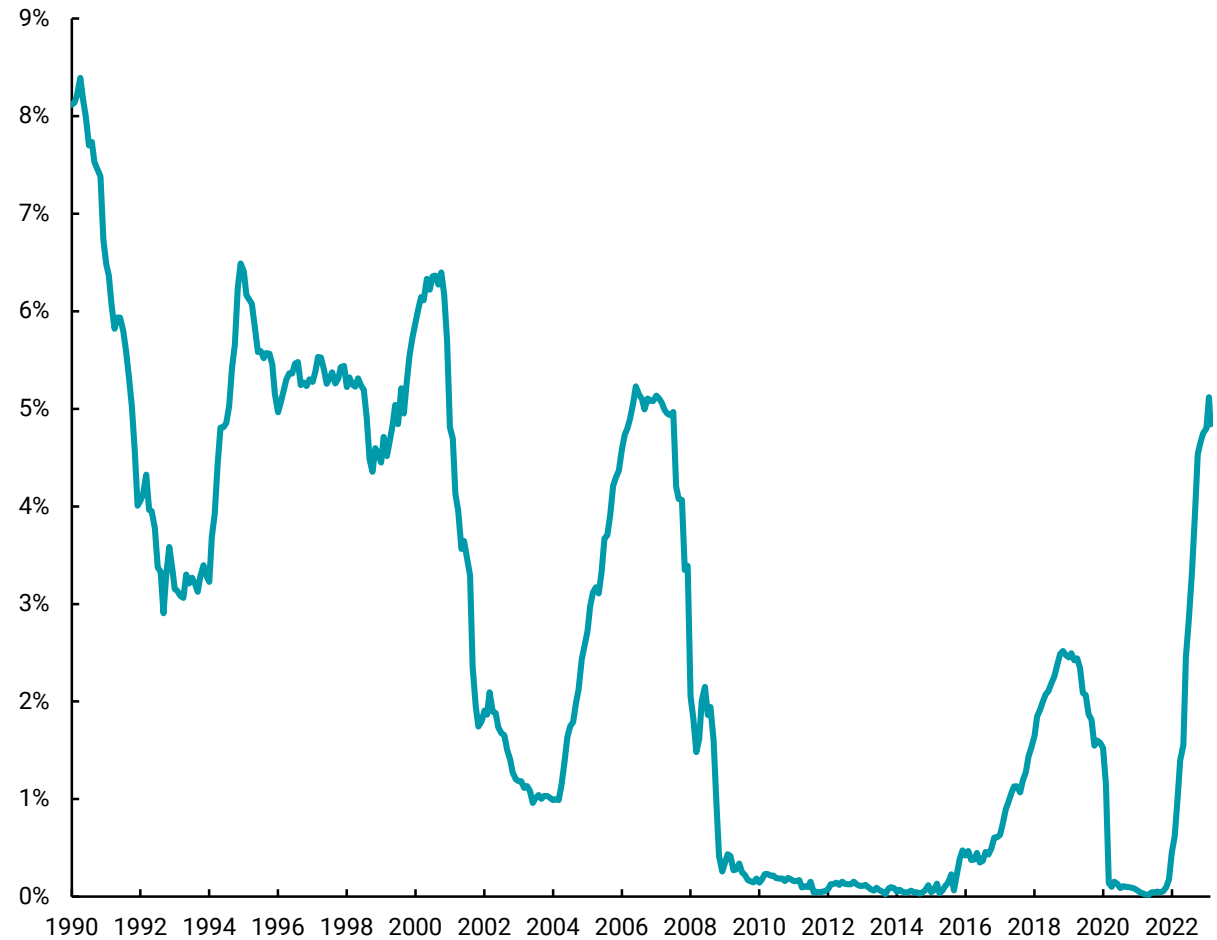
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Alternative investments

Bond market yields increased

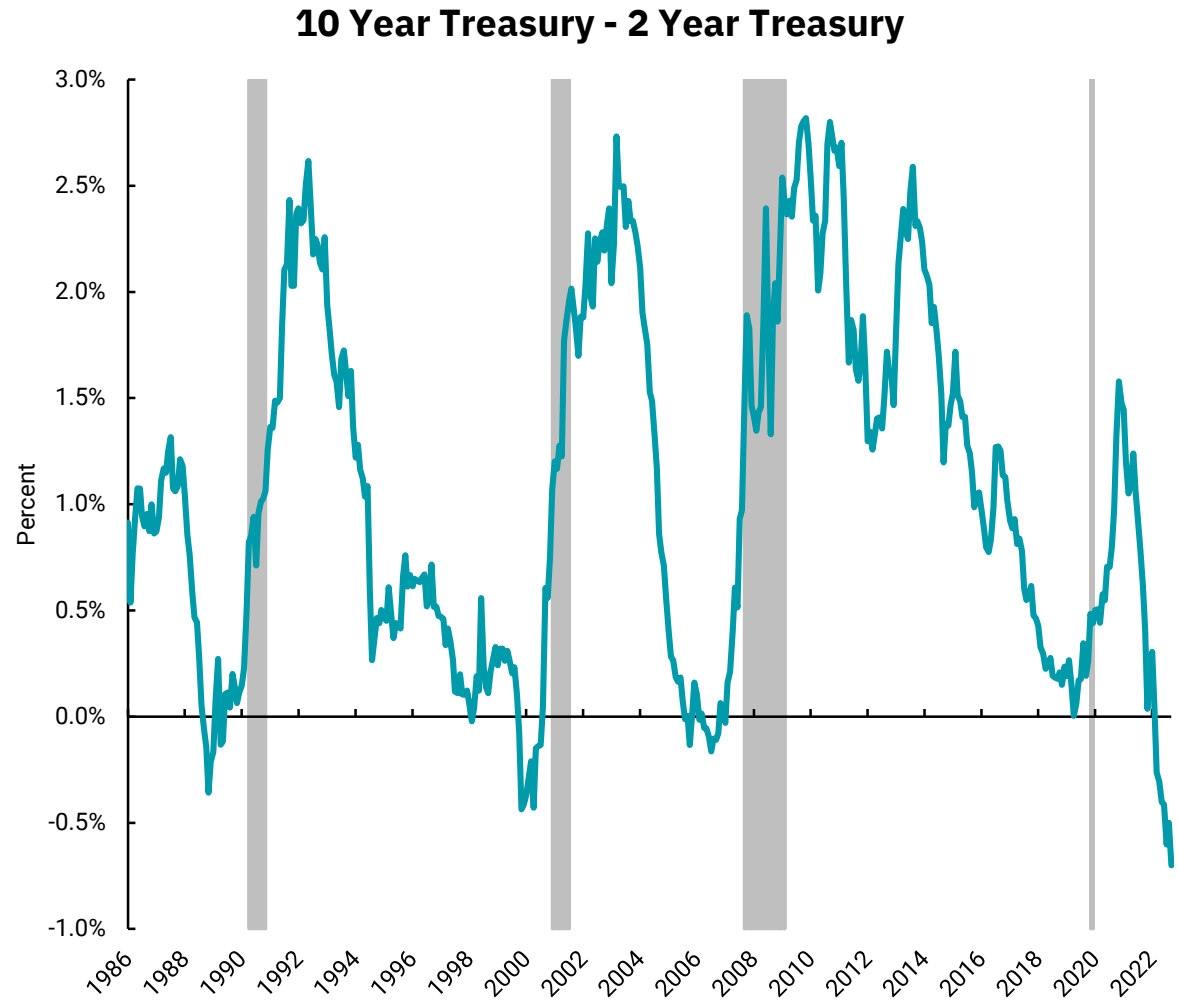
- Government bond yields are trading near the highest yields since the 2008 financial crisis.
- Investment-grade bond yields are beginning to appear attractive as rates approach 20-year highs.
- Bonds may represent attractive value at these levels if inflation continues to subside from recent levels, as we expect.
- One note of caution is that credit spreads remain subdued and may have the potential to widen if a recession does occur.

