

Economic and Market Update

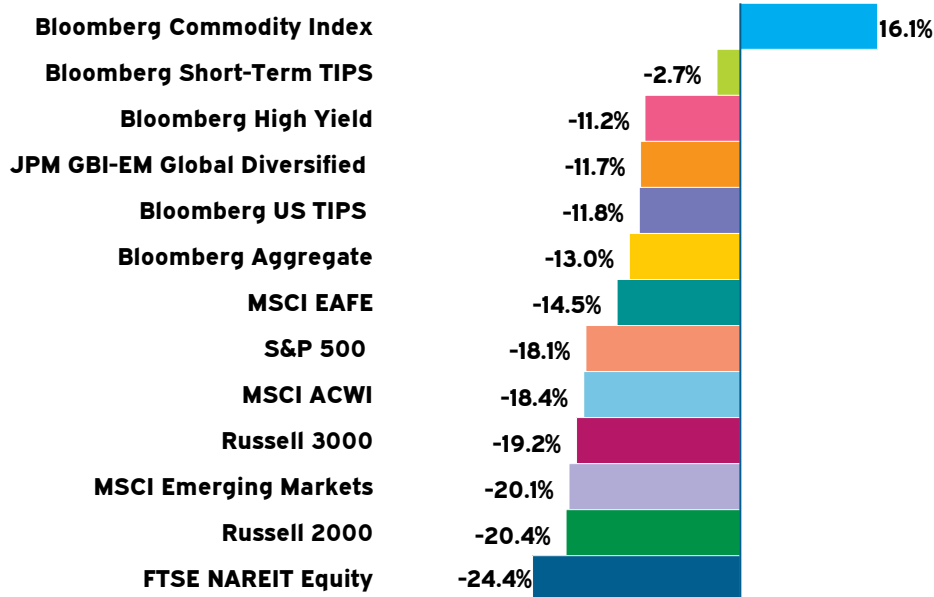
July 2023 Report

Commentary

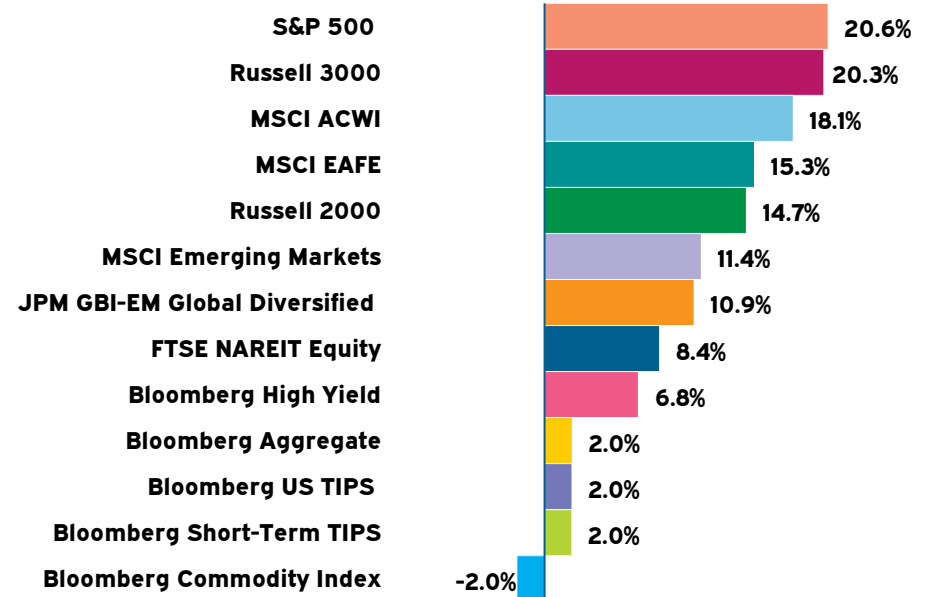
- Riskier assets continued to gain in July as economic data remained resilient while inflation receded. Except for commodities, most public market asset classes remained positive for the year, with US equities leading the way.
- After a pause in June, the Federal Reserve increased interest rates in July by 0.25% to a range of 5.25% - 5.5%, the highest level in over two decades. Markets are largely expecting that this will be the Fed's final rate increase.
 - US equity markets (Russell 3000 index) continued to rise in July (+3.8%), bringing the year-to-date gains to 20.3%. The technology sector remains the key driver of results this year, helped by artificial intelligence optimism.
 - Non-US developed equity markets also rose in July (MSCI EAFE +3.2%), but they continue to trail US markets year-to-date (15.3% versus 20.3%).
 - Emerging market equities had the strongest results in July, gaining 6.2%, driven by optimism over additional policy support in China. They continue to trail developed market equities year-to-date though, returning 11.4%, due partly to China's weak results for the period.
 - Generally, corporate bonds outperformed government bonds for the month on continued risk appetite. Overall, interest rates increased slightly in July, leading to a small decline in the broad US bond market (-0.1%). The index remains positive (+2.0%) year-to-date on declining inflation and expectations for the Fed to end their rate hikes soon.
- This year, the paths of inflation and monetary policy, slowing global growth, and the war in Ukraine will all be key.

Index Returns¹

2022



YTD



→ After a particularly difficult 2022, most public market assets are up thus far in 2023, led by developed market equities.

→ Risk sentiment has been supported by expectations that policy tightening could be ending soon, as inflation continues to fall, while growth has remained relatively resilient.

