Market insights

Red River Showdown- Healthcare Beyond Borders 10-19/20-2023

BOK FINANCIAL

Key points

1. Despite higher interest rates, economic growth remains surprisingly resilient due to strong consumer spending and expanding U.S. government budget deficits.

2. Headline inflation rates have trended lower, but supply imbalances in labor market conditions aren't yet conducive to achieving a sustainable 2% inflation rate.

3. The time lags from tighter monetary policy appear longer this cycle, and the Federal Reserve intends to hold rates higher for longer to ensure inflation continues to slow.

4. Across the curve, bond yields have shifted higher due to persistent above-target inflation, increased deficits, quantitative tightening and resilient economic growth.

5. Large-cap equities are outperforming mid and small-caps, which are more vulnerable to higher rates and potential future economic weakness.

Base case outlook

Economy

Economic recession odds remain high but have been pushed out.

Policy

The Federal Reserve has slowed its pace of rate increases. Ongoing fiscal outlays are supporting demand.

Markets

Bond markets offer attractive yields but low spreads. Current equity valuations are high relative to historical norms.

Risks: Tighter lending standards and higher unemployment slow growth significantly.

Risk: Persistent inflation takes rates higher than expected.

Risk: Recession risk leads to earnings collapse.

A look at the domestic economy

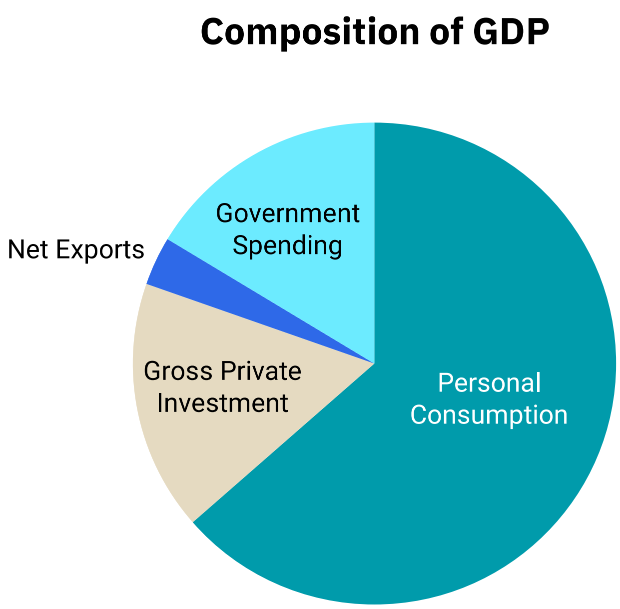
1 Consumer staying strong

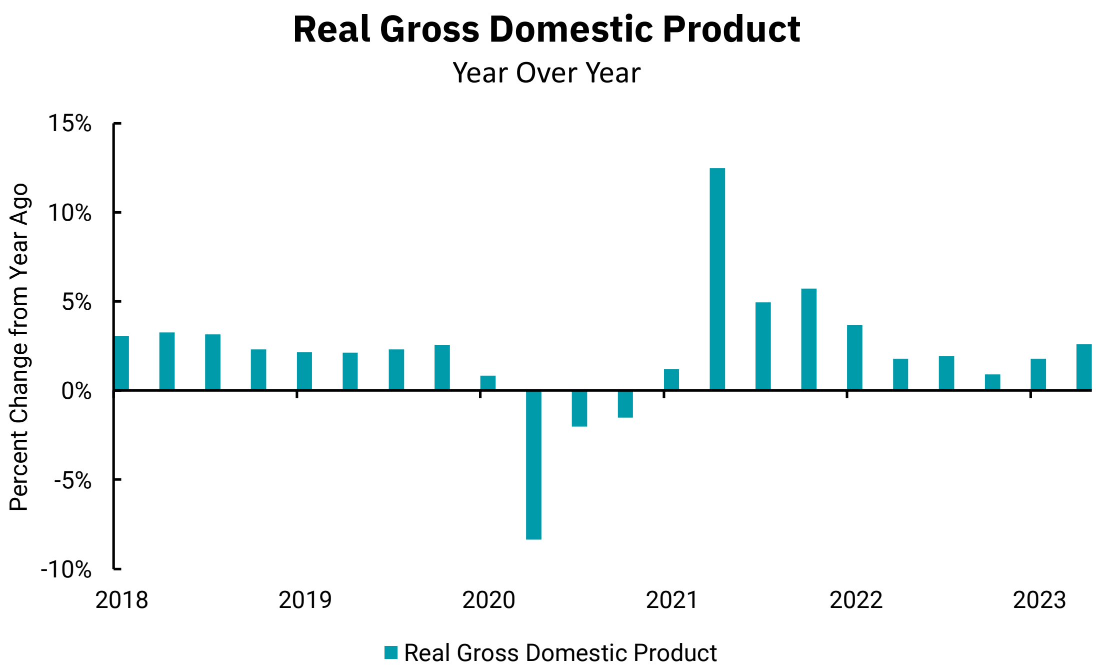
2 Government supporting growth

3 Business confidence cautious

GDP - Cool the economy to stop inflation

- Growth has re-accelerated despite Federal Reserve rate increases.
- A strong job market, wage gains and fiscal spending are supporting growth.
- GDP growth could decelerate as we move into 2024 as Fed tightening impacts the economy with a lag.



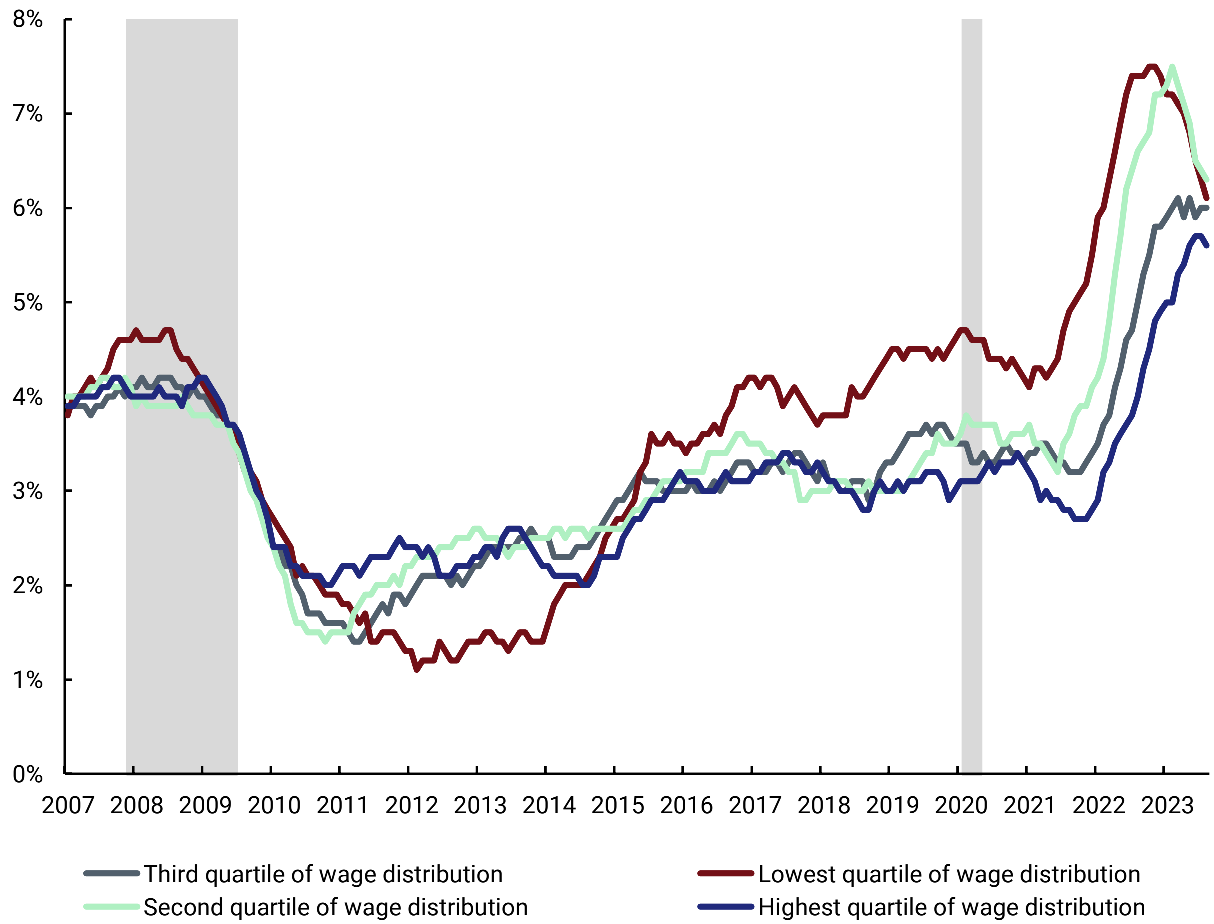


Source: Federal Reserve. Data shown as of Jul. 31, 2023.

Consumer - Wage gains by income quartile

- The largest wage gains have been within the lower income earners.
- As headline inflation declines, these higher wages support consumer spending.
- Companies will have to deal with narrowing margins as inflation slows real unit growth.

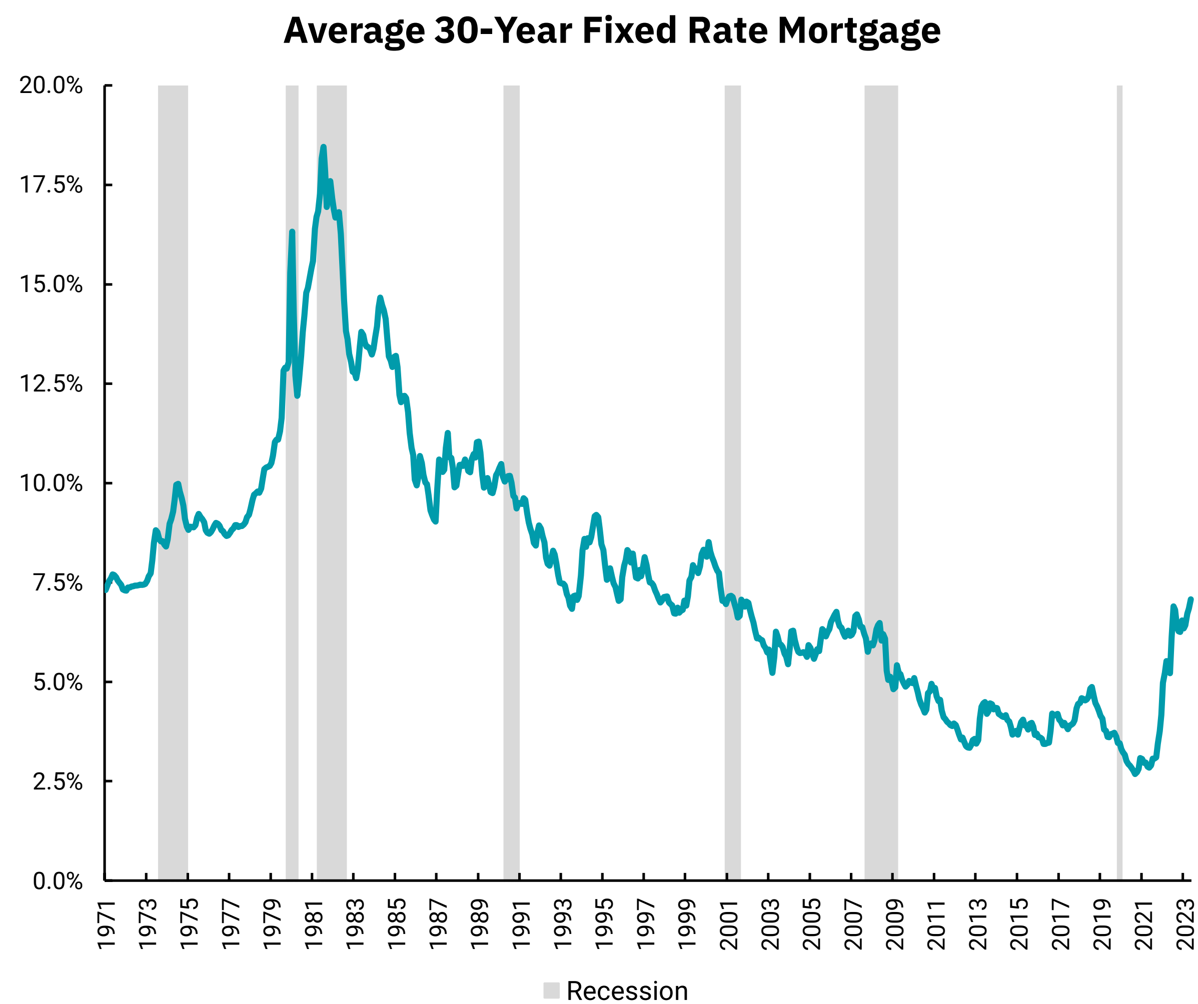
Wage Growth by Quartile



The data are 12-month moving averages of monthly median wage growth for each average wage quartile (also 1st and 2nd half). Wage computed on an hourly basis.
Source: Federal Reserve Bank of Atlanta. Data as of Aug. 31, 2023.