Short Term Government Bond Yields



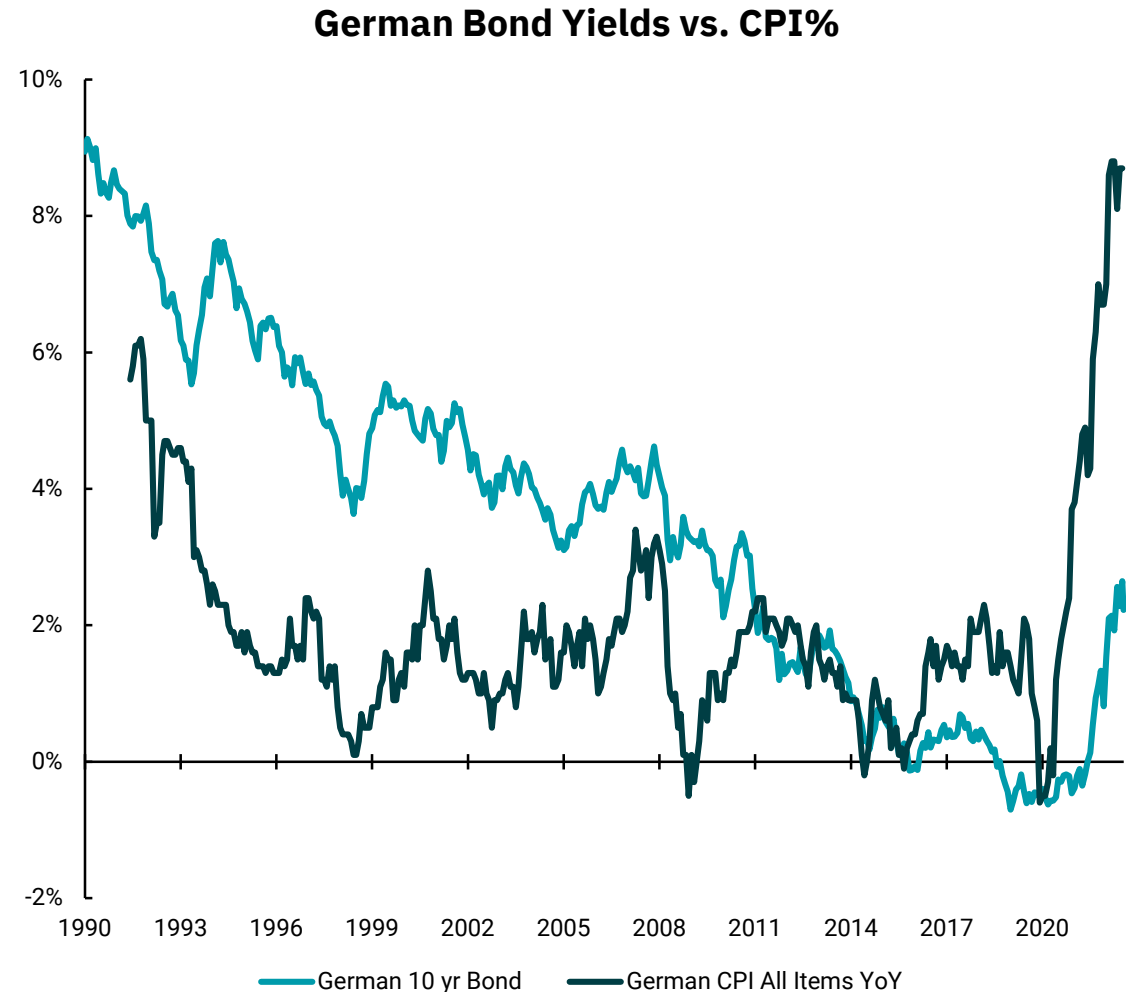
Yield curve inversion is significant

- The 2-10 yield curve has inverted, meaning near-term rates are higher than longer-term rates.
- Inversions often indicate a recession, and we haven't seen an inversion of this magnitude in decades.
- It's always dangerous to say things are different this time, but an inverted yield curve is something we are watching with great interest, given the economic slowdown we anticipate in 2023.