¹ Source: Bloomberg. Data is as of July 31, 2023.

Domestic Equity Returns¹

Domestic Equity	July (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	3.2	8.7	20.6	13.0	13.7	12.2	12.7
Russell 3000	3.6	8.4	20.3	12.6	13.1	11.4	12.1
Russell 1000	3.4	8.6	20.7	12.9	13.2	11.9	12.4
Russell 1000 Growth	3.4	12.8	33.4	17.3	12.2	15.2	15.5
Russell 1000 Value	3.5	4.1	8.8	8.3	14.1	8.0	9.0
Russell MidCap	4.0	4.8	13.3	8.7	11.8	8.8	10.1
Russell MidCap Growth	3.0	6.2	19.4	13.0	6.0	9.9	11.2
Russell MidCap Value	4.4	3.9	9.8	6.2	14.9	7.2	8.9
Russell 2000	6.1	5.2	14.7	7.9	12.0	5.1	8.2
Russell 2000 Growth	4.7	7.1	18.9	11.6	6.5	4.8	8.5
Russell 2000 Value	7.5	3.2	10.2	3.9	17.5	4.7	7.4

US Equities: Russell 3000 Index rose 3.6% in July and 20.3% YTD.

- Equity investors continue to express optimism that the Federal Reserve’s monetary tightening will not have serious impacts on earnings. Though corporate profits were down compared to a year ago, approximately 80% of S&P 500 companies that reported second quarter results in July exceeded earnings expectations.
- In contrast to the year-to-date trend, value stocks outperformed growth stocks in July, particularly in small cap, driven by outperformance in financials and energy. So far in 2023, growth has significantly outperformed value driven by optimism over artificial intelligence.
- Small cap stocks outperformed large cap stocks in July, but trail for the full year, again due to the strength of the technology sector. The July dynamic was driven partially by the outperformance of small cap banks after regulators announced higher capital requirements for larger banks.

¹ Source: Bloomberg. Data is as of July 31, 2023.

Foreign Equity Returns¹

Foreign Equity	July (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	4.1	2.4	13.9	13.4	7.1	3.9	4.7
MSCI EAFE	3.2	3.0	15.3	16.8	9.3	4.5	5.2
MSCI EAFE (Local Currency)	1.7	4.3	14.0	13.6	13.0	6.2	7.4
MSCI EAFE Small Cap	4.4	0.6	10.2	7.9	6.1	2.1	6.0
MSCI Emerging Markets	6.2	0.9	11.4	8.3	1.5	1.7	3.5
MSCI Emerging Markets (Local Currency)	5.3	1.7	11.1	8.6	3.0	3.7	6.1
MSCI China	10.8	-9.7	4.7	1.8	-9.9	-2.8	3.7

Foreign Equity: Developed international equities (MSCI EAFE) rose 3.2% in July bringing the YTD gains to 15.3%. Emerging market equities (MSCI EM) rose 6.2% in July, rising 11.4% YTD.

- International equities also had strong results in July, led by China and emerging markets more broadly.
- Japanese equities continued their steady rise, especially in the mid- and small-cap sectors. Eurozone and UK equities were broadly supported by falling inflation and solid corporate fundamentals.
- After a disappointing reopening of the economy, China’s government announced additional support to stimulate consumption and bolster the real estate sector, leading to double-digit gains for the month (10.8%). India underperformed as higher food costs kept inflation elevated.

¹ Source: Bloomberg. Data is as of July 31, 2023.

Fixed Income Returns¹

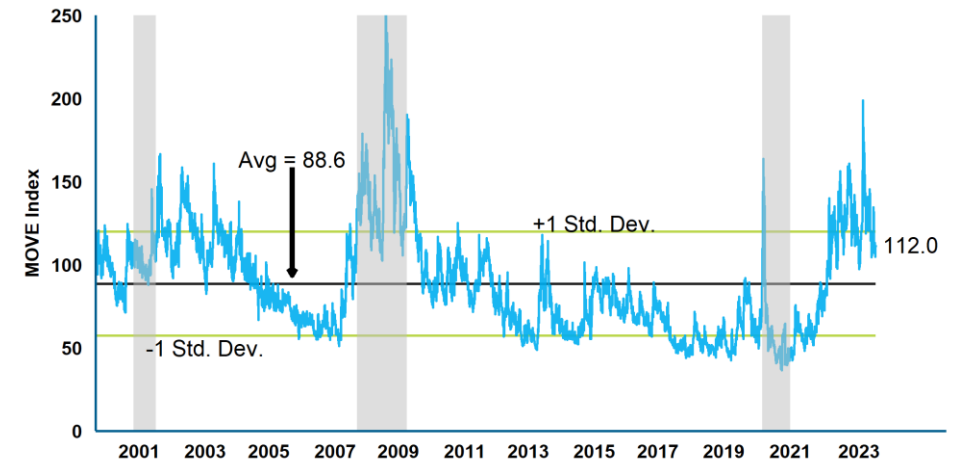
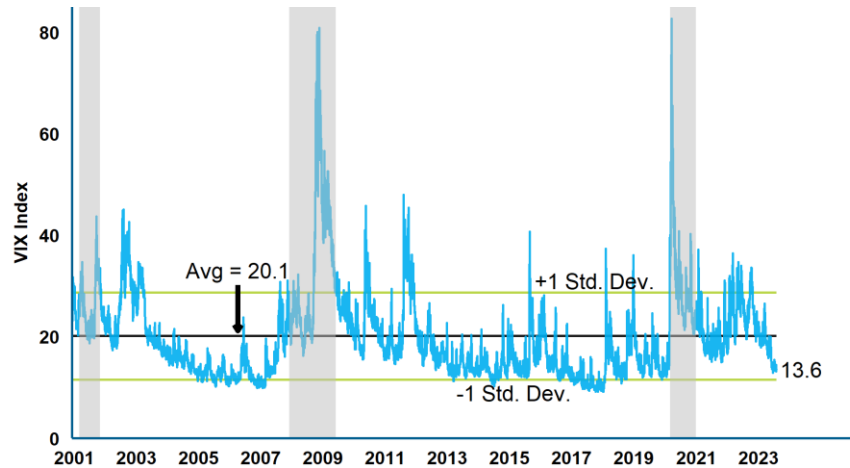
Fixed Income	July (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	0.1	-0.6	2.4	-2.4	-4.0	1.0	1.8	5.2	6.2
Bloomberg Aggregate	-0.1	-0.8	2.0	-3.4	-4.5	0.7	1.5	4.9	6.5
Bloomberg US TIPS	0.1	-1.4	2.0	-5.4	-0.8	2.6	2.0	4.6	6.9
Bloomberg Short-term TIPS	0.5	-0.7	2.0	-1.2	2.3	2.9	1.7	5.3	2.7
Bloomberg High Yield	1.4	1.7	6.8	4.4	2.0	3.4	4.4	8.3	4.0
JPM GBI-EM Global Diversified (USD)	2.9	2.5	10.9	14.3	-1.5	0.5	-0.2	6.5	5.0