Consumer - Mortgage rates

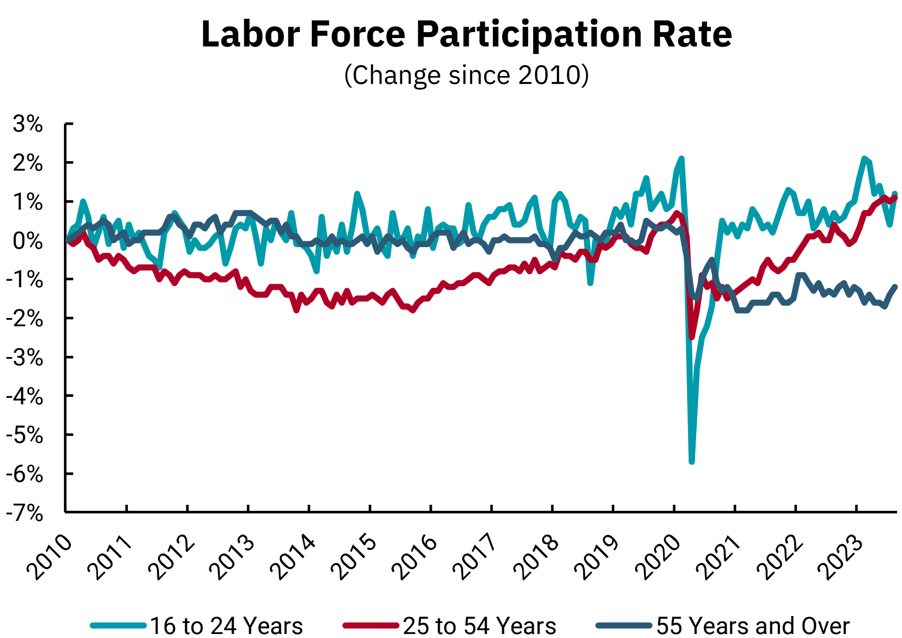
- The cost of a new mortgage has risen significantly as the Federal Reserve raised interest rates.
- As housing is the largest monthly expense of many households, it is an important variable in determining consumer spending power.
- Rising interest costs have also made many hesitant to move houses as they have locked in mortgages at lower interest rates.

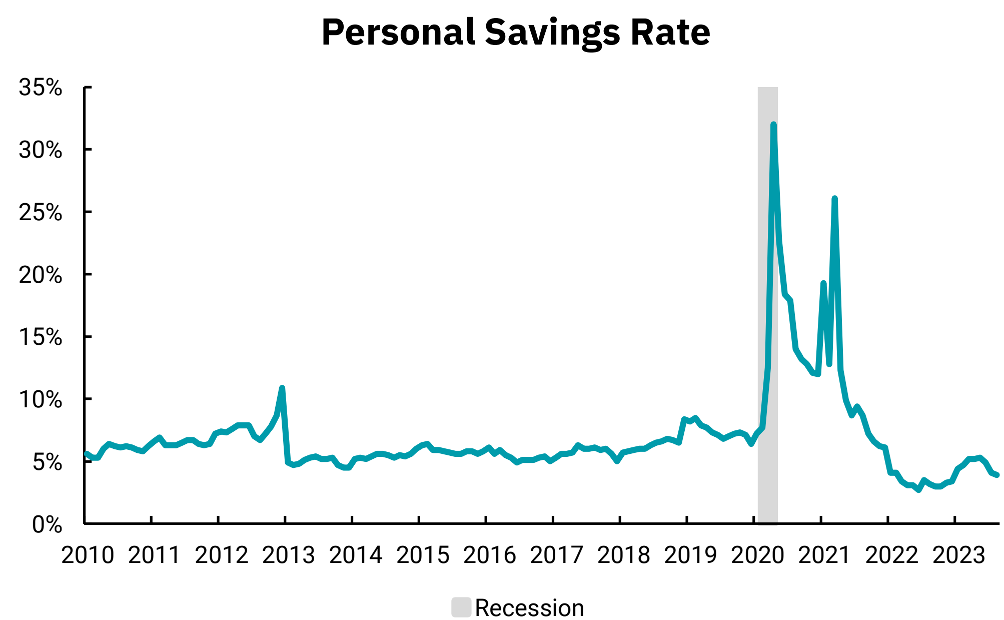


Source: Federal Reserve Bank of St. Louis. Data as of Sep. 30, 2023.

Consumer - Savings and labor force participation

- Prime-age workers represent an increasing percentage of the labor force.
- Older workers are dropping out of the labor force and have begun spending their retirement assets down.
- This reduction in retirement savings is reflected in the decrease in the overall savings rate and may continue to put upward pressure on inflation and interest rates.





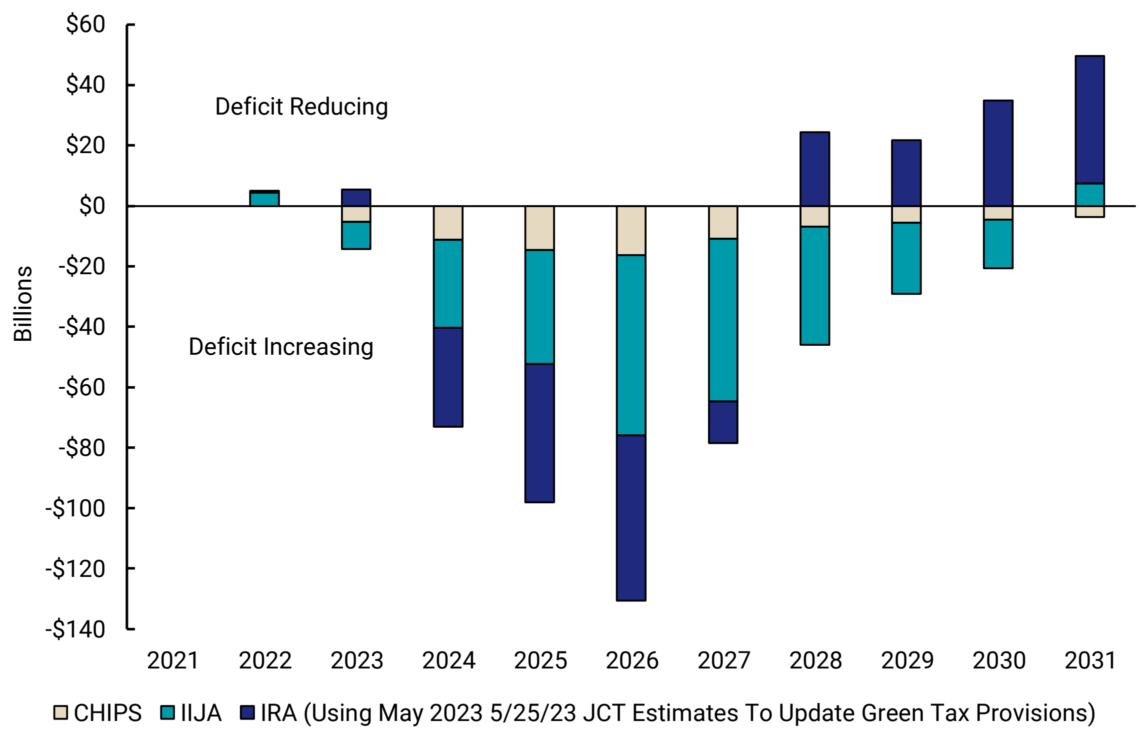
Source: Chart one, Renaissance Macro Research. Data as of Aug. 31, 2023. Chart two, Federal Reserve Bank of St. Louis. Data as of Sep. 30, 2023.

Government - Impact of major recent fiscal bills

- Deficit spending is set to increase through 2026 due to legislation passed in recent years.
- This uptick in spending should provide a boost to economic growth in the short run but has repercussions for both inflation and interest rates.
- Moving forward, we believe agreements involving spending cuts and/or tax increases would relieve some of the pressure on inflation and interest rates.

Impact On Surplus (Deficit)
Of Major Recent Fiscal Bills

Infrastructure Investment & Jobs Act; CHIPS & Science Act;
Inflation Reduction Act (with 5/25/23 Update Green Energy Measures); - CBO Scores

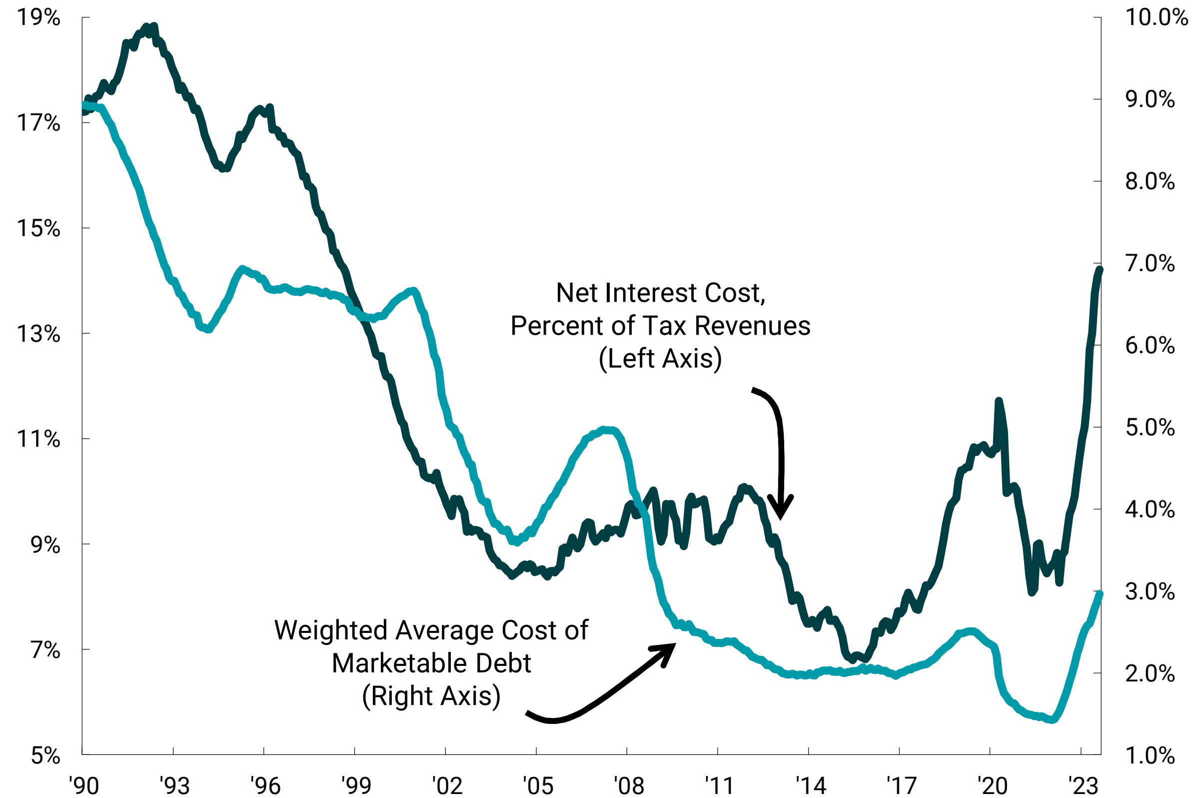


Source: Strategas. Data as of Aug. 31, 2023.

Government - Rising rates on government debt

- As interest rates fell and remained low, the federal government could borrow 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.