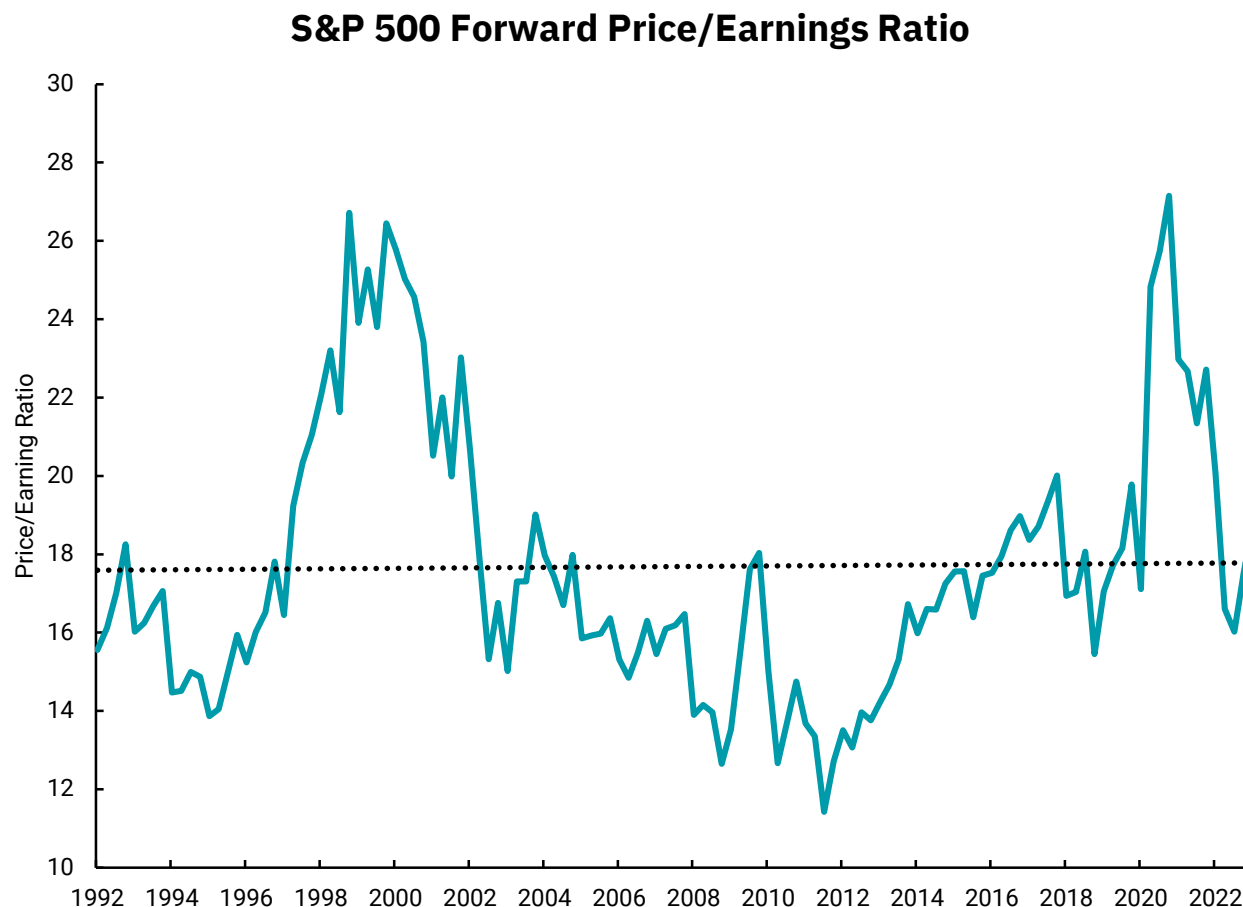
International markets also fighting inflation

- The European Central Bank (ECB) is also in a fight against inflation, and yields of European bonds have risen significantly.
- As the ECB finally moves interest rates into positive territory, opportunities for international fixed-income investors have increased.
- Despite an increase in yields, spreads in Europe are also pricing in a soft-ish landing. Credit spreads do not reflect a recession in Europe.