Fixed Income: The Bloomberg Universal rose 0.1% in July remaining positive YTD (+2.4%), as inflation continues to decline, and yields remain high.

- In July, riskier bonds continued to outperform government bonds on optimism over a potential soft landing of the economy.
- The broad US bond market (Bloomberg Aggregate) declined slightly for the month (-0.1%) while the TIPS index, and the short-term TIPS index both posted small gains. All three indexes now have the same results so far in 2023.
- In the risk-on environment, high yield bonds rose 1.4% for the month, while emerging market bonds were the top performer, up 2.9%. The two asset classes remain the top performers for the year.

¹ Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of July 31, 2023. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.

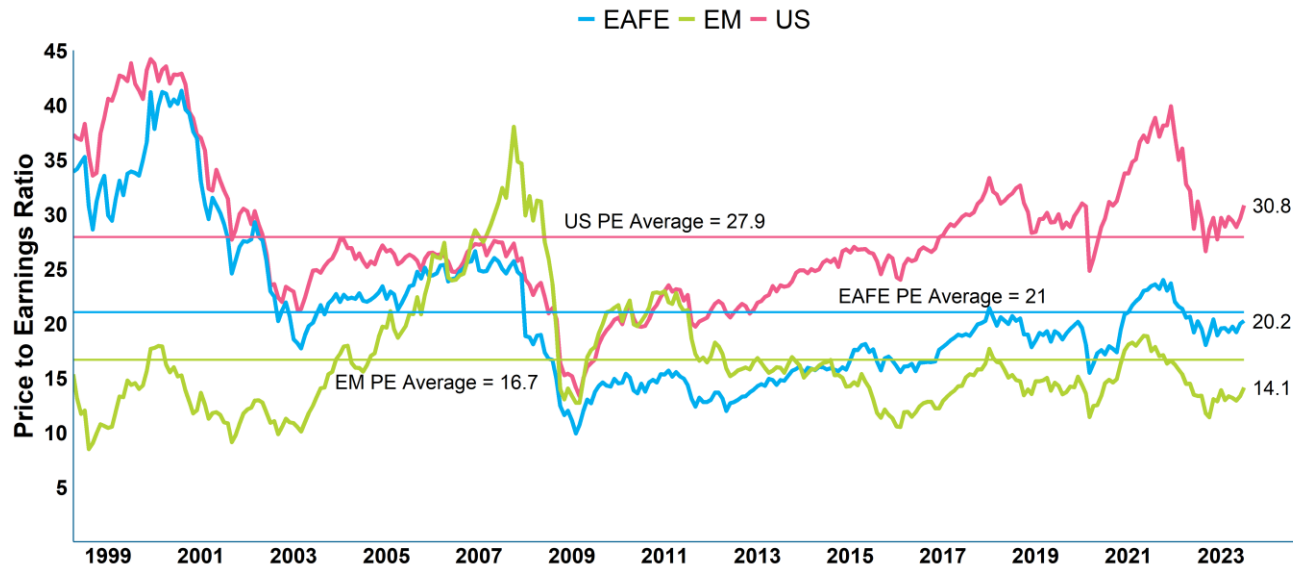
Equity and Fixed Income Volatility¹



- Volatility in equities (VIX) remains well below the historical average as investors continue to anticipate the end of the Fed’s policy tightening.
- The bond market continues to be volatile after last year’s historic losses and due to policy uncertainty and previous issues in the banking sector. The MOVE (fixed income volatility) remains well above (112.0) its long-run average (88.6), but off its recent peak during the heart of the banking crisis.