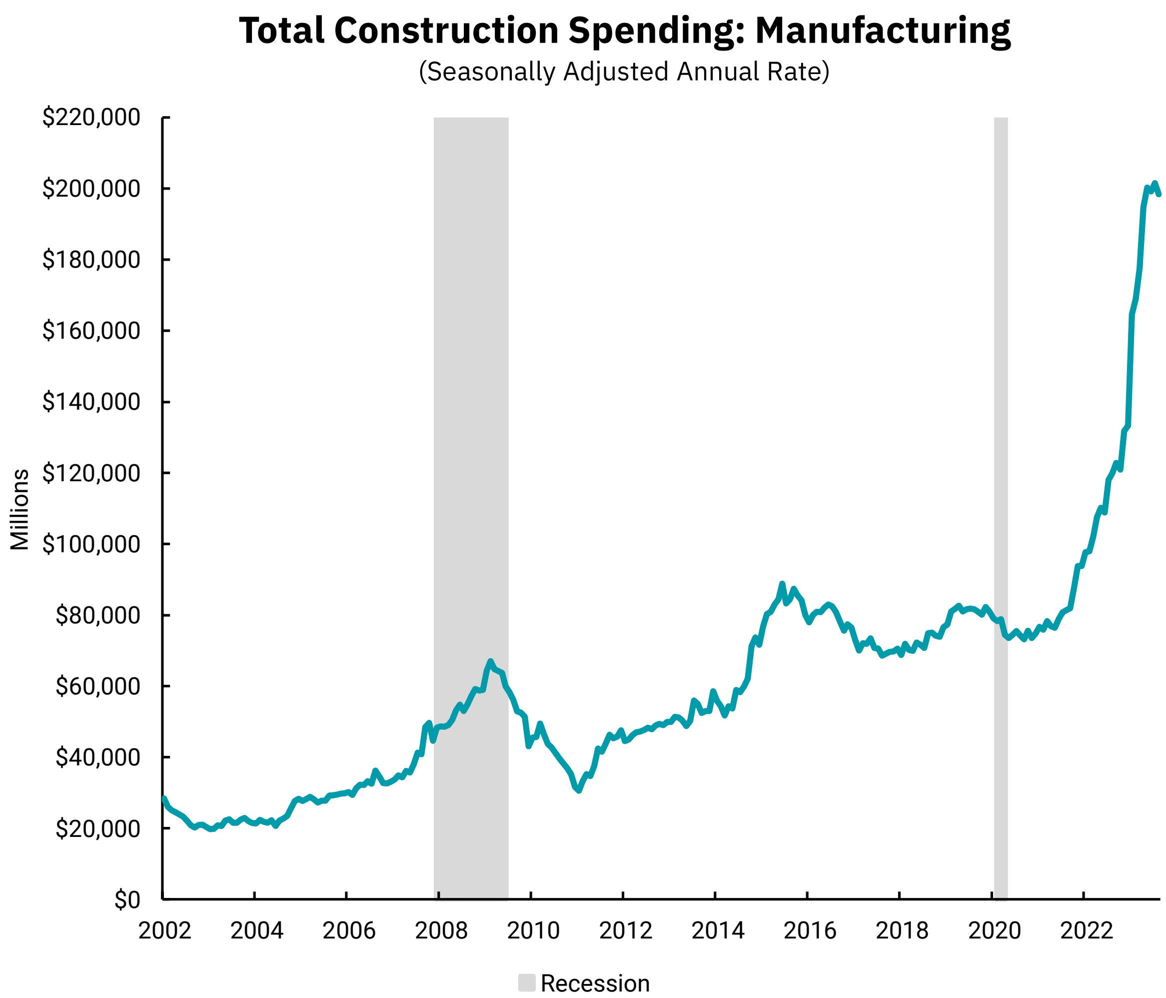
Net Interest Cost & Weighted Average Cost of Marketable Debt



Source: Strategas. Data shown as of Sep. 30, 2023.

Business - Manufacturing expansion

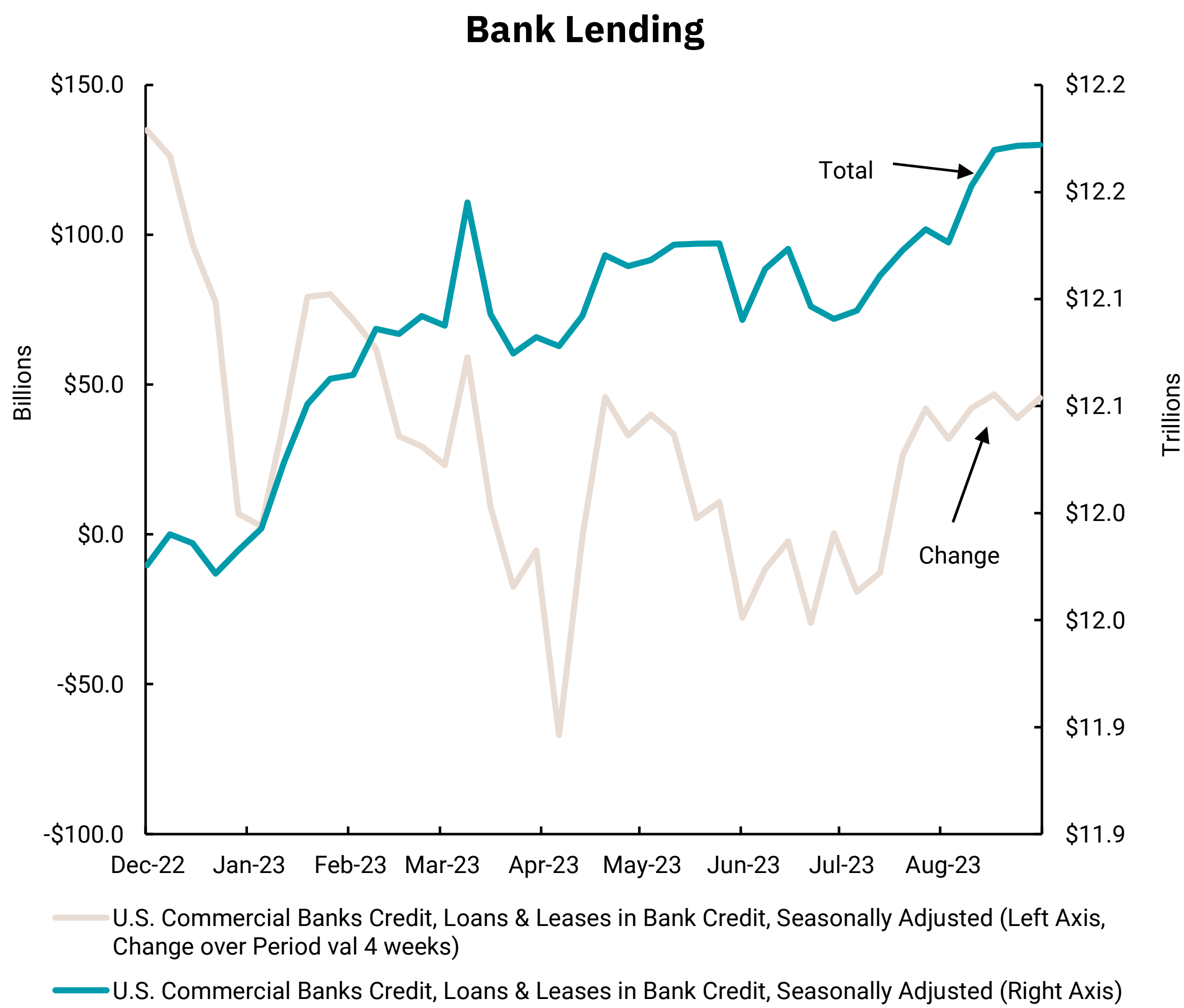
- The U.S. production capacity for physical goods is largely dependent on the facilities to create and manufacture them.
- Construction of manufacturing facilities in the U.S. has seen a significant uptick since 2022.
- Increased production capacity may allow the U.S. to produce more physical goods and contribute further to economic growth.
- We are witnessing a manufacturing renaissance as investment in productive capacity explodes higher.



Source: Federal Reserve Bank of St. Louis. Data as of Sep. 30, 2023.

Business – Commercial lending

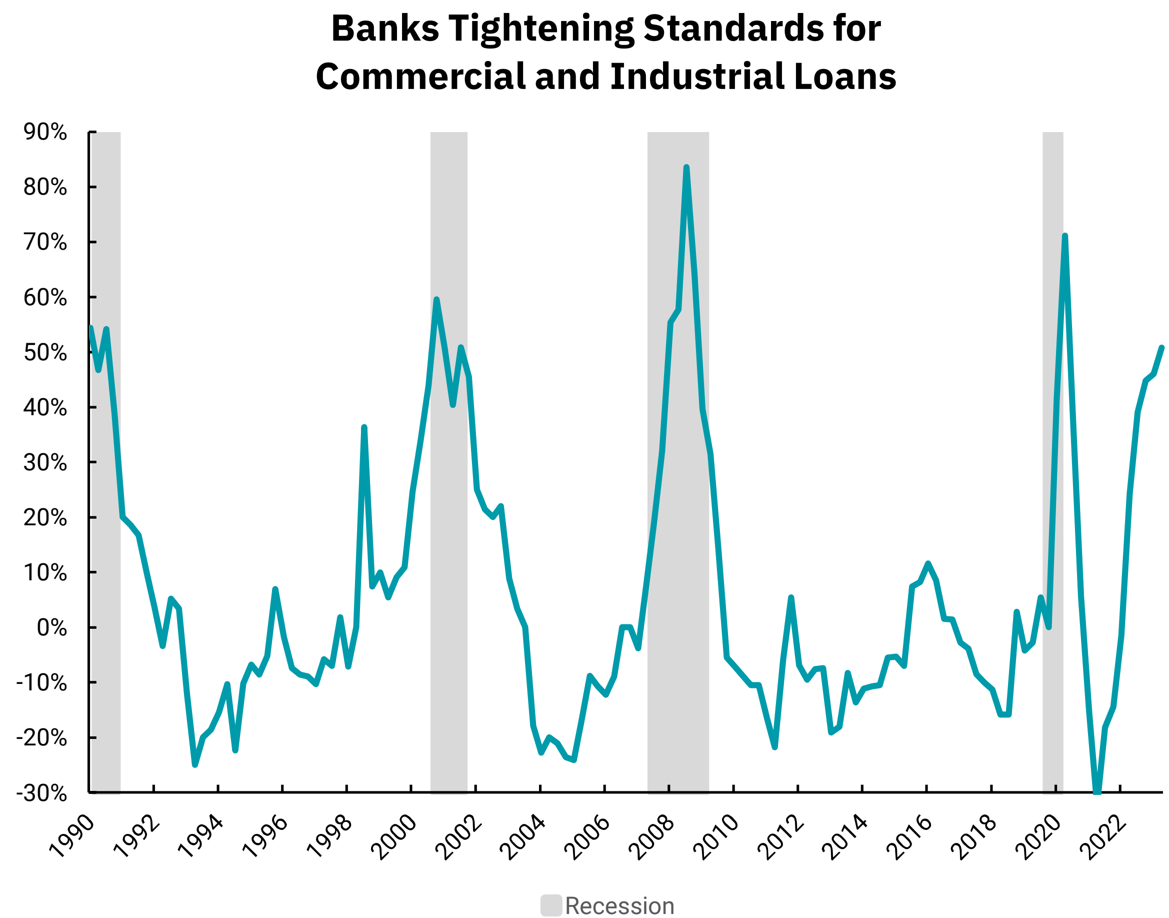
- Despite the failure of some banks earlier this year, bank lending itself remains healthy.
- In the face of higher interest rates, bank lending has increased and recently broken out to a new high for 2023.
- If the demand for loans remains solid, the economy should continue to grow.



Source: Renaissance Macro Research. Data as of Aug. 31, 2023.

Business - Tightening lending standards

- Banks have begun to tighten lending standards, possibly reducing companies' access to capital.
- If lending declines, business and consumer spending could slow, potentially resulting in an economic contraction.
- Supply and demand for credit will be critical in the coming quarters and will help determine whether economic growth continues to be positive.



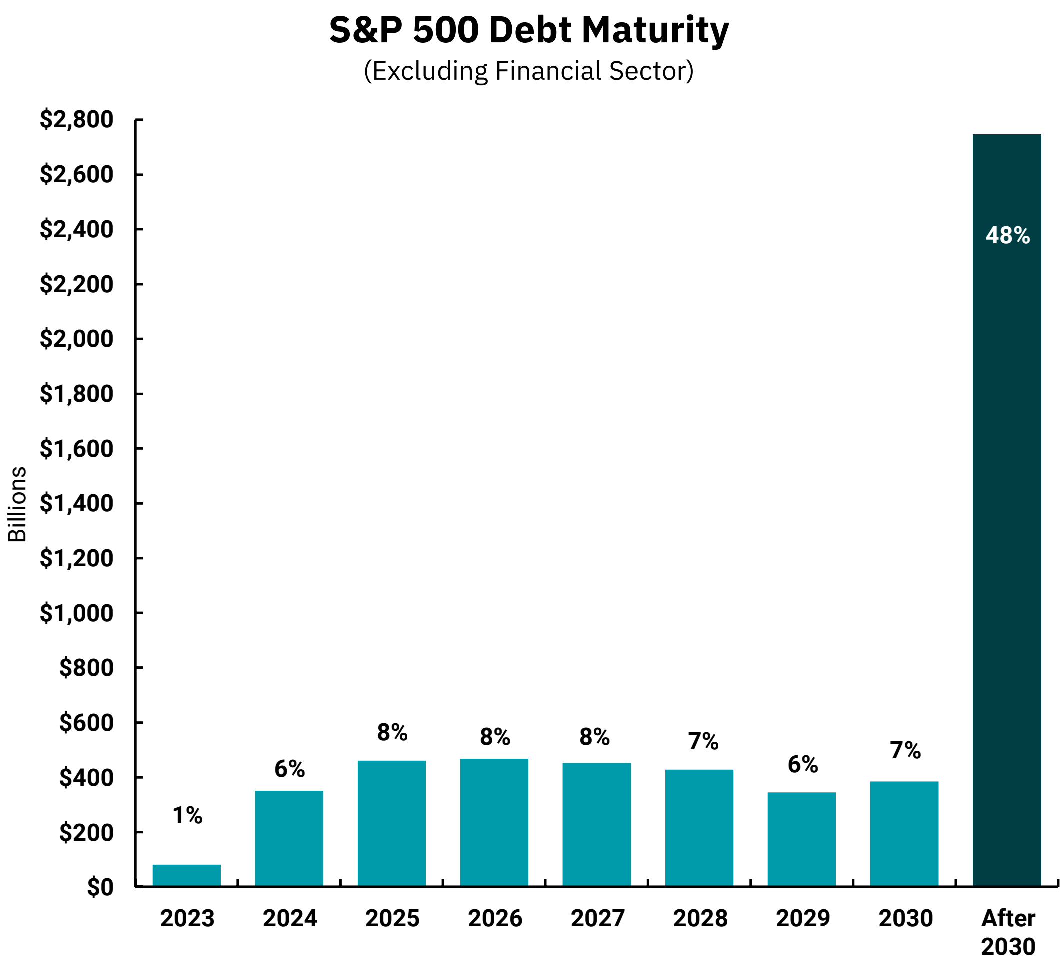
Source: Federal Reserve Bank of St. Louis. Data as of Aug. 31, 2023.