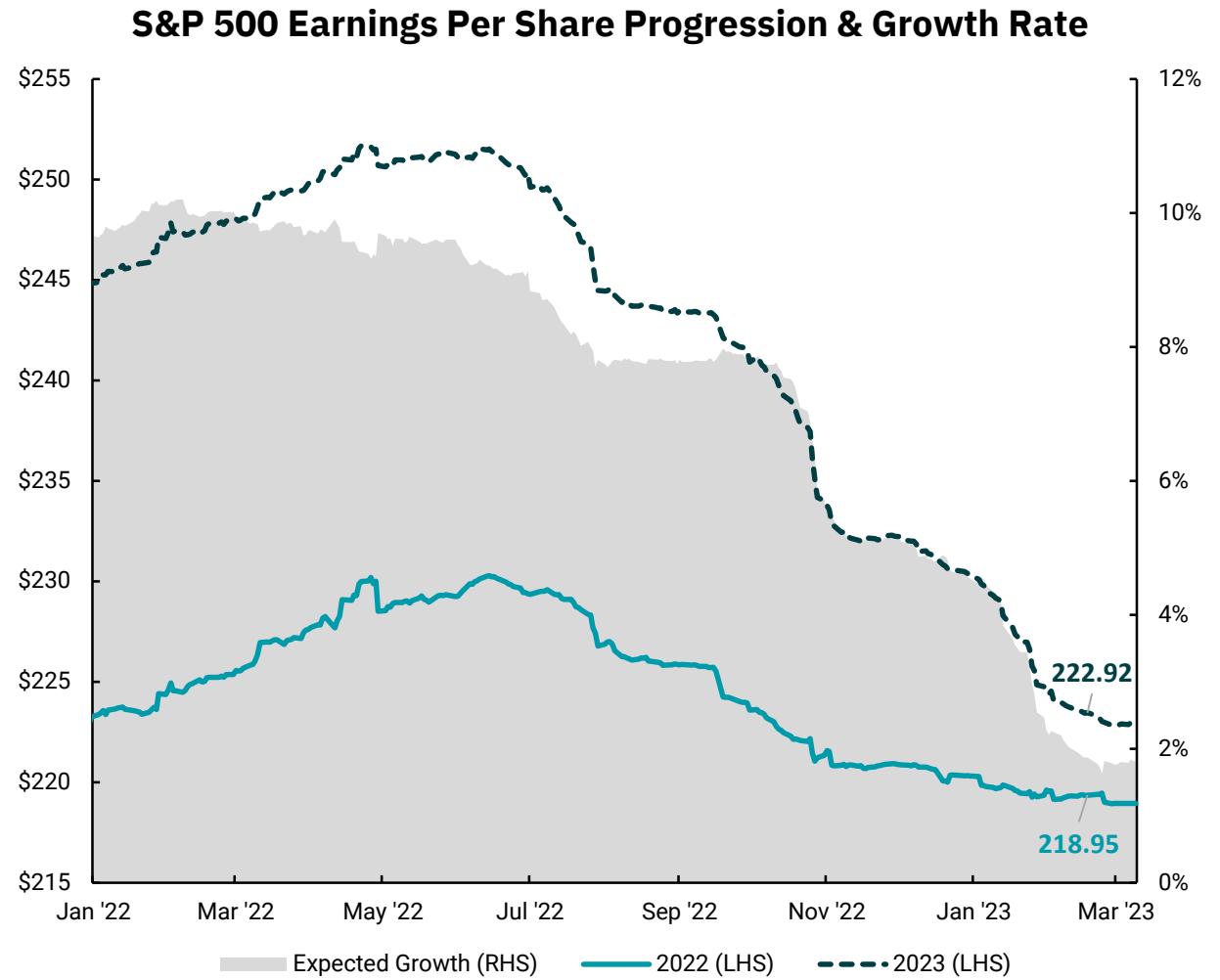
S&P 500 P/E valuation has declined

- Valuations of equities have improved as prices have fallen.
- Consensus expectations are that 2023 earnings will be higher than 2022. However, there are risks to that assumption.
- Multiples though near average, are risky in our view, given the risk of recession and the backdrop of higher rates.
- Inflation and higher rates are headwinds to both earnings and multiples.



Earnings estimates are falling

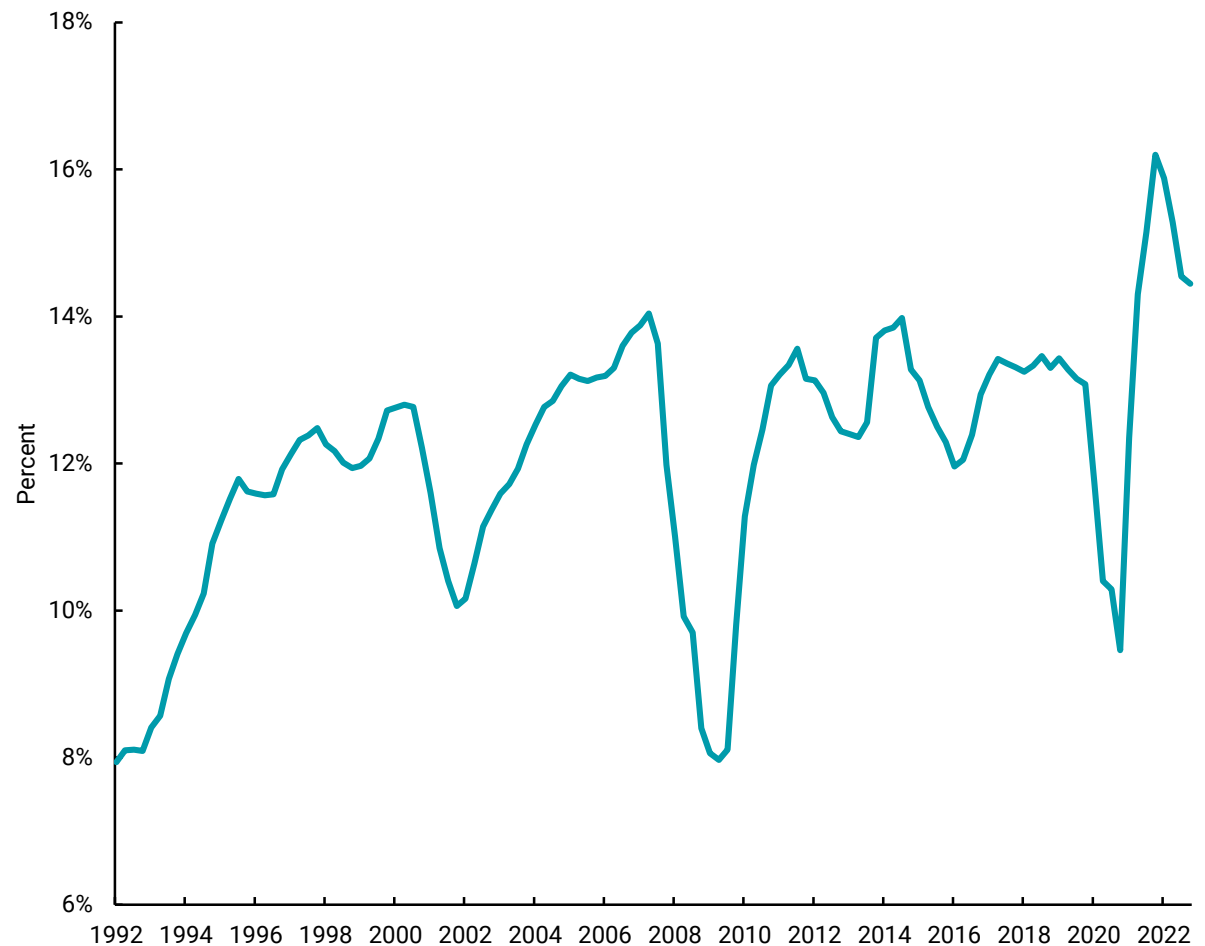
- Earnings estimates for 2022 and 2023 are falling to reflect the slow-growth, high-inflation environment.
- Currently, 2023 earnings are expected to be higher than 2022, as the market is not forecasting a recession.
- The chart displays Factset earnings estimates. Estimates from Bloomberg tell a different story, as some consensus estimates exclude non-recurring expenses.



Operating margins falling from COVID peak

- Corporate margins expanded as we worked our way through the pandemic.
- As real demand has slowed, the ability to pass higher costs to consumers has diminished, impacting margins.
- As margins return to more normal levels, earnings for companies will be under pressure.
- A recession would likely drive margins substantially lower, negatively impacting corporate earnings.