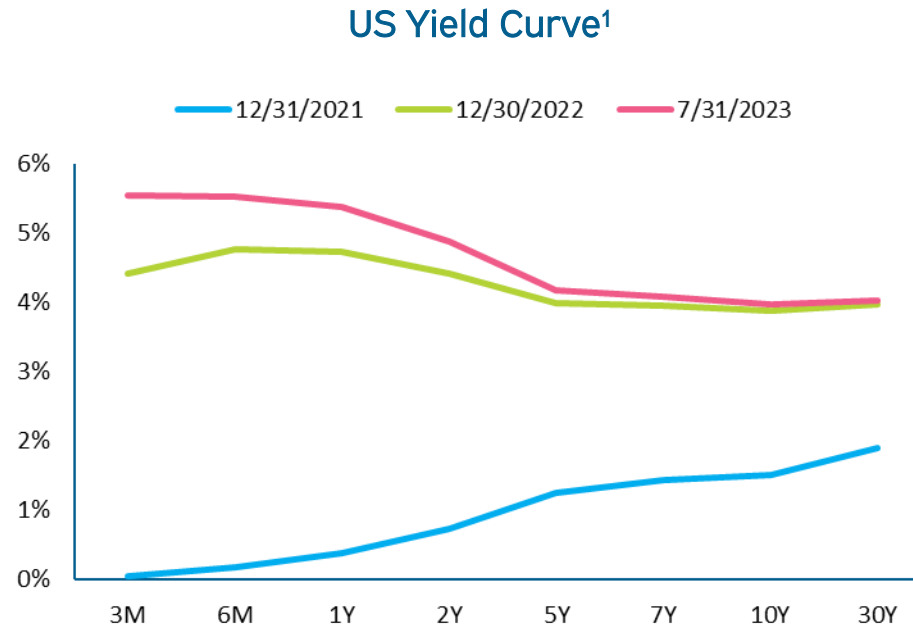
¹ Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of July 2023. The average line indicated is the average of the VIX and MOVE values between January 2000 and July 2023.

Equity Cyclically Adjusted P/E Ratios¹



- Given the strong technology-driven rally this year, the US equity price-to-earnings ratio increased above its long-run (21st century) average.
- International developed market valuations are below their own long-term average, with those for emerging markets the lowest and well under the long-term average.

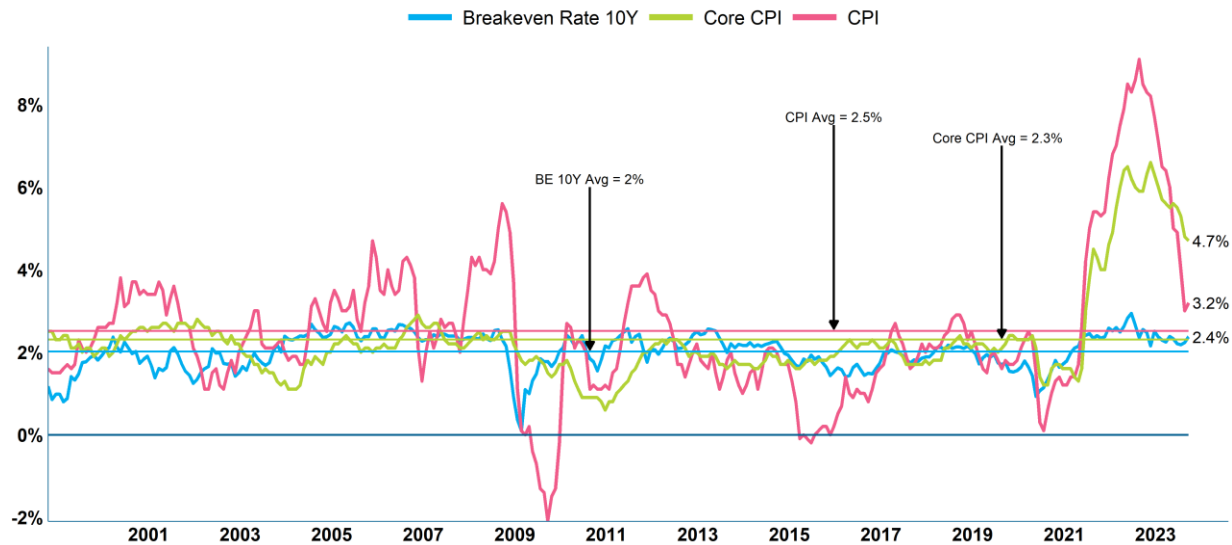
¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of July 2023. The average line is the long-term average of the US, EM, and EAFE PE values from December 1999 to the recent month-end respectively.



- In July, very short-term interest rates (6-months or less) fell as it appears interest rate hikes might be coming to an end. Longer dated maturities continued to drift higher, as economic data remains resilient. So far in 2023, rates overall remain higher, particularly the policy sensitive front-end of the yield curve.
- The yield curve remains inverted with the spread between two-year and ten-year Treasuries finishing the month at -0.91%. The more closely watched measure (by the Fed) of the three-month and ten-year Treasuries spread also remained inverted at -1.60%. Inversions in the yield curve have often preceded recessions.

¹ Source: Bloomberg. Data is as of July 31, 2023.