Business – Debt maturity profile

- S&P 500 companies refinanced their debt structure when interest rates were low and now have debt servicing costs significantly below the cost the government pays to borrow ten years out.

- Not only is the typical interest rate being paid by large companies low, but large companies have also extended the maturity profile of their debt obligations.

- Nearly half of the debt incurred by large companies does not become due until after 2030.



Source: Refintiv. Data as of Aug. 31, 2023.

Policy response

1 Core CPI remains high

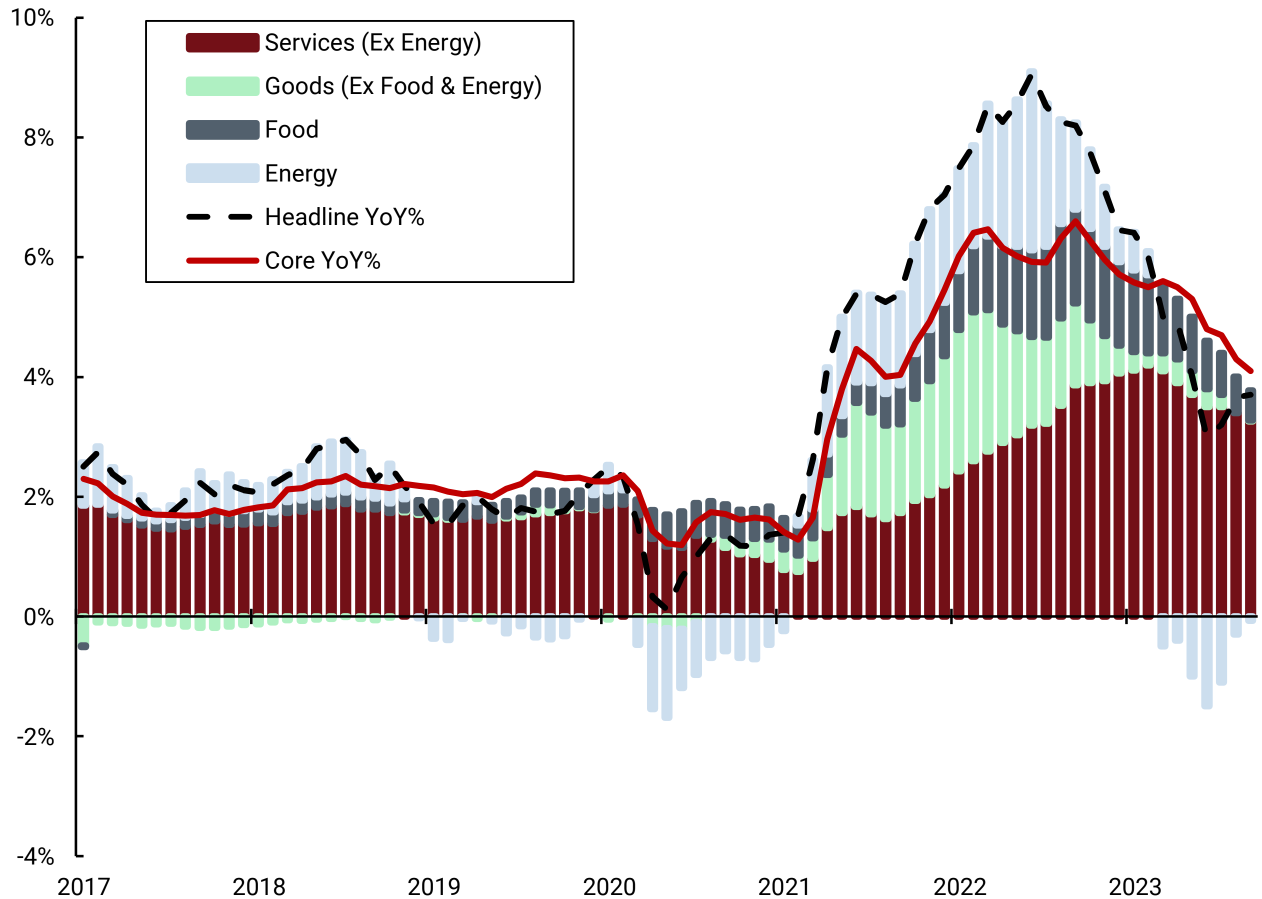
2 Tight monetary policy

3 Yield curve inversion

CPI remains elevated

- Headline inflation is moderating rapidly but is still above prior peaks in the past 30 years.
- Core inflation remains elevated, with wage pressure driving higher prices.
- The Federal Reserve is 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.

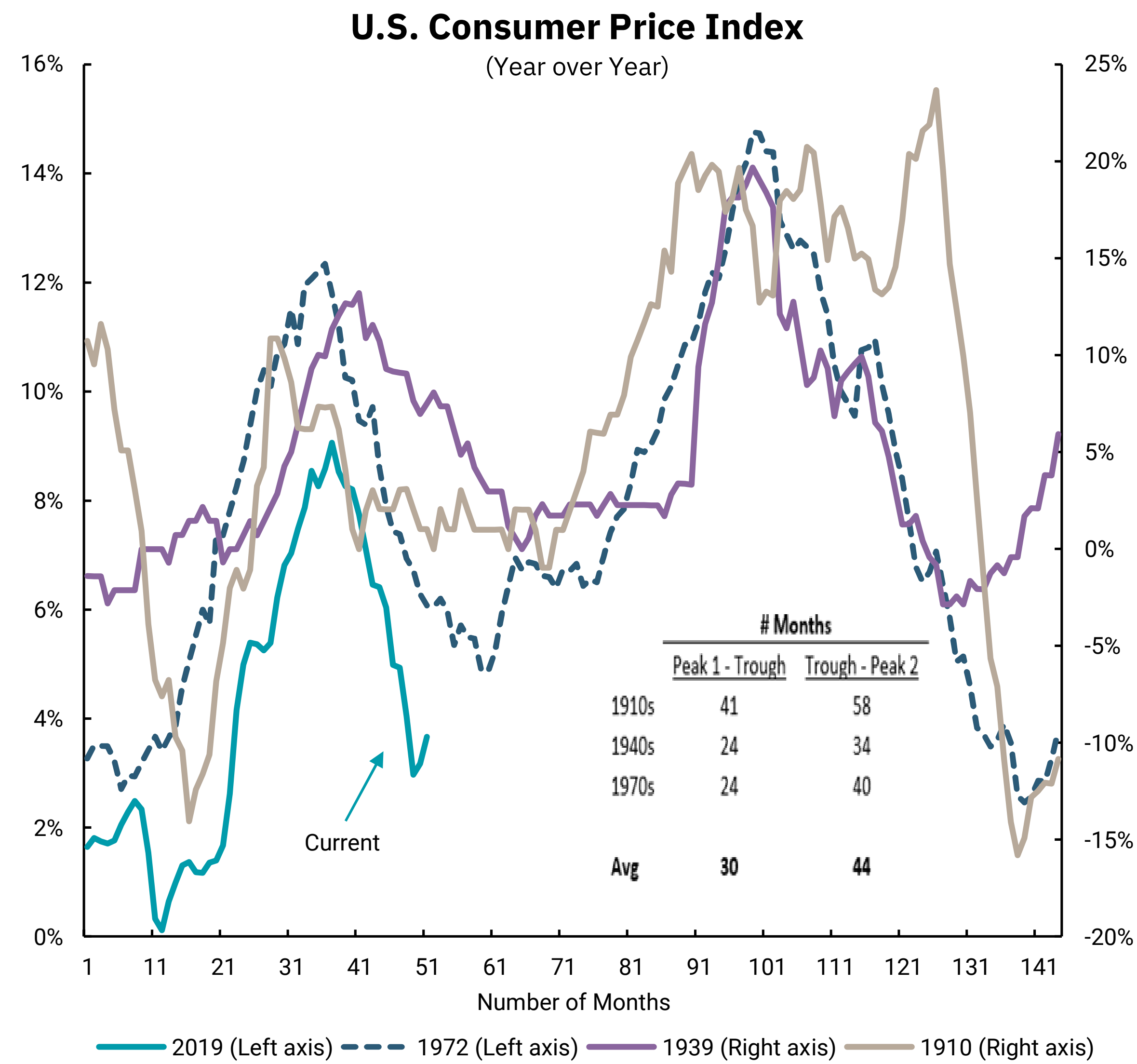
Consumer Price Index
Headline vs. Core



Source: Bureau Labor and Statistics. Data as of Oct. 12, 2023.

Inflation waves 1910s, 1940s and 1970s

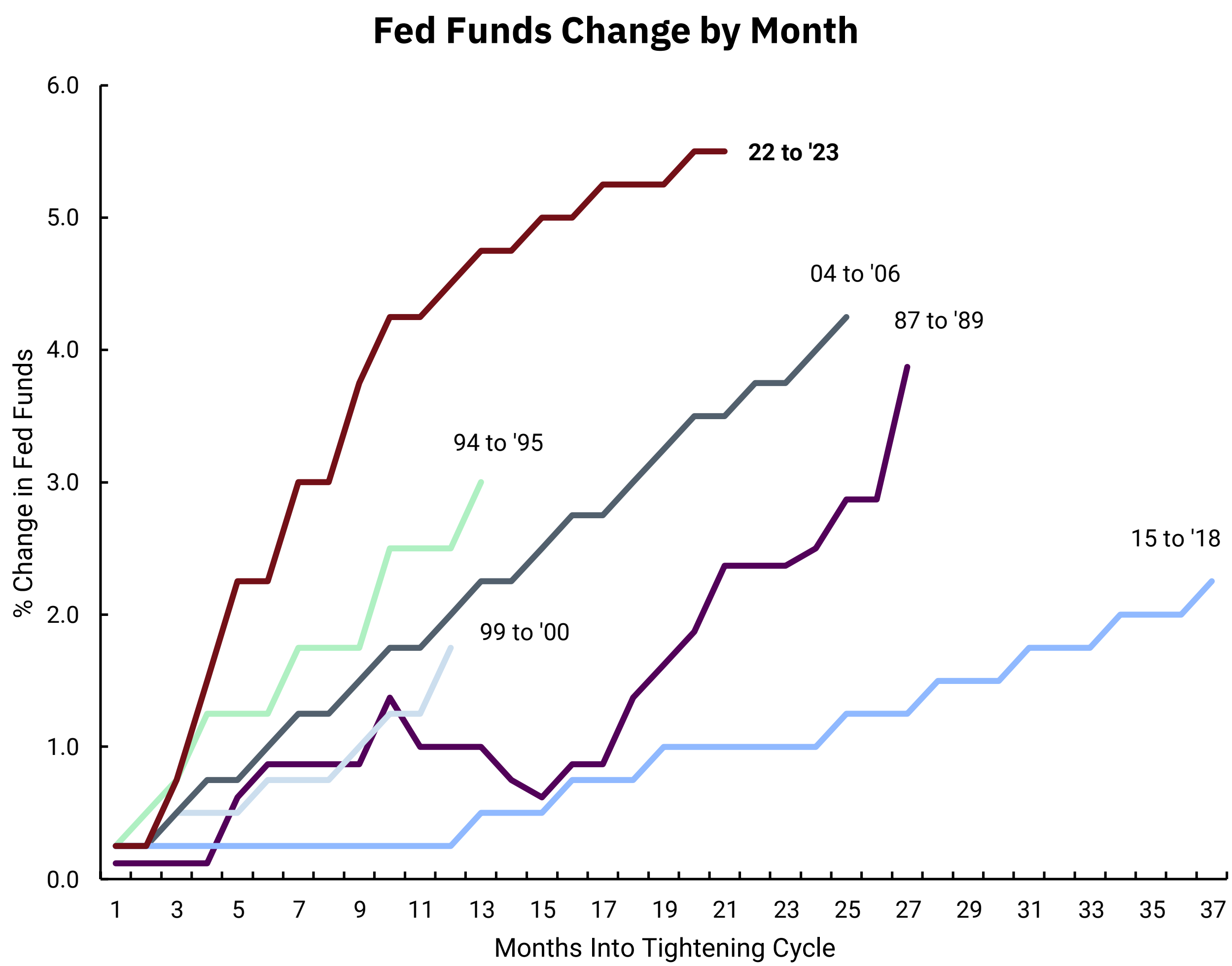
- Historically, the U.S. has experienced many waves of inflation.
- Overlaying some of the prior cycles of inflation shows that initial peaks and drawdowns have only been the beginning of the inflation cycle.
- Recent inflation data shows an additional tick upward, similar to prior inflationary cycles.



