

A decorative geometric pattern of overlapping triangles in shades of blue and green is overlaid on the left side of the image. A large white triangle is positioned to the left of the main text.

**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**

4<sup>TH</sup> QUARTER 2024  
Investment Landscape

# Verus business update

## Since our last Investment Landscape webinar:

- Verus hired Joshua Freimark as a Public Markets Research Analyst, Michael Hughes as Managing Director of Portfolio Management, and Tri Nguyen as a Portfolio Manager, in our Seattle office.
- Kraig McCoy, CFA, formerly Chief Financial Officer and Chief Operations Officer, was appointed President.
- Scott Whalen, CFA, CAIA, Executive Managing Director, was selected by *Chief Investment Officer* as a 2024 Knowledge Broker.
- Tim McEnery, CFA, Managing Director, was recognized by *Crain's Chicago Business* as a 2024 Notable Leader in Consulting.
- Recent research, found at [verusinvestments.com/research](https://verusinvestments.com/research):
  - *The Rise of OCIO*
  - *The private equity return premium: It's not just due to illiquidity*
  - *Trends and challenges in the commercial real estate sector*
  - *How fixed income portfolios are affected by interest rate regimes*

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# Recent Verus research

Visit: [verusinvestments.com/research](https://verusinvestments.com/research)

## Thought leadership

### THE RISE OF OCIO

We explore the factors leading to the rapid growth of the OCIO model, important variables when evaluating OCIO providers, and key questions asset owners should discuss when considering a move to OCIO.

### TRENDS AND CHALLENGES IN THE COMMERCIAL REAL ESTATE SECTOR

Headlines warning of commercial real estate risks to the broader financial system may overstate the size and scope of the challenges in real estate. The office market faces serious challenges that are likely to persist, especially in lower-quality office assets.

### THE PRIVATE EQUITY RETURN PREMIUM: IT'S NOT JUST DUE TO ILLIQUIDITY

We discuss the key drivers of successful private investment outcomes: skilled manager selection, best-in-class processes such as portfolio management, and effective and efficient governance.

### HOW FIXED INCOME PORTFOLIOS ARE AFFECTED BY INTEREST RATE REGIMES

The rise and fall of interest rates can have a significant positive or negative impact on fixed income portfolio performance.

# 3<sup>rd</sup> quarter summary

## THE ECONOMY

- On September 18th, the Federal Reserve cut interest rates by 50 basis points, bringing the target rate from 5.25-5.50% to 4.75-5.00%. This larger cut surprised many investors who still see inflation risks on the horizon and the economy as generally strong. This move likely kicks off a multi-year period of cuts as the Fed brings interest rates towards what they see as a more neutral level. **p. 19**
- U.S. inflation (CPI) fell to 2.4% year-over-year in September, moving closer to the Fed's 2% target. However, risks remain that inflation moderates above the Fed target, as shelter inflation is still elevated and food prices accelerated in September. Core inflation (ex-Food & Energy) has not budged from Q2 levels—at 3.3% year-over-year. **p. 9**

## EQUITY

- Global markets delivered strong performance, with consistent results across regions. Emerging markets (MSCI EM +8.7%) led, followed by international developed (MSCI EAFE +7.3%) and lastly the U.S. market (S&P 500 +5.9%). U.S. dollar weakness provided particular benefits to investors in international developed equities. **p. 26 & 36**
- Small cap and value style investing reversed their run of underperformance during the second quarter. Small cap led large cap by +3.2% (-8.9% over the past year), while value also outperformed by +6.2% (-14.4% over the past year). Despite this improvement, the market environment has been incredibly difficult for these style factors. **p. 28**

## FIXED INCOME

- The 10-year U.S. Treasury yield fell from 4.36% to 3.79% during the quarter, alongside a series of economic data releases that suggested inflation is moving further towards the Fed's 2% target, and that the labor market is softening. Interestingly, yields moved slightly higher in late September after the Fed's aggressive 50 bps rate cut. **p. 19**
- Default activity remained low, given economic strength. High yield bond default rates continued to decline, falling to 1.4%, well below the long-term annual average of 3.4%. However, distressed exchange activity was high. Total distressed exchange volume was roughly \$13.5 billion, the second largest quarter on record (since Q4 2008). **p. 23**

## ASSET ALLOCATION ISSUES

- China announced an aggressive stimulus program in the form of both fiscal and monetary support. Those moves followed a People's Bank of China rate cut from 2.3% to 2.0%. Chinese equities rallied more than 30% in late September. It is not yet clear whether these efforts will help solve any of China's deep and structural issues. **p. 30**
- On August 5th, volatility spiked 42 points to 66, marking the largest one day jump in volatility in modern market history. This was widely attributed to the unwinding of carry trade positions (one popular carry trade involved borrowing in Yen to invest in equities) following a weak labor market data release and an unexpected interest rate hike from the Bank of Japan. **p. 33**

In September, the Fed enacted the first of likely a series of interest rate cuts.