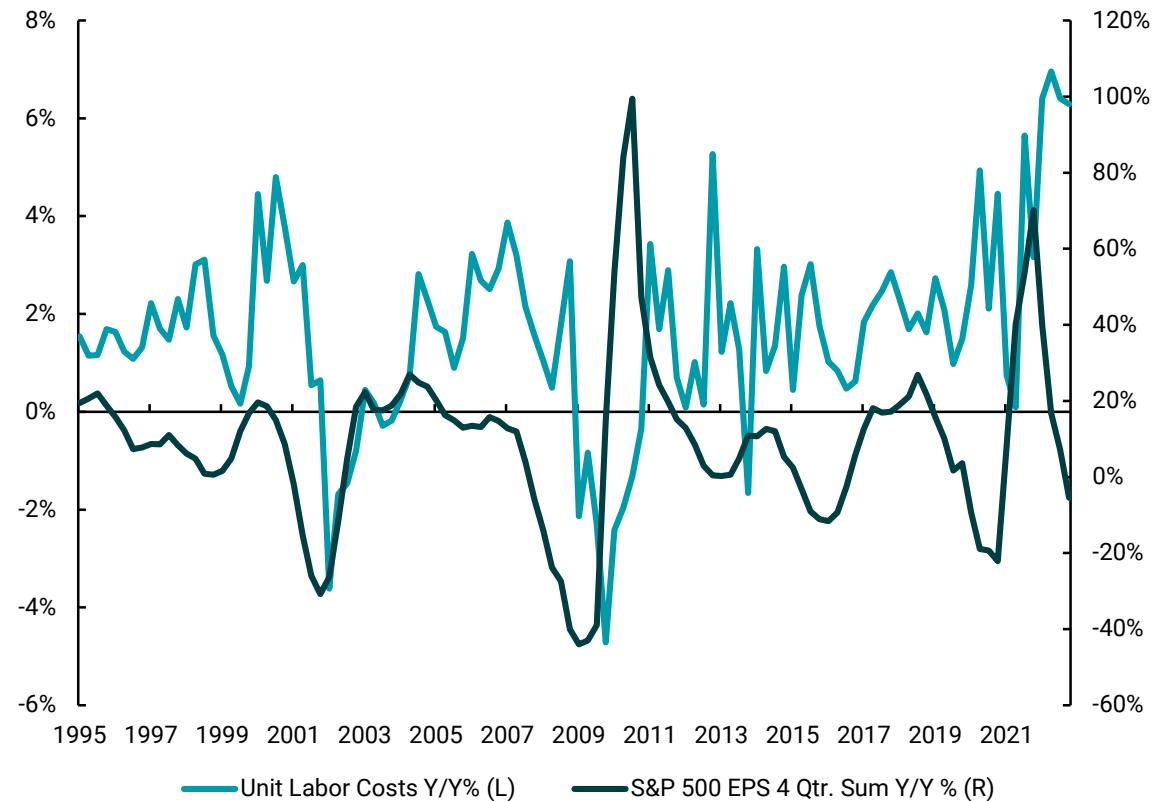
S&P 500 Trailing 12m Operating Profit Margin



Labor risk remains high

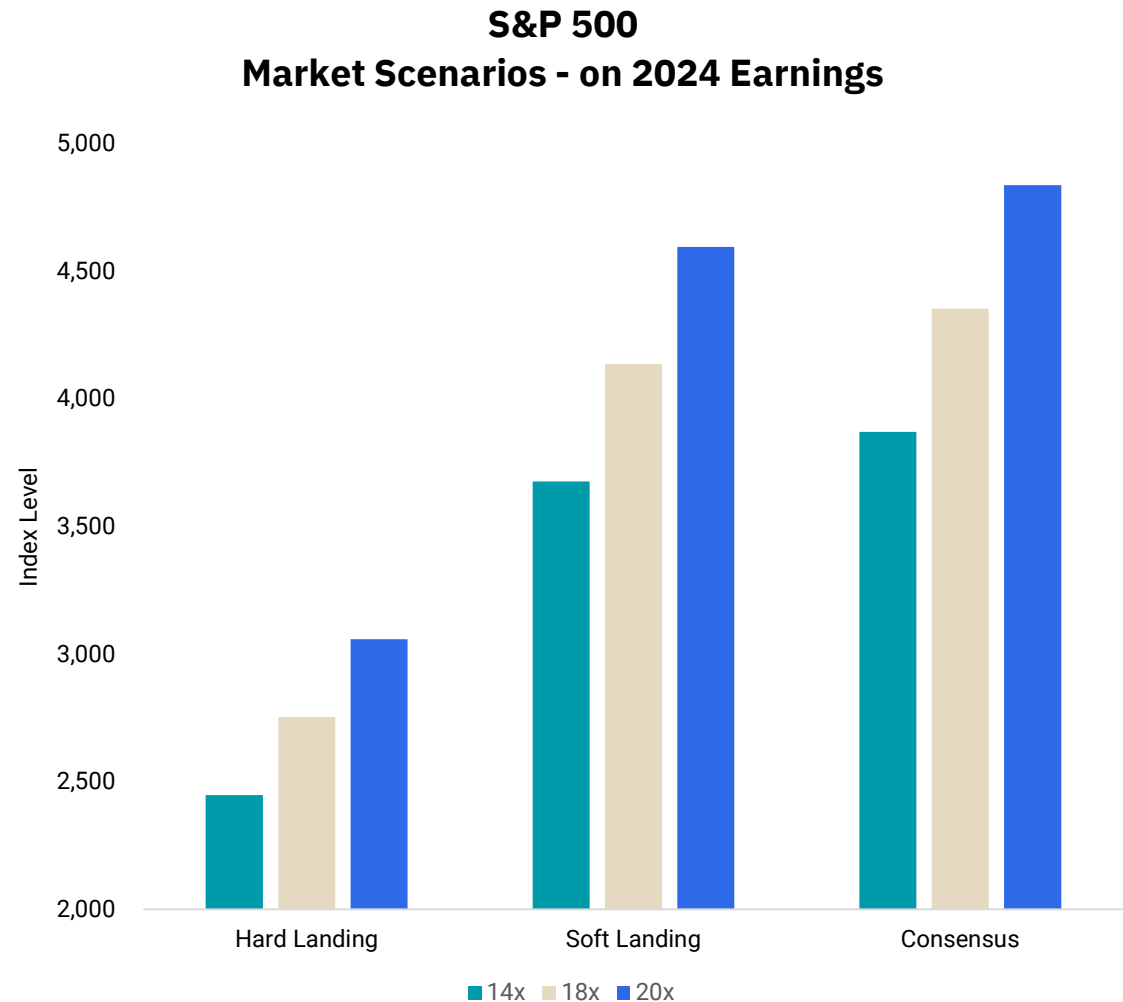
- Wages continue to increase, and historically, earnings growth has declined as wages rise.
- With unit labor costs increasing and consumer spending slowing, margins are at risk for most operating businesses.
- Lower margins would, of course, impact earnings.
- The market is not priced for a decline in earnings, as estimates remain for earnings growth in 2023 and 2024.