Source: Strategas. Data as of Aug. 31, 2023.

Rising rates may stifle demand

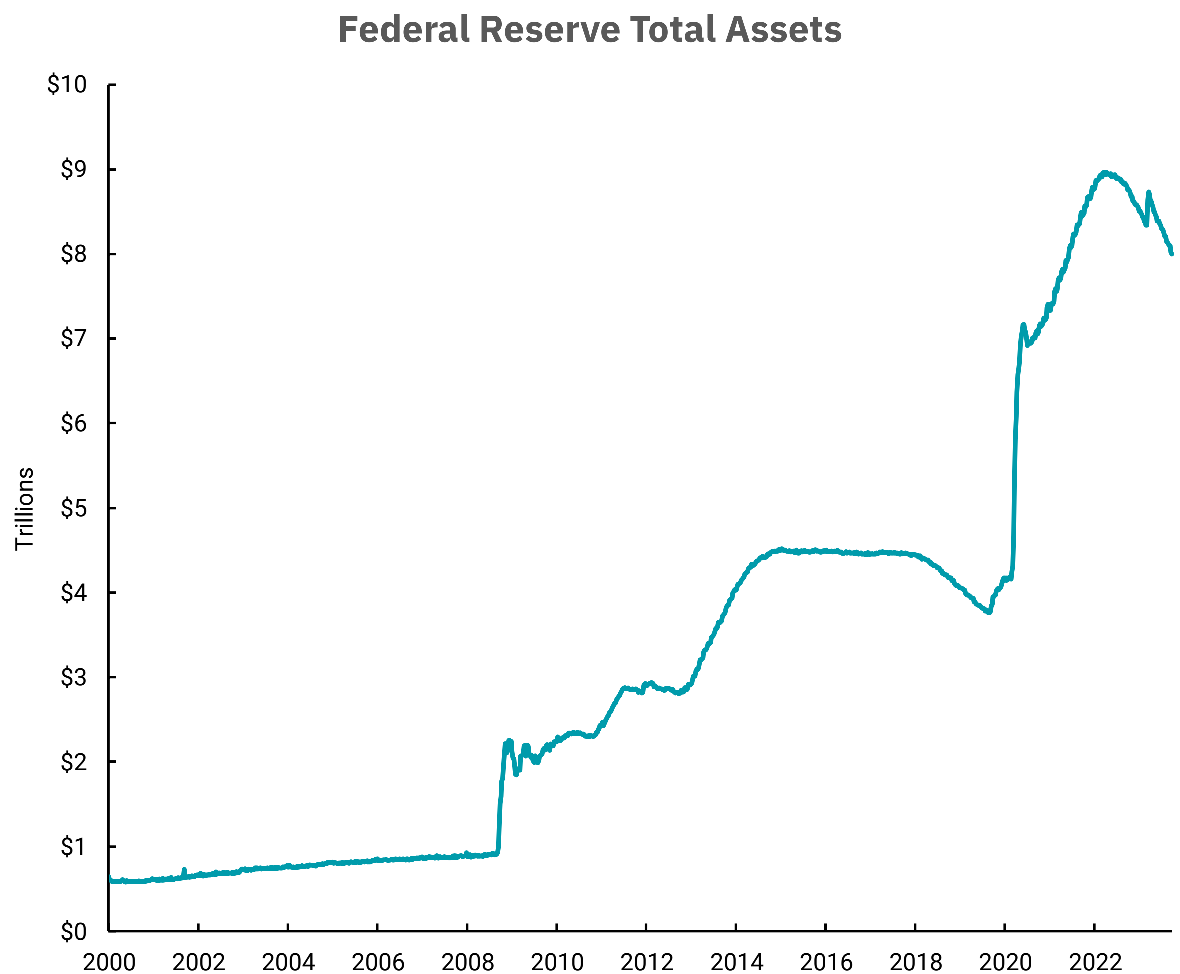
- Financial conditions have tightened faster than they have in 40 years.
- The Federal Reserve has now raised rates to 5.25-5.50%.
- Despite rate increases, economic growth remains positive, and inflation remains above target.
- Additional rate increases might still be possible.



Source: Bloomberg. Data shown as of Sep. 30, 2023.

The Fed balance sheet has peaked

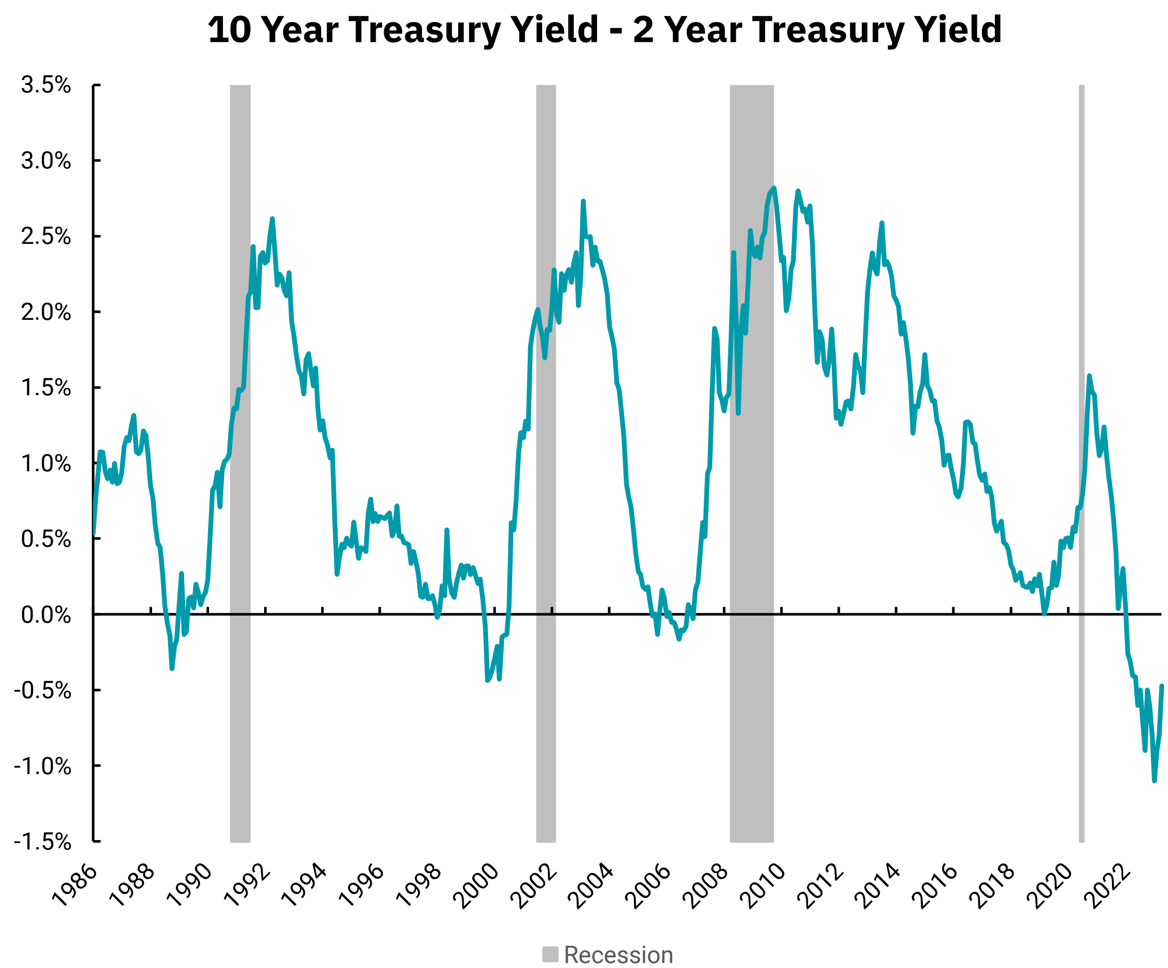
- After years of balance sheet expansion, the Federal Reserve is shrinking its balance sheet.
- In response to a bank run in March 2023, the Fed increased its lending of reserves, reversing some of its balance sheet declines.
- If inflation remains firm, the Fed may accelerate its balance sheet reduction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



Source: Bloomberg. Data shown as of Sep. 30, 2023.

Yield curve inversion is significant

- The 2 year -10 year 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, so an inverted yield curve is something we are watching with great interest, given the possibility of an economic slowdown.



Source: Bloomberg. Data shown as of Sep. 30, 2023.

Market pulse

1 Higher fixed income yields

2 Equity market valuation

3 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.
- One note of caution is that credit spreads remain subdued and may have the potential to widen if a recession does occur.