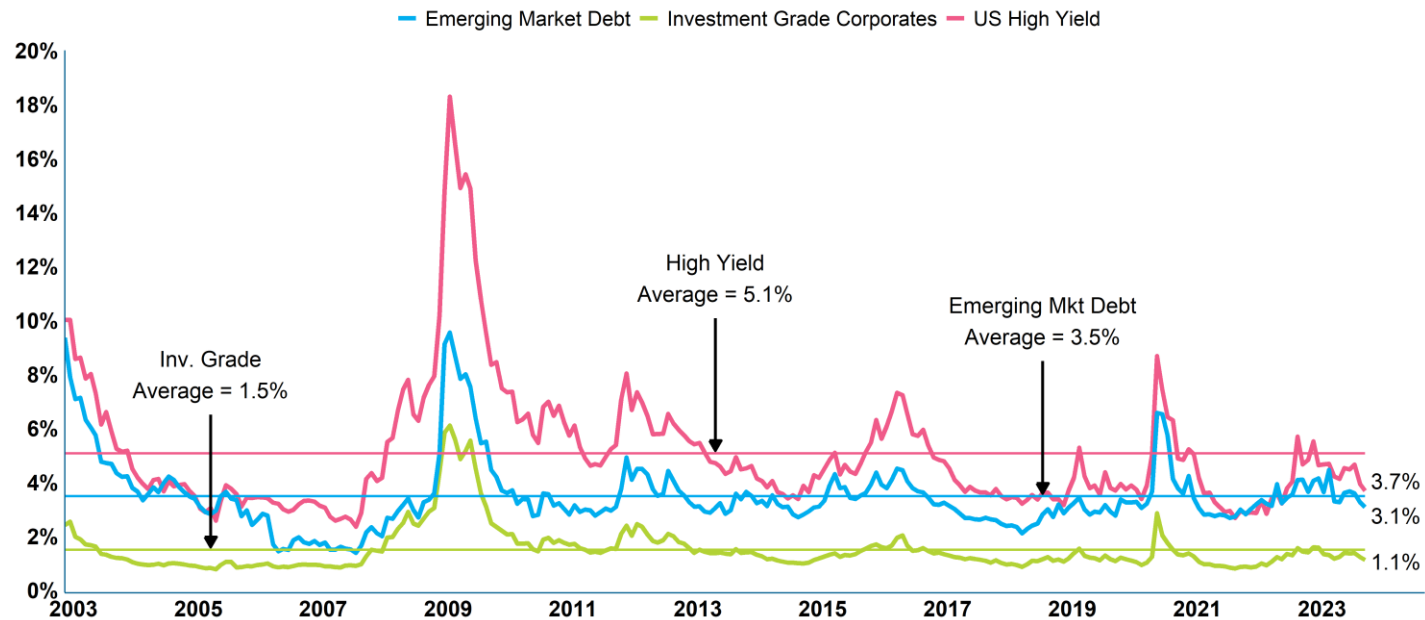
Ten-Year Breakeven Inflation and CPI¹



- Declines in inflation while other economic data remains strong has led to optimism over the Federal Reserve potentially achieving a rarely observed soft landing for the economy.
- Year-over-year headline inflation rose slightly in July (3.0% to 3.2%) but came in below expectations. The trend of lower month-over-month price increases continued with the rate staying steady at 0.2%.
- Core inflation – excluding food and energy - fell (4.8% to 4.7%) year-over-year. It remains stubbornly high though driven by shelter costs (+7.7%), particularly owners equivalent rent, and transportation services (+9.0%).
- Inflation expectations (breakevens) remain well below current inflation as investors continue to expect inflation to track back toward the Fed’s 2% average target.

¹ Source: Bloomberg. Data is as July 31, 2023. The CPI and 10 Year Breakeven average lines denote the average values from August 1998 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.