**Unit Labor Cost Y/Y
vs.
S&P 500 EPS 4 Qtr. Sum Y/Y**



U.S. market scenarios

- Looking at 2024 earnings, the consensus appears to be pricing in a soft landing, or the fabled no-landing, as earnings expectations are 10% higher than 2023.
- In a normal recession, where earnings drop 25%, equity markets would suffer further losses.
- Higher taxes due to the expiration of R&D tax credits also does not appear to be reflected in estimates.



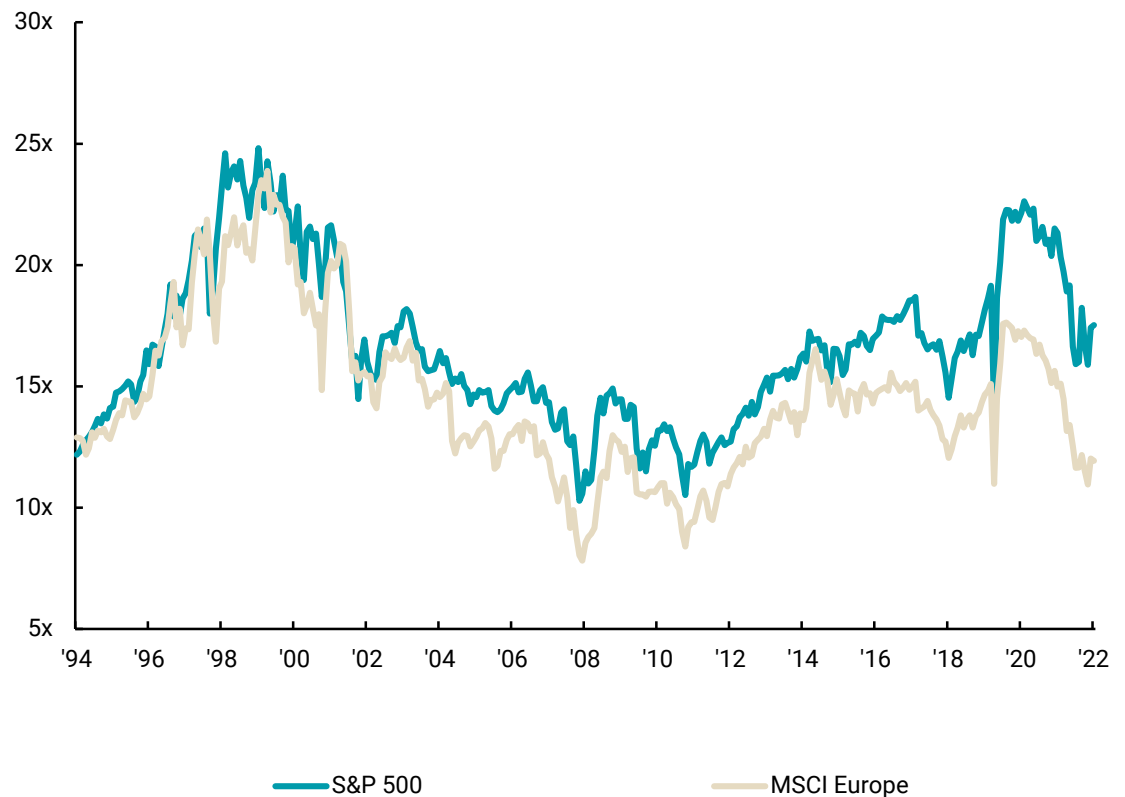
Source: Cavanal Hill. Data shown as of December 31, 2022.

Values assume consensus earnings per share (EPS) of \$227 for 2023, \$204 assuming mild recession in 2023, and \$184 assuming normal recession in 2023.

International equities are inexpensive

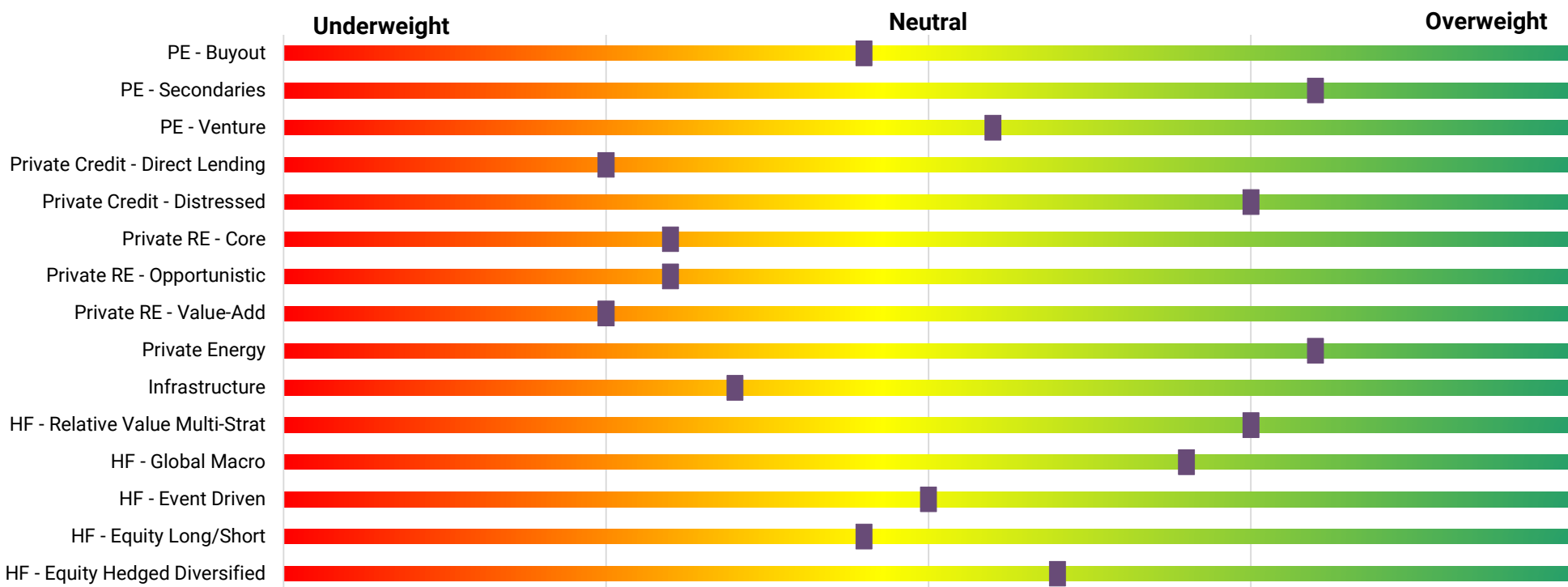
- Equities in international markets have outperformed domestic markets over the past six months.
- International markets still appear discounted compared to domestic markets and may represent an opportunity.
- Headwinds for international stocks, including European equities, include higher rates, slower growth, a stronger dollar, and energy shortages.
- Earnings estimates for international markets do not reflect a potential recession.