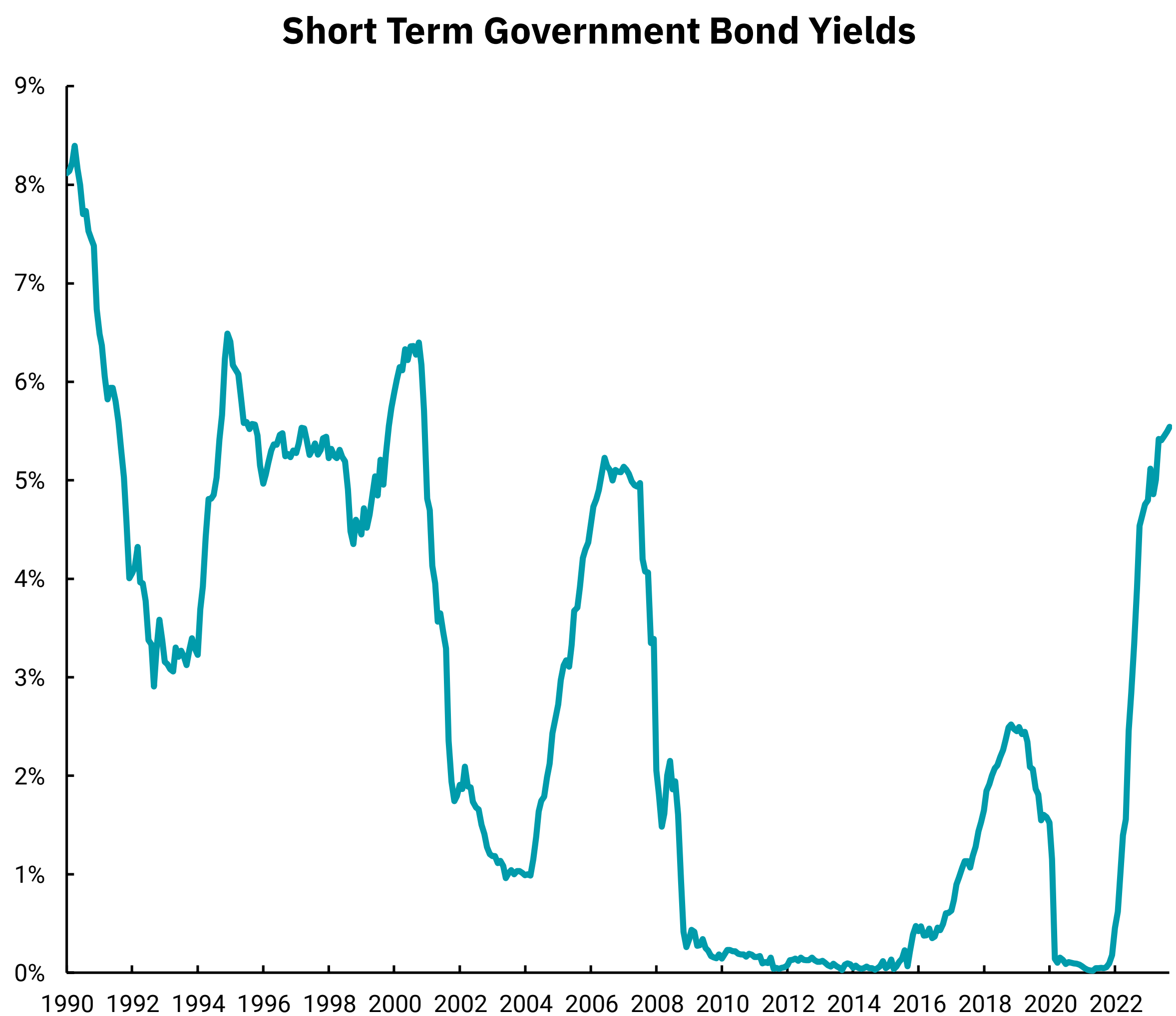


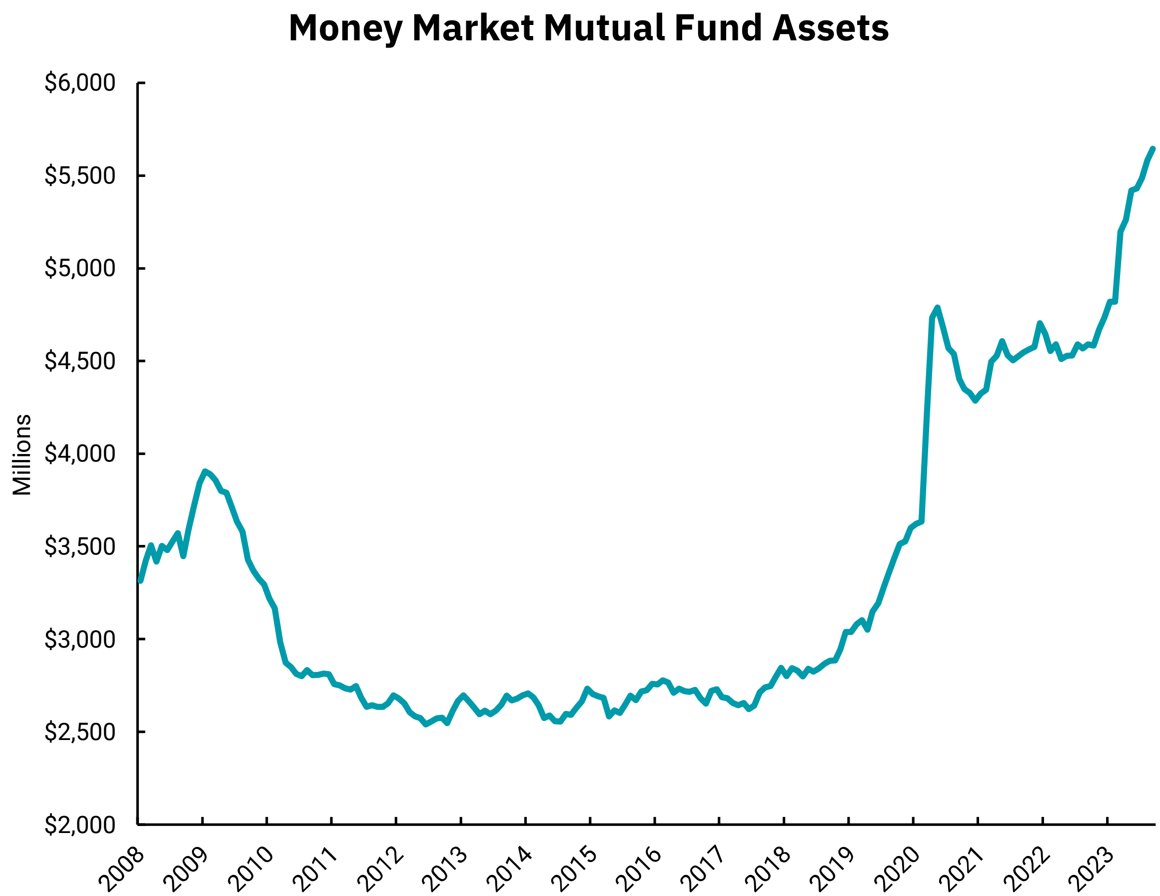
Chart depicts 6 month generic government bonds.
Source: Bloomberg. Data shown as of Sep. 30, 2023.

Yield is everywhere now

- With short yields above 5%, investors are flocking to money market mutual funds, Treasury bills and CDs.

- System wide, domestic bank deposits have stabilized.

- M2 growth has turned negative but the “stock” of money in the economy is still very high.



Source: Bloomberg. Data shown as of Sep. 30, 2023.

Industry concentration

- S&P 500 index returns are largely driven by the highly weighted components of the index.
- Over 90% of the S&P 500 market capital gains this year have been driven by just 10 companies, with five stocks accounting for nearly 65%.
- The level of performance dispersion between the Dow Jones, the S&P 500 and the NASDAQ is material.

Megacap Tech Stocks	1 Month Total Return	3 Month Total Return	YTD Total Return
NVDA	-6.90%	15.00%	197.76%
AAPL	-12.73%	-3.28%	32.33%
MSFT	-5.80%	-3.65%	32.65%
META	-5.77%	13.41%	149.47%
AMZN	-4.91%	5.42%	51.33%
TSLA	-6.44%	22.70%	103.13%
GOOGL	-1.40%	6.50%	48.32%
GOOG	-0.95%	6.87%	48.60%
AVGO	-7.06%	3.93%	51.27%
ADBE	-6.64%	22.05%	51.52%
AMD	-10.12%	-13.02%	58.75%

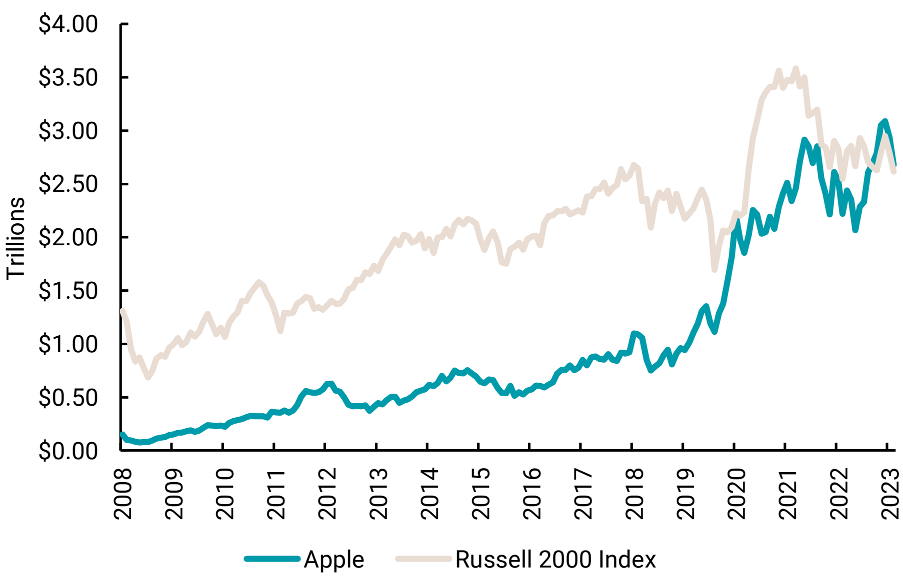
Source: Bloomberg. Data shown as of Sep. 30, 2023.

Market narrowness

- As the market continues its rise, much of the returns have been driven by mega-cap tech stocks.
- Apple now has a market cap of $3 trillion, exceeding the entire market cap of the Russell 2000.
- Artificial intelligence has lifted technology stocks in hopes of strong uptake and massive productivity improvement.

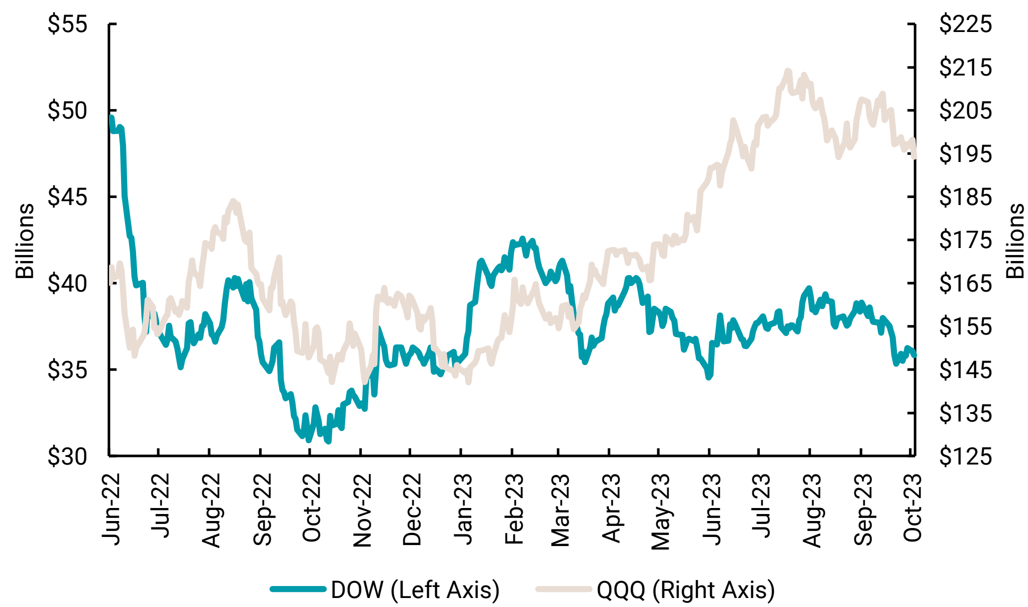
Apple Stock vs. Russell 2000 Index

(Market Capitalization)



Dow Jones Industrial Average vs. QQQ Index

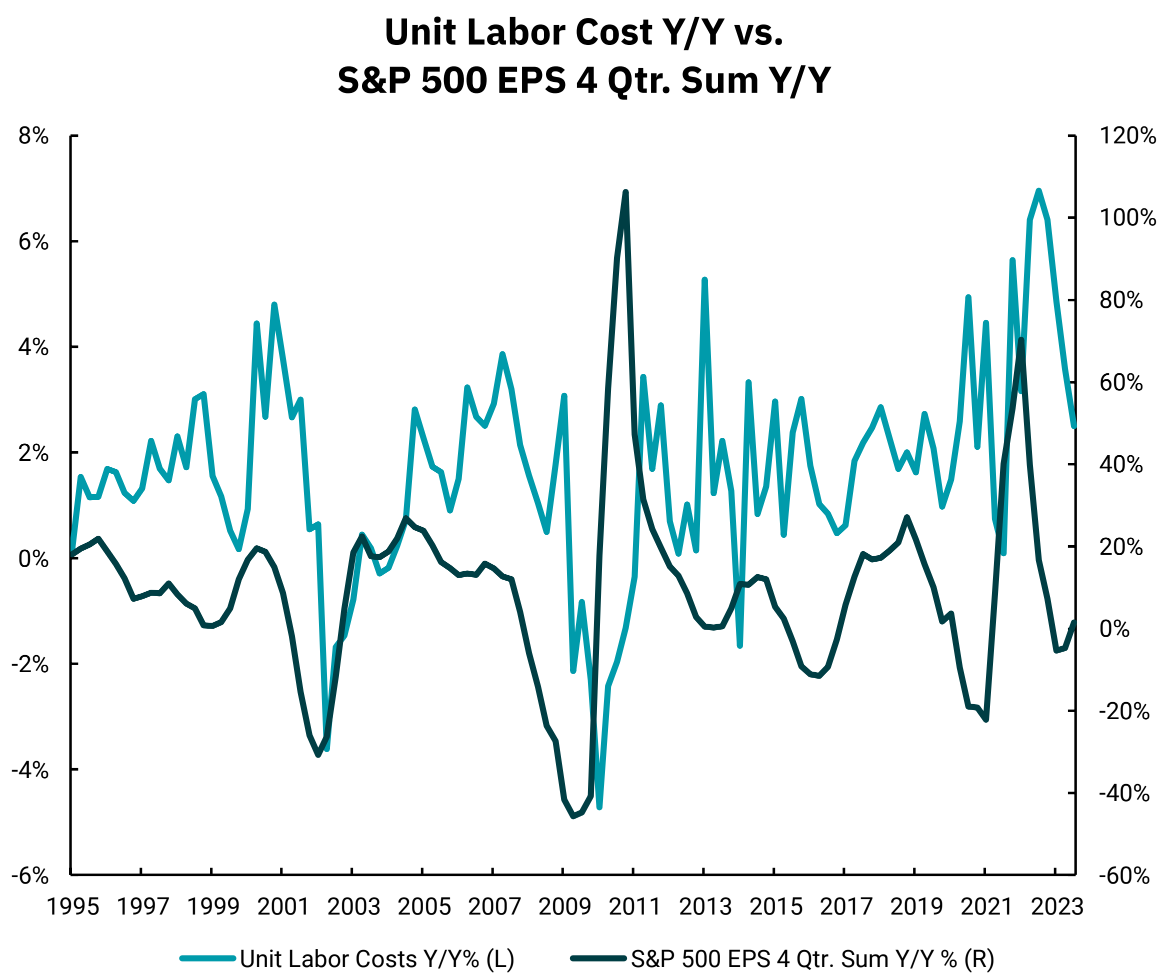
(Market Capitalization)



Source: Bloomberg. Data shown as of Sep. 30, 2023.