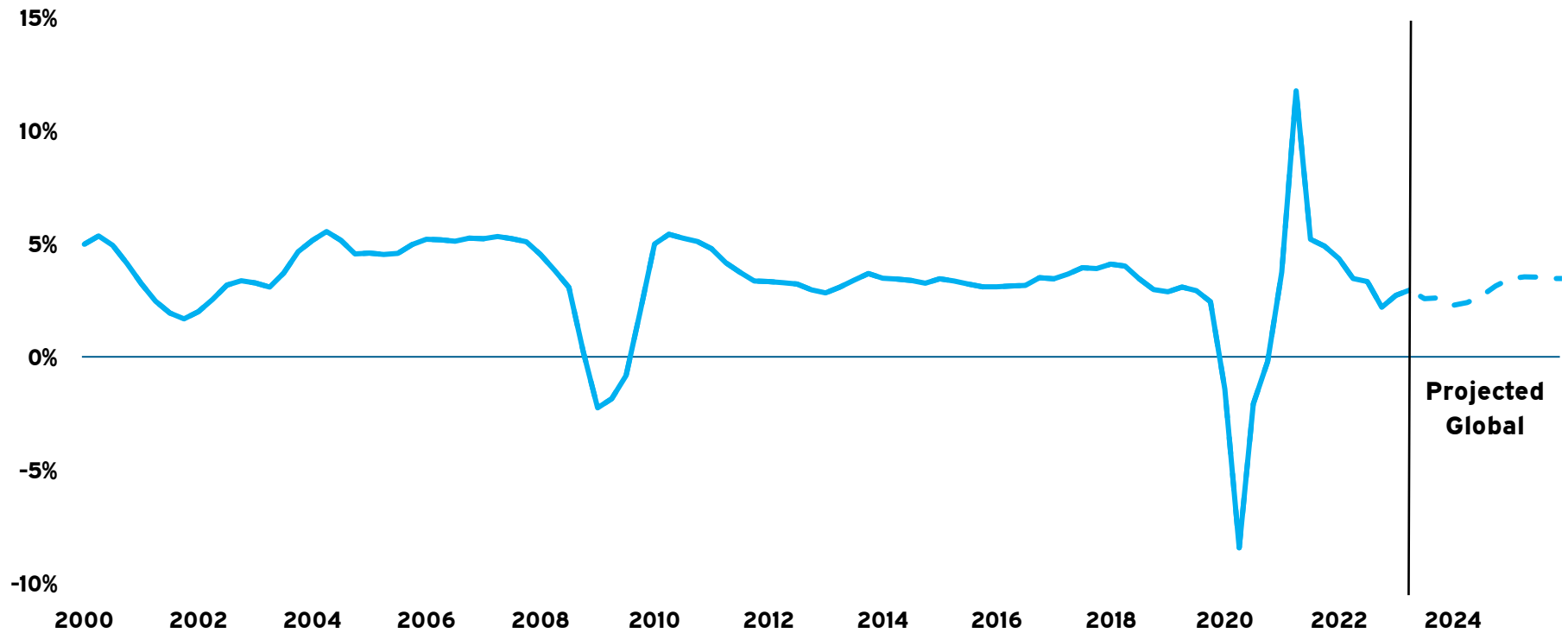
Credit Spreads vs. US Treasury Bonds¹



- Credit markets outperformed government bonds for the month with spreads (the added yield above a comparable maturity Treasury) declining. Risk appetite was strong as growth remains resilient, while inflation continues to decline.
- High yield spreads remain well below the long-term average. Investment grade and emerging market spreads are also below their respective long-term averages, but by smaller margins.

¹ Sources: Bloomberg. Data is as of July 31, 2023. Average lines denote the average of the investment grade, high yield, and emerging market spread values from August 2000 to the recent month-end, respectively.

Global Real Gross Domestic Product (GDP) Growth¹

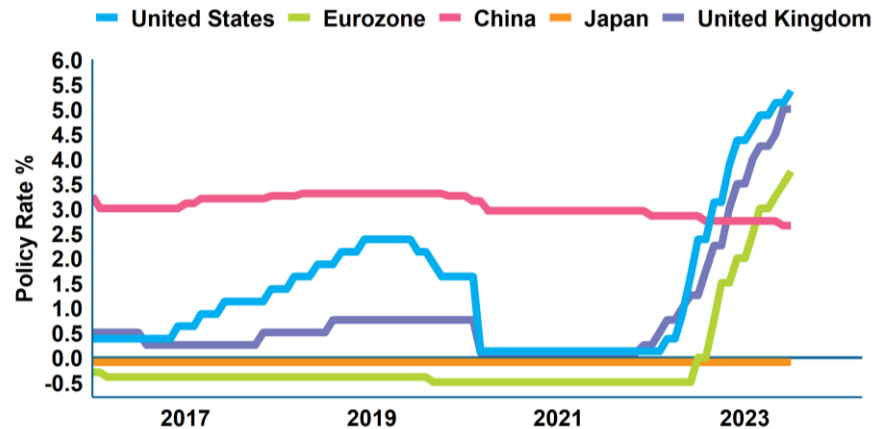


- Global economies are expected to slow this year compared to 2022. The risk of recession remains given policymakers' aggressive tightening, but optimism has started to grow over some central banks potentially navigating a soft landing.
- The delicate balancing act of central banks trying to reduce inflation without dramatically depressing growth will remain key.

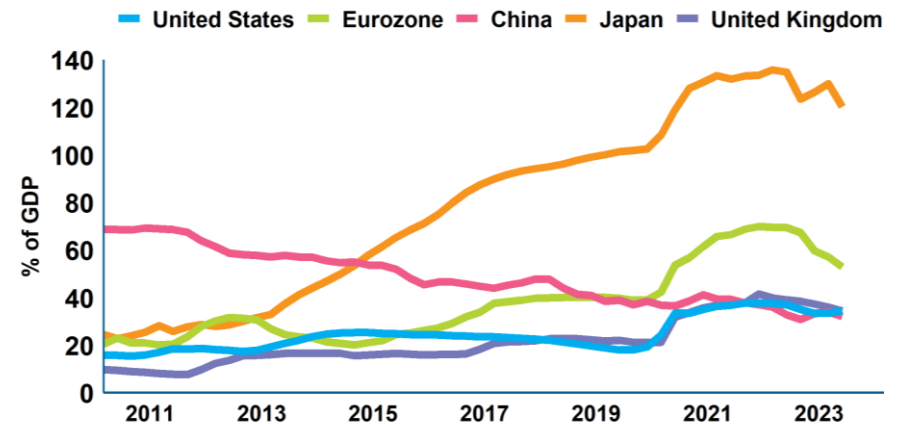
¹ Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, real, % change YoY). Updated July 2023.