International Forward Price to Earnings Ratios



Alternatives: Our 2023 outlook

Alternatives Spectrum Chart



Market expectations

- Deal activity in the private market is slowing.
- Private equity facing downward fair market value adjustments.
- Key identified risks include inflation, aggressive Fed, COVID variants, and China/U.S. relations.

Areas of emphasis

- In private equity, we favor opportunistic credit and PE secondaries.
- High current income secured by assets is attractive
- For hedge funds, we favor uncorrelated returns across multiple strategies.

Market pulse summary

1

As interest rates rose and as spreads widened across the globe, we saw pockets of opportunity emerging in the U.S. investment-grade bond market.

2

International markets have also adjusted. International fixed income yields have risen providing an opportunity to neutralize underweights while overseas equity market valuations are depressed relative to domestic equities.

3

Domestic equities valuations have declined from peak levels to reflect higher interest rates and slower growth. However, we believe there are further risks to the downside for both earnings and multiples.

4

The federal debt is likely to crowd out some investments and is a risk to financial market stability.

5

Alternative investments remain a potential opportunity for investment as distressed assets often provide attractive returns for talented managers.

Broad market overview

Returns (%)	1 Mo.	YTD	1 Yr.	3 Yrs.	5 Yrs.	10 Yrs.
Capital Markets						
DJ Industrial Average TR USD	2.08	0.93	-1.98	17.33	9.01	11.15
NASDAQ 100 TR USD	9.54	20.77	-10.35	20.02	15.96	17.95
Russell 3000 TR USD	2.67	7.18	-8.58	18.49	10.45	11.73
S&P 500 TR USD	3.67	7.50	-7.73	18.62	11.19	12.24
Domestic Large Cap Equities						
Russell 1000 TR USD	3.16	7.46	-8.39	18.57	10.87	12.02
Russell 1000 Value TR USD	-0.46	1.01	-5.91	17.94	7.50	9.13
Russell 1000 Growth TR USD	6.84	14.37	-10.90	18.59	13.66	14.59
Domestic Mid Cap Equities						
Russell Mid Cap TR USD	-1.53	4.06	-8.78	19.21	8.06	10.05
Russell Mid Cap Value TR USD	-3.15	1.32	-9.22	20.71	6.54	8.80
Russell Mid Cap Growth TR USD	1.38	9.14	-8.52	15.21	9.07	11.17
Domestic Small Cap Equities						
Russell 2000 TR USD	-4.78	2.74	-11.61	17.52	4.71	8.04
Russell 2000 Value TR USD	-7.17	-0.66	-12.96	21.03	4.55	7.22
Russell 2000 Growth TR USD	-2.47	6.07	-10.60	13.37	4.26	8.49
International Equities						
MSCI EAFE NR USD	2.48	8.47	-1.38	12.99	3.52	5.00
MSCI EAFE Value NR USD	-0.26	5.93	-0.31	14.59	1.75	3.75
MSCI EAFE Growth NR USD	5.34	11.09	-2.79	10.96	4.89	6.01
MSCI ACWI Ex USA NR USD	2.44	6.87	-5.07	11.81	2.47	4.17
MSCI EM NR USD	3.03	3.96	-10.70	7.83	-0.91	2.00
Cash & Fixed Income						
FTSE Treasury Bill 3 Mon USD	0.40	1.12	2.61	0.95	1.40	0.85
Bloomberg US Agg Bond TR USD	2.54	2.96	-4.78	-2.77	0.91	1.36
Bloomberg Gbl Agg Ex USD TR Hdg USD	2.01	2.86	-3.27	-1.82	0.90	2.28
Bloomberg US Corporate High Yield TR USD	1.07	3.57	-3.34	5.91	3.21	4.10
Alternatives						
MSCI US REIT GR USD	-2.47	2.73	-19.17	12.00	6.02	5.94
Bloomberg Commodity TR USD	-0.21	-5.36	-12.49	20.84	5.36	-1.72