Wage pressure remains high

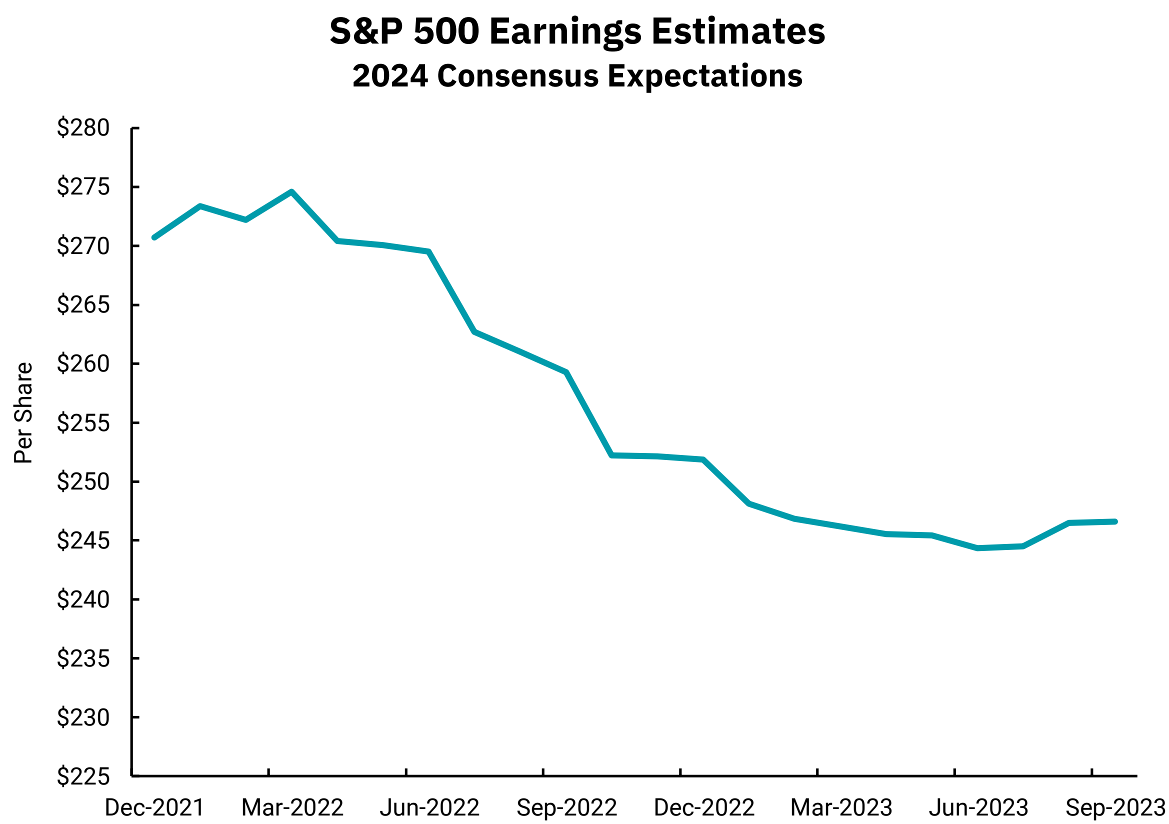
- Wages continue to increase, and historically, earnings growth has declined as wages rise.
- With unit labor costs increasing and consumer spending slowing, margins are at risk for most operating businesses.
- Lower margins will impact earnings.
- The market is not priced for a decline in earnings as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



Source: Cornerstone. Data shown as of Jun. 30, 2023.

S&P 500 forward earnings per share

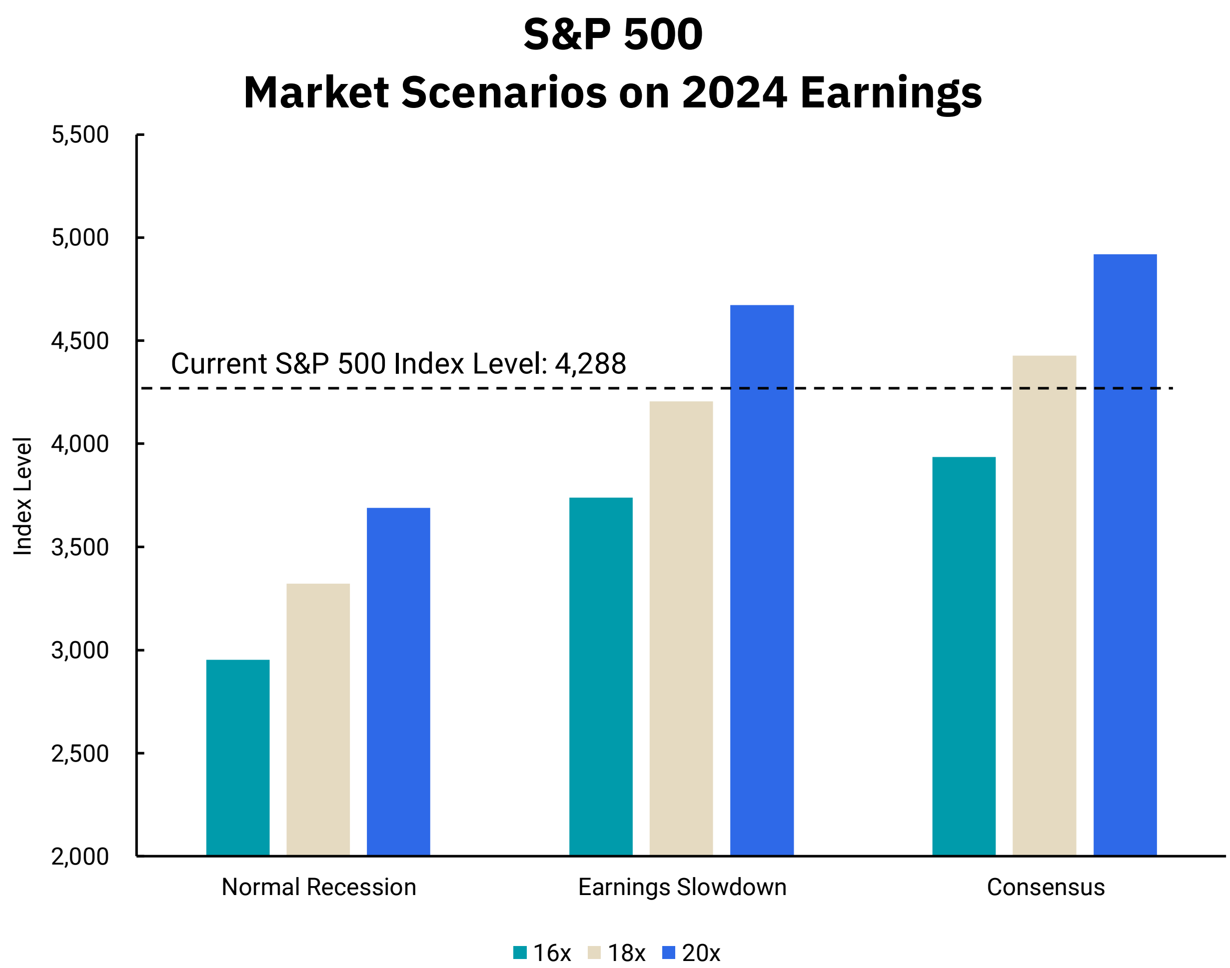
- Surprisingly, earnings for 2023 have held up. we have now begun turning our heads toward 2024 earnings.
- Currently, expectations are for S&P 500 companies to deliver approximately $250 per share in earnings for next year.
- Standalone earnings expectations are important, but where does that put the markets from a valuation perspective?



Source: FactSet. Data shown as of Sep. 22, 2023.

U.S. equity 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 Sep. 22, 2023. S&P 500 Index Level as of Sep. 30, 2023.
Values assume consensus earnings per share (EPS) of $246 for 2024, $233.70 assuming an earnings slowdown in 2024, and $184.50 assuming a normal recession in 2024.

Market pulse summary

1 As interest rates rise, we see pockets of opportunity emerging in the U.S. fixed income market.

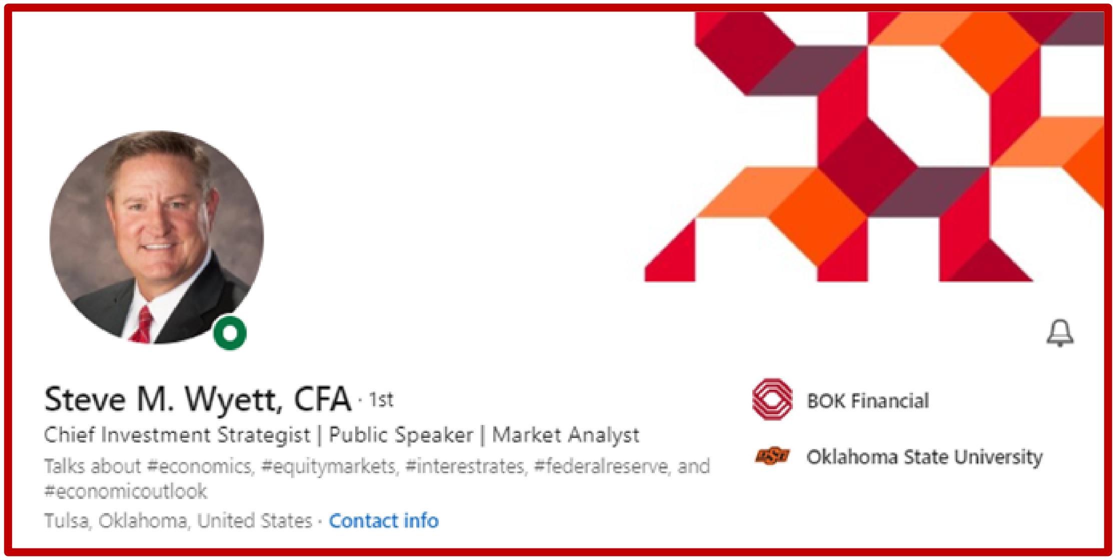
2 Equity valuations, such as the price-to-earnings ratio, are somewhat elevated when compared to historical norms.

3 One of the keys to determining the outlook for the equity markets is earnings and whether companies can hold the line on profit margins.

4 The federal debt may begin to crowd out some investments and is a growing risk to financial market stability.

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

Follow me on LinkedIn



www.linkedin.com/in/steve-m-wyett-cfa/

If sending a connection request, please include a message so I know where we're connecting from.

BOK FINANCIAL

BOK Financial Investment Management

Investment expertise. Competitive results.

Four centers of expertise. More than 70 experienced investment professionals. Collaborating as one team.

Strategic Investment Advisors
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.

Cavanal Hill Investment Management
Asset management

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

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

Alternative Investments
Comprehensive alternative services

Provides access to a variety of non-traditional asset classes and strategies delivered through limited partnerships.

- Private equity.
- Real assets.
- Hedge funds.
- Semi-liquid or interval funds.
- Liquid alternatives.

Investment Management Communication

A dedicated team providing education and insight into the BOK Financial Investment Management process as well as current economic and market conditions for both internal and external audiences.

- Regular market commentary.
- Timely response to changing market conditions.

77 investment professionals

19 years average industry experience

10 years average tenure at BOKF

20 CFA® Charterholders

Managing money since **1949**

$103.6 billion assets under management/ advisement*

*The Investment Management team is part of the BOK Financial Wealth Management division, which had $103.6 billion in assets under management and custody as of 6/30/2023.