Central Bank Response¹

Policy Rates



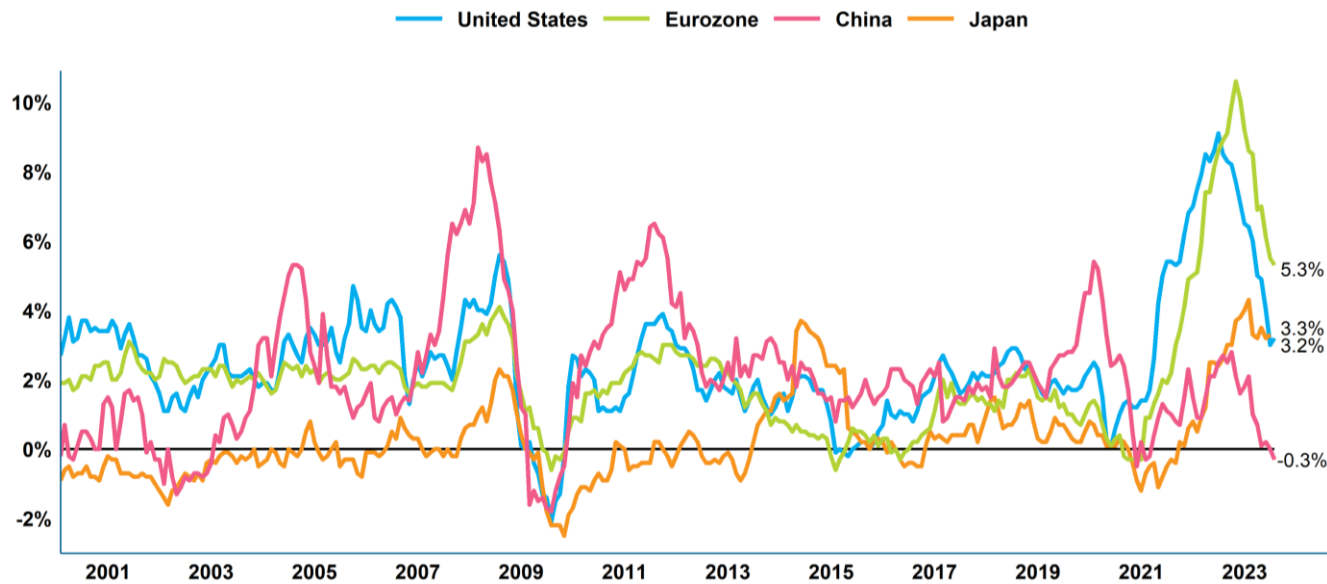
Balance Sheet as % of GDP



- Slowing inflation and growth have led to expectations for a reduction in the pace of aggressive policy tightening.
- In July the Fed raised rates another 25 basis points to a range of 5.25% to 5.50% with markets largely expecting this to be the last rate increase. After month-end, the FOMC paused its tightening campaign.
- The European Central Bank also increased rates in July, but they remain lower than in the US. In Japan the BOJ surprised markets by announcing they would be more flexible on their 10-year interest rate target.
- The central bank in China has continued to cut interest rates and inject liquidity into the banking system, as weaker than expected economic data appears to indicate a widespread slowdown.
- Looking ahead, risks remain for a policy error as central banks attempt to balance multiple goals, bringing down inflation, maintaining financial stability, and supporting growth.

¹ Source: Bloomberg. Policy rate data is as of July 31, 2023. China policy rate is defined as the medium-term lending facility 1 year interest rate. Balance sheet as % of GDP is based on quarterly data and is as of June 30, 2023.

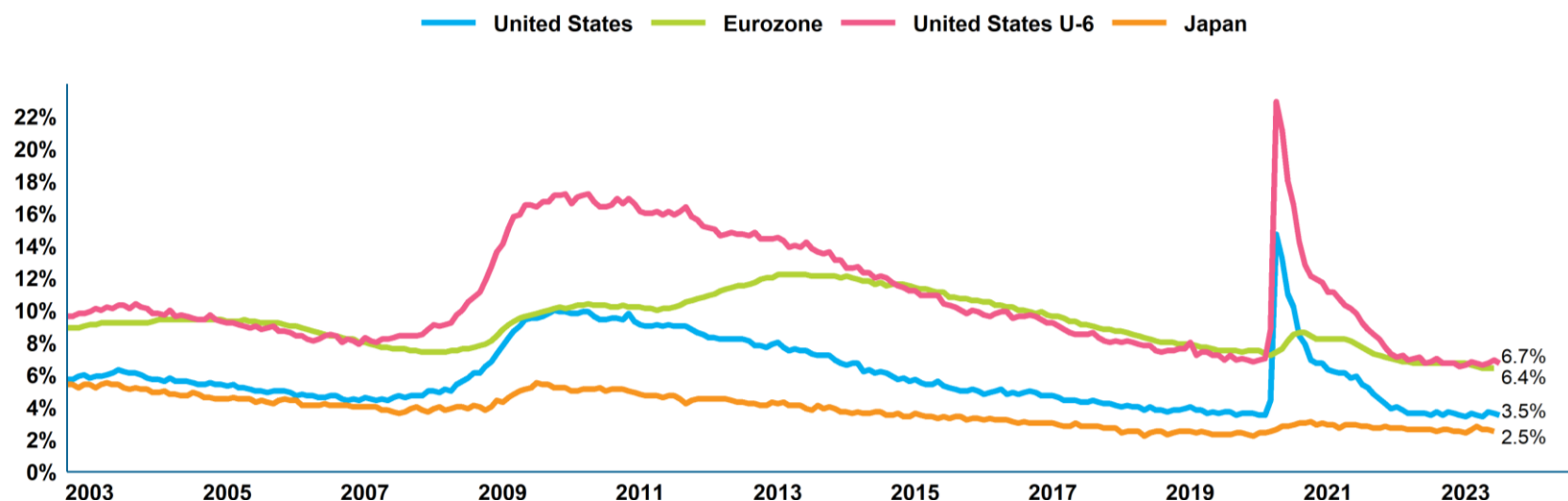
Inflation (CPI Trailing Twelve Months)¹



- The inflation picture remains mixed across the major economies.
- In the US, inflation rose slightly in July (3.0% to 3.2%), while eurozone inflation continued to fall (5.5% to 5.3%) a level well off its peak. Despite 2023's significant declines in the US and Europe, inflation levels remain elevated compared to central bank targets.
- Inflation in Japan remains elevated at levels not seen in almost a decade largely driven by food and home related items. In China, deflationary pressures emerged in July due to falling food prices, but this is expected to be temporary as high base effects from last year work their way through.