Asset class quilt

2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	YTD	
38.82%	13.69%	5.67%	21.31%	37.28%	3.17%	36.39%	38.49%	28.71%	-7.54%	14.37%	Best Performing ↑ ↓ Worst Performing
34.76%	13.45%	1.38%	17.34%	30.21%	0.01%	31.49%	19.96%	27.60%	-9.76%	8.47%	
33.48%	13.22%	1.36%	17.13%	25.03%	-1.51%	30.54%	18.40%	25.16%	-11.19%	7.50%	
32.53%	13.05%	0.55%	13.80%	21.83%	-2.08%	26.54%	18.31%	22.58%	-13.01%	4.06%	
32.39%	8.79%	-0.81%	11.96%	18.52%	-4.38%	25.52%	17.10%	14.82%	-14.45%	3.96%	
22.78%	5.97%	-2.44%	11.19%	14.65%	-8.27%	22.01%	7.82%	11.26%	-17.32%	3.57%	
7.44%	4.89%	-3.83%	7.08%	13.66%	-9.06%	18.44%	7.51%	5.28%	-18.11%	2.96%	
1.18%	2.45%	-4.41%	4.90%	7.50%	-11.01%	14.32%	7.11%	-1.40%	-20.09%	2.86%	
-2.02%	-2.19%	-4.47%	2.65%	3.54%	-13.79%	8.72%	3.94%	-1.54%	-20.44%	2.74%	
-2.60%	-4.90%	-14.92%	1.00%	2.48%	-14.58%	7.57%	2.80%	-2.54%	-29.14%	1.01%	

S&P 500
Large Cap Value
Large Cap Growth

Mid Cap Blend
Small Cap Blend
Foreign Bonds

Foreign Stocks
Emerging Markets
High Yield

Bonds

Equity returns across periods

1 Month

	Value	Core	Growth
Large	-0.5	3.7	6.8
Mid	-3.1	-1.5	1.4
Small	-7.2	-4.8	-2.5
Int'l	0.3	2.4	4.6

1 Year

	Value	Core	Growth
Large	-5.9	-7.7	-10.9
Mid	-9.22	-8.8	-8.5
Small	-13.0	-11.6	-10.6
Int'l	-4.0	-5.1	-6.4

3 Year

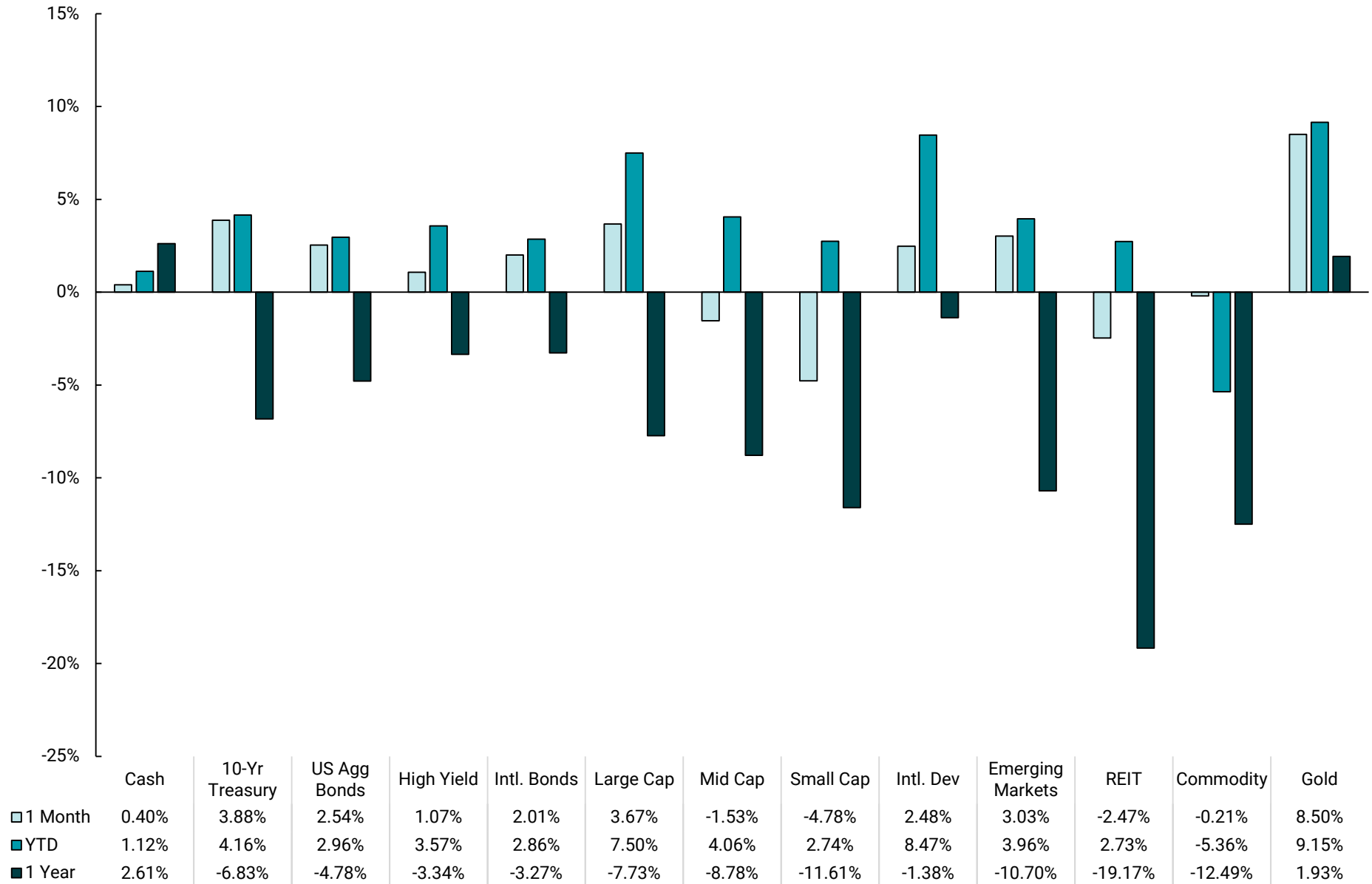
	Value	Core	Growth
Large	17.9	18.6	18.6
Mid	20.7	19.2	15.2
Small	21.0	17.5	13.4
Int'l	13.8	11.8	9.5

5 Year

	Value	Core	Growth
Large	7.5	11.2	13.7
Mid	6.5	8.1	9.1
Small	4.5	4.7	4.3
Int'l	1.3	2.5	3.4

Source: Morningstar. Returns in the style boxes are represented by the Russell indexes and the S&P 500 for the Large Cap Core space. Returns in the international boxes are represented by the MSCI ACWI Ex USA indexes. Boxes shown in red represent returns below 0%. Purple boxes represent returns between 0% and 10%. Returns above 10% are shown in violet. Data shown as of March 31, 2023.

Market summary



Source: Morningstar. Data shown as of March 31, 2023.

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