Broad market overview

Returns (%)	1 Mo.	3 Mo.	YTD	1 Yr.	3 Yrs.	5 Yrs.	10 Yrs.
Capital Markets							
DJ Industrial Average TR USD	-3.42	-2.10	2.73	19.18	8.62	7.14	10.79
NASDAQ 100 TR USD	-5.02	-2.86	35.37	35.31	9.70	15.07	17.64
Russell 3000 TR USD	-4.76	-3.25	12.39	20.46	9.39	9.14	11.28
S&P 500 TR USD	-4.77	-3.27	13.07	21.62	10.16	9.92	11.92
Domestic Large Cap Equities							
Russell 1000 TR USD	-4.70	-3.15	13.01	21.19	9.54	9.63	11.63
Russell 1000 Value TR USD	-3.86	-3.16	1.79	14.44	11.06	6.23	8.45
Russell 1000 Growth TR USD	-5.44	-3.13	24.98	27.72	7.98	12.42	14.48
Domestic Mid Cap Equities							
Russell Mid Cap TR USD	-5.02	-4.68	3.91	13.45	8.10	6.38	8.99
Russell Mid Cap Value TR USD	-5.09	-4.46	0.54	11.05	10.99	5.18	7.92
Russell Mid Cap Growth TR USD	-4.87	-5.22	9.88	17.47	2.61	6.97	9.95
Domestic Small Cap Equities							
Russell 2000 TR USD	-5.89	-5.13	2.54	8.93	7.17	2.40	6.65
Russell 2000 Value TR USD	-5.21	-2.96	-0.53	7.84	13.33	2.59	6.19
Russell 2000 Growth TR USD	-6.60	-7.32	5.24	9.59	1.09	1.55	6.72
International Equities							
MSCI EAFE NR USD	-3.42	-4.11	7.08	25.65	5.76	3.24	3.83
MSCI EAFE Value NR USD	-0.85	0.59	9.92	31.51	11.12	2.81	2.98
MSCI EAFE Growth NR USD	-5.99	-8.64	4.31	20.00	0.37	3.23	4.42
MSCI ACWI Ex USA NR USD	-3.16	-3.77	5.34	20.39	3.74	2.58	3.35
MSCI EM NR USD	-2.62	-2.93	1.82	11.70	-1.73	0.55	2.07
Cash & Fixed Income							
FTSE Treasury Bill 3 Mon USD	0.45	1.38	3.80	4.71	1.78	1.74	1.12
Bloomberg US Agg Bond TR USD	-2.54	-3.23	-1.21	0.64	-5.21	0.10	1.13
Bloomberg Gbl Agg Ex USD TR Hdg USD	-1.13	-0.78	2.80	2.99	-2.63	0.83	2.30
Bloomberg US Corporate High Yield TR USD	-1.18	0.46	5.86	10.28	1.76	2.96	4.24
Alternatives							
MSCI US REIT GR USD	-6.78	-7.02	-1.95	3.18	5.70	2.82	5.94
Bloomberg Commodity TR USD	-0.69	4.71	-3.44	-1.30	16.24	6.13	-0.75

Source: Morningstar. Data shown as of Sep. 30, 2023.

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%	24.98%
34.76%	13.45%	1.38%	17.34%	30.21%	0.01%	31.49%	19.96%	27.60%	-9.76%	13.07%
33.48%	13.22%	1.36%	17.13%	25.03%	-1.51%	30.54%	18.40%	25.16%	-11.19%	7.08%
32.53%	13.05%	0.55%	13.80%	21.83%	-2.08%	26.54%	18.31%	22.58%	-13.01%	5.86%
32.39%	8.79%	-0.81%	11.96%	18.52%	-4.38%	25.52%	17.10%	14.82%	-14.45%	3.91%
22.78%	5.97%	-2.44%	11.19%	14.65%	-8.27%	22.01%	7.82%	11.26%	-17.32%	2.80%
7.44%	4.89%	-3.83%	7.08%	13.66%	-9.06%	18.44%	7.51%	5.28%	-18.11%	2.54%
1.18%	2.45%	-4.41%	4.90%	7.50%	-11.01%	14.32%	7.11%	-1.40%	-20.09%	1.82%
-2.02%	-2.19%	-4.47%	2.65%	3.54%	-13.79%	8.72%	3.94%	-1.54%	-20.44%	1.79%
-2.60%	-4.90%	-14.92%	1.00%	2.48%	-14.58%	7.57%	2.80%	-2.54%	-29.14%	-1.21%

Best Performing

Worst Performing

S&P 500

Large Cap Value

Large Cap Growth

Mid Cap Blend

Small Cap Blend

Foreign Bonds

Foreign Stocks

Emerging Markets

High Yield

Bonds

Source: Morningstar. Data shown as of Sep. 30, 2023.

Equity returns across periods

1 Month

	Value	Core	Growth
Large	-3.9	-4.8	-5.4
Mid	-5.1	-5.0	-4.87
Small	-5.2	-5.9	-6.6
Int'l	-1.0	-3.2	-5.3

1 Year

	Value	Core	Growth
Large	14.4	21.62	27.7
Mid	11.05	13.4	17.5
Small	7.84	8.9	9.6
Int'l	25.2	20.4	15.8

3 Year

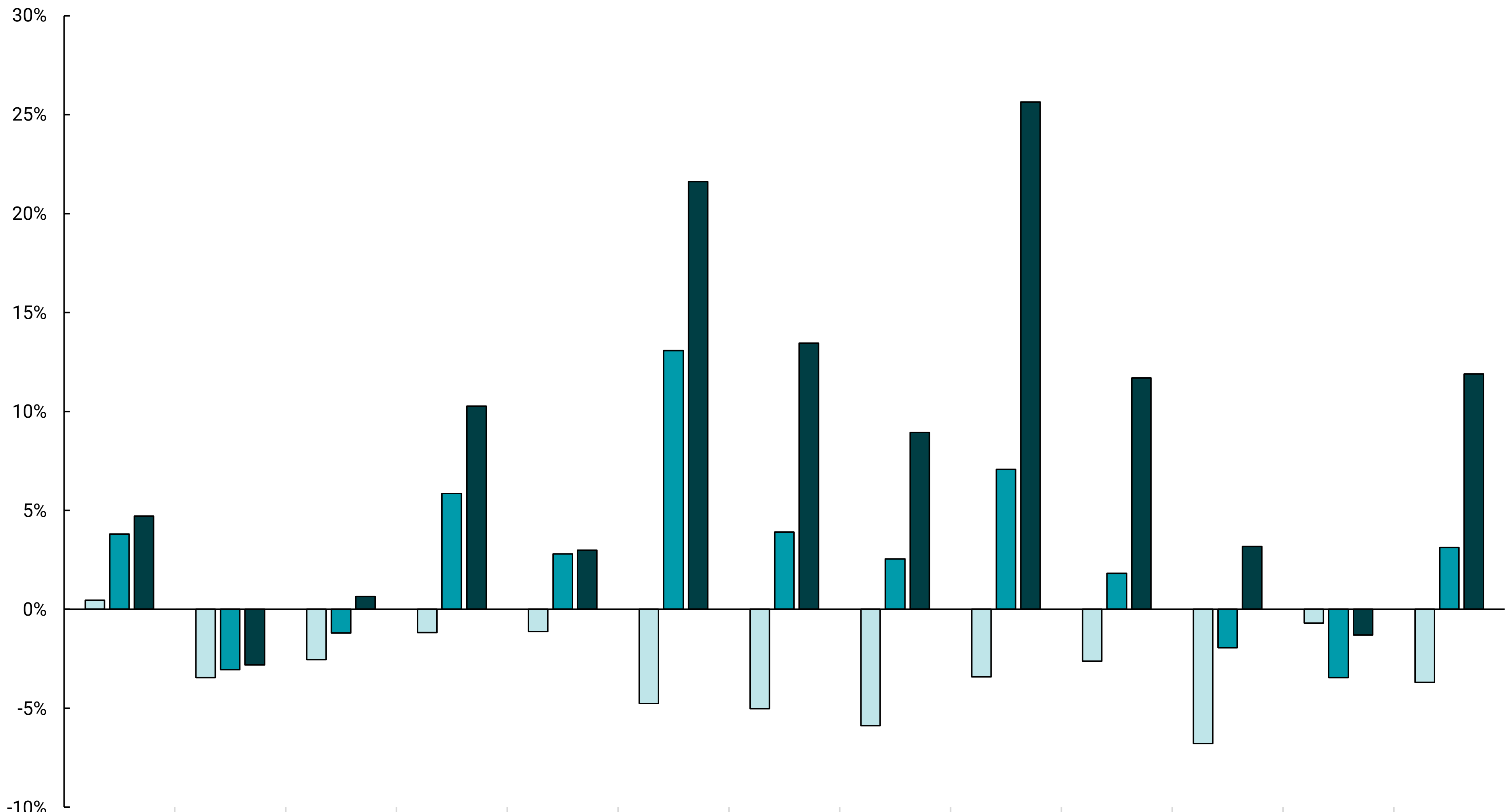
	Value	Core	Growth
Large	11.1	10.2	8.0
Mid	11.0	8.1	2.6
Small	13.3	7.2	1.1
Int'l	9.6	3.7	-1.9

5 Year

	Value	Core	Growth
Large	6.23	9.9	12.42
Mid	5.2	6.4	7.0
Small	2.59	2.40	1.6
Int'l	2.3	2.6	2.5

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 Sep. 30, 2023.

Market summary



	Cash	10-Yr Treasury	US Agg Bonds	High Yield	Intl. Bonds	Large Cap	Mid Cap	Small Cap	Intl. Dev	Emerging Markets	REIT	Commodity	Gold
1 Month	0.45%	-3.44%	-2.54%	-1.18%	-1.13%	-4.77%	-5.02%	-5.89%	-3.42%	-2.62%	-6.78%	-0.69%	-3.70%
YTD	3.80%	-3.04%	-1.21%	5.86%	2.80%	13.07%	3.91%	2.54%	7.08%	1.82%	-1.95%	-3.44%	3.13%
1 Year	4.71%	-2.81%	0.64%	10.28%	2.99%	21.62%	13.45%	8.93%	25.65%	11.70%	3.18%	-1.30%	11.89%

Source: Morningstar. Data shown as of Sep. 30, 2023.

Disclosures

The information provided herein was prepared by the Investment Management team of BOKF, NA. BOKF, NA is the bank subsidiary of BOK Financial Corporation (BOKF), a financial services holding company (NASDAQ:BOKF). BOKF offers trust and wealth management services through its subsidiaries including BOKF, NA (and its banking divisions Bank of Oklahoma, Bank of Texas, Bank of Albuquerque, and BOK Financial) and investment advisory services through its non-bank subsidiaries, Cavanal Hill Investment Management, Inc. and BOK Financial Private Wealth, Inc., each an SEC registered investment adviser, and BOK Financial Securities, Inc., also an SEC registered investment adviser and registered broker/dealer, member FINRA/SIPC (each an “Investment Affiliate”) (collectively, “BOKF”). Distribution of this document is intended for informational purposes. Information contained herein has been obtained from sources believed to be reliable, but not guaranteed. The opinions expressed herein reflect the judgment of the author(s) as of the date prepared and are subject to change without notice and are not a complete analysis of any sector, industry, or security regardless of the date on which the reader may receive or access the information. The information provided is intended to be educational in nature and not advice relative to any investment or portfolio offered through an Investment Affiliate, and does not constitute any form of regulated financial, legal, or tax advice, or other regulated financial service. The content provided herein is not a solicitation for the investment management services of any Investment Affiliate, nor is it intended to constitute a recommendation for, or advice to, any specific person on behalf of any Investment Affiliate, as it does not take into account the financial objectives, situation, or needs of any specific person. This information is provided on the understanding that the recipient has sufficient knowledge and experience to be able to understand and make their own evaluation of said content, any risks associated therewith, and any related legal, tax, accounting, or other material considerations. Recipients should not solely rely on this material in making any future investment decision. To the extent that the recipient has any questions regarding the applicability of any specific issue discussed above to their specific portfolio or situation, they are encouraged to consult with a qualified lawyer, accountant, or financial professional.

This document may contain forward-looking statements that are based on management's beliefs, assumptions, current expectations, estimates, and projections, the securities and credit markets and the economy in general. Words such as "anticipates," "believes," "estimates," "expects," "forecasts," "plans," "projects," variations of such words and similar expressions are intended to identify such forward-looking statements. Management judgments relating to and discussion of the value and potential future value or performance of any security, group of securities, type of security or market segment involve judgments as to expected events and are inherently forward-looking statements. These statements are not guarantees of future performance. Likewise, past performance is not a guarantee of future results. This content is prepared for the use of the Investment Affiliates and their clients and prospective clients, and may not be reproduced, redistributed, retransmitted or disclosed, or referred to in any publication, in whole or in part, or in any form or manner, without the express written consent of BOKF or BOKF, NA. Any unauthorized use or disclosure is prohibited. Receipt and review of this document constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein. This report should not be distributed without the attached disclosures, and is considered incomplete if the disclosures are not attached.

Charts are for illustrative purposes only and not indicative of any actual investment.

Asset allocation, diversification, and rebalancing do not ensure a profit or protect against loss in declining markets. Investing involves risks, including possible loss of principal, and there is no guarantee that investment objectives will be achieved.

INVESTMENT AND INSURANCE PRODUCTS ARE: NOT FDIC INSURED | NOT GUARANTEED BY THE BANK OR ITS AFFILIATES | NOT DEPOSITS | NOT INSURED BY ANY FEDERAL GOVERNMENT AGENCY | MAY LOSE VALUE

BOK FINANCIAL