*A soft landing appears very possible for the U.S. economy.*

# What drove the market in Q3?

**“Federal Reserve signals end to inflation fight with a sizable half-point rate cut”**

## Fed Funds Effective Rate

Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024
5.08%	5.33%	5.33%	5.33%	5.33%	4.83%

Article Source: Associated Press, September 18<sup>th</sup>, 2024

**“China’s central bank unveils most aggressive stimulus since pandemic”**

## Chinese Equity Market Performance, Monthly

April 24	May 24	June 24	July 24	Aug 24	Sep 24
+6.5%	+2.4%	-2.1%	-1.2%	+0.9%	+23.4%

Article Source: Reuters, September 24<sup>th</sup>, 2024

**“Fears of Slowing U.S. Growth Jolt Markets Around the World”**

## Monthly Nonfarm Payroll Additions

April 24	May 24	June 24	July 24	Aug 24	Sep 24
108k	216k	118k	144k	159k	254k

Article Source: New York Times, August 5<sup>th</sup>, 2024

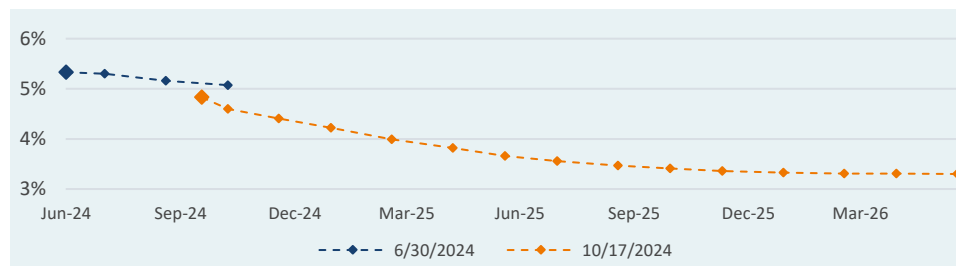
**“Inflation falls to its lowest level in more than 3 years”**

## Consumer Price Index, Year-over-Year change

April 24	May 24	June 24	July 24	Aug 24	Sep 24
3.4%	3.3%	3.0%	2.9%	2.5%	2.4%

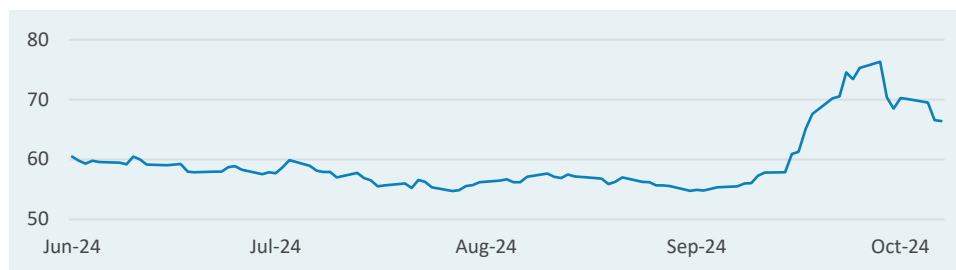
Article Source: NPR, September 11<sup>th</sup>, 2024

## U.S. MARKET IMPLIED FUTURE INTEREST RATES



Source: CME Group, as of 9/30/24

## MSCI CHINA INDEX, PRICE



Source: MSCI, as of 9/30/24

## CONSUMER PRICE INDEX, YEAR-OVER-YEAR CHANGE



Source: FRED, as of 9/30/24

# Economic environment

# U.S. economics summary

- On September 18<sup>th</sup>, the Federal Reserve cut interest rates by 50 basis points, bringing the target rate from 5.25-5.50% to 4.75-5.00%. This larger cut surprised many investors who still see inflation risks on the horizon and see the economy as generally strong. This move likely kicks off a multi-year period of cuts as the Fed brings interest rates towards what they see as a more neutral level.
- U.S. inflation (CPI) fell to 2.4% year-over-year in September, moving closer to the Fed's 2% target. However, risks remain that inflation remains above the Fed target, as shelter inflation is still high and food prices accelerated in September. Core inflation (ex-Food & Energy) has not budged from Q2 levels—at 3.3% year-over-year.
- Since earlier in 2024, unemployment had been ticking higher, but in August and September this trend reversed, with unemployment ending the quarter at 4.1%. The September nonfarm employment report reflected a 254,000

gain in jobs, dramatically outperforming expectations. The impacts of unlawful immigration on official employment statistics have continued to cause discrepancies in data and confusion regarding true labor conditions. We believe analyzing jobs data requires careful analysis.

- Multiple labor strikes have been occurring around the country, including Boeing and the International Longshoremen's Association (ILA). As organized labor fights for higher wages and benefits, disruptions to production and trade could contribute to inflation flareups.
- Consumer sentiment improved slightly during the third quarter, as illustrated by the University of Michigan Consumer Sentiment survey. Households expressed further frustration about high prices, but optimism has grown around the economy and the inflation outlook. According to the survey, expectations have brightened for Americans across the economic and political spectrum.

	Most Recent	12 Months Prior
Real GDP (YoY)	2.7% 9/30/24	2.4% 6/30/23
Inflation (CPI YoY, Core)	3.3% 9/30/24	3.7% 9/30/23
Expected Inflation (5yr-5yr forward)	2.3% 9/30/24	2.5% 9/30/23
Fed Funds Target Range	4.75–5.00% 9/30/24	5.25–5.50% 9/30/23
10-Year Rate	3.79% 9/30/24	4.59% 9/30/23
U-3 Unemployment	4.1% 9/30/24	3.8% 9/30/23
U-6 Unemployment	7.7% 9/30/24	7.0% 9/30/23



# Inflation

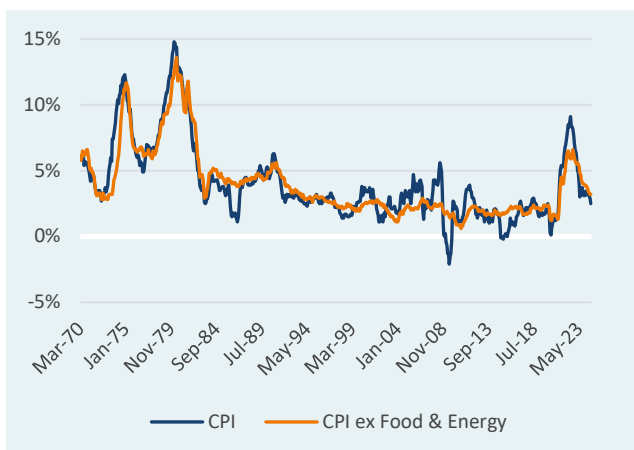
U.S. inflation (CPI) fell to 2.4% year-over-year in September, moving closer to the Fed's 2% target. However, risks remain that inflation could remain above the Fed target, as shelter inflation is still elevated and food prices accelerated in September. Core inflation (ex-Food & Energy) has not budged from Q2 levels—at 3.3% year-over-year.

While certain prices continue to show concerning trends, deflation (year-over-year) has been occurring across many goods prices, such as new vehicles (-1.3%), used vehicles (-5.1%), and energy (-6.8%). If inflation were calculated using market-based shelter prices, the current rate of inflation would likely be less than 2%.

Although price trends have recently been encouraging, the U.S. is certainly not out of the woods yet. For example, Federal Reserve rate cuts create the risk of reigniting demand and spending, pushing prices upward. Multiple labor strikes have been occurring around the country, including Boeing and the International Longshoremen's Association. As organized labor fights for higher wages and benefits, disruptions to production and trade could contribute to inflation flareups. Additionally, falling energy prices over the past year have played a large role in bringing inflation lower. If energy prices flatten out, or reverse and move higher, perhaps due to escalating conflict between Israel and Iran, energy could once again become an inflationary force.

Inflation had been fluctuating between 3-3.5%, but broke lower to 2.4% in Q3

U.S. CPI (YOY)



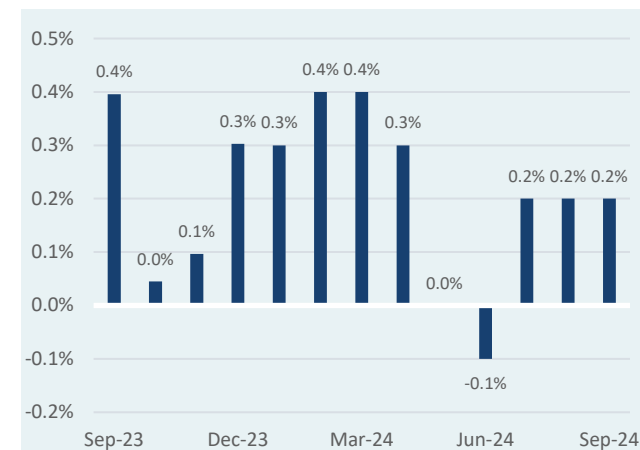
Source: BLS, as of 9/30/24

POTENTIAL INFLATION PATHS