¹ Source: Bloomberg. Data is as July 31, 2023. The most recent Japanese inflation data is as of June 2023.

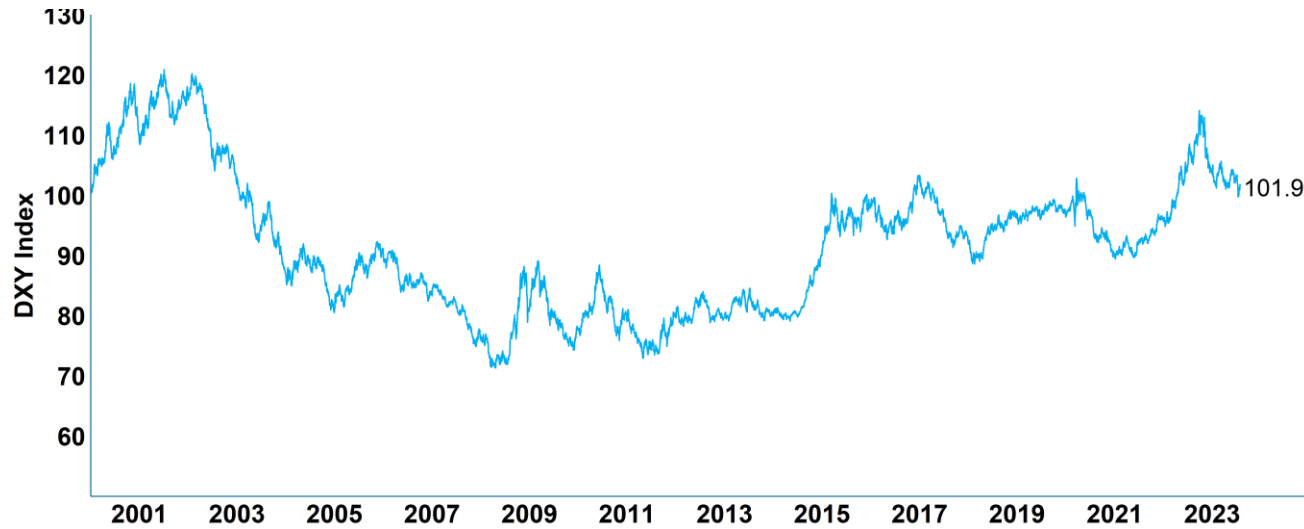
Unemployment¹



- Despite slowing growth and relatively high inflation, the US labor market continues to show signs of resilience (3.5%). Unemployment in the US, which experienced the steepest rise, recently returned to pre-pandemic levels. Broader measures of unemployment (U-6) remain higher at 6.7% but also declined dramatically from their peak.
- The strong labor market and higher wages, although beneficial for workers, motivates the Fed's efforts to fight inflation, potentially leading to higher unemployment.
- Unemployment in Europe has also declined but remains higher than the US, while levels in Japan have been flat through the pandemic given less layoffs.

¹ Source: Bloomberg. Data is as July 31, 2023, for the US. The most recent data for Eurozone and Japanese unemployment is as of June 2023.

US Dollar versus Broad Currencies¹



- The dollar finished 2022 much higher than it started, due to the increased pace of policy tightening, stronger relative growth, and safe-haven flows.
- Late last year and into early this year, the dollar declined, as weaker economic data and lower inflation led to investors anticipating the end of Fed tightening. Since then, the dollar has largely been range-bound due to competing forces of safe-haven flows and monetary policy expectations.
- For the rest of this year, the track of inflation across economies and the corresponding monetary policies will be key drivers of currency moves.

¹ Source: Bloomberg. Data as of July 31, 2023.

Summary

Key Trends:

- The impact of inflation still above policy targets will remain key, with bond market volatility likely to stay high.
- Global monetary policies could diverge in 2023. The risk of policy errors remains elevated as central banks try to reduce persistent inflation while not tipping their economies into recession.
- Growth is expected to slow globally this year, with many economies forecasted to tip into recession. Optimism has been building though that some economies could experience a soft landing. Inflation, monetary policy, and the war will all be key.
- In the US, consumers could feel pressure as certain components of inflation remain high (e.g., shelter), borrowing cost are elevated, and the job market may weaken.
- The key for US equities going forward will be whether earnings can remain resilient if growth continues to slow. Also, the future path of the large technology companies that have driven market gains will be important.
- Equity valuations remain lower in emerging and developed markets, but risks remain, including potential for renewed strength in the US dollar, higher inflation weighing particularly on Europe, and China's sluggish economic reopening and on-going weakness in the real estate sector. Japan's recent hint at potentially tightening monetary policy along with changes in corporate governance in the country could influence relative results.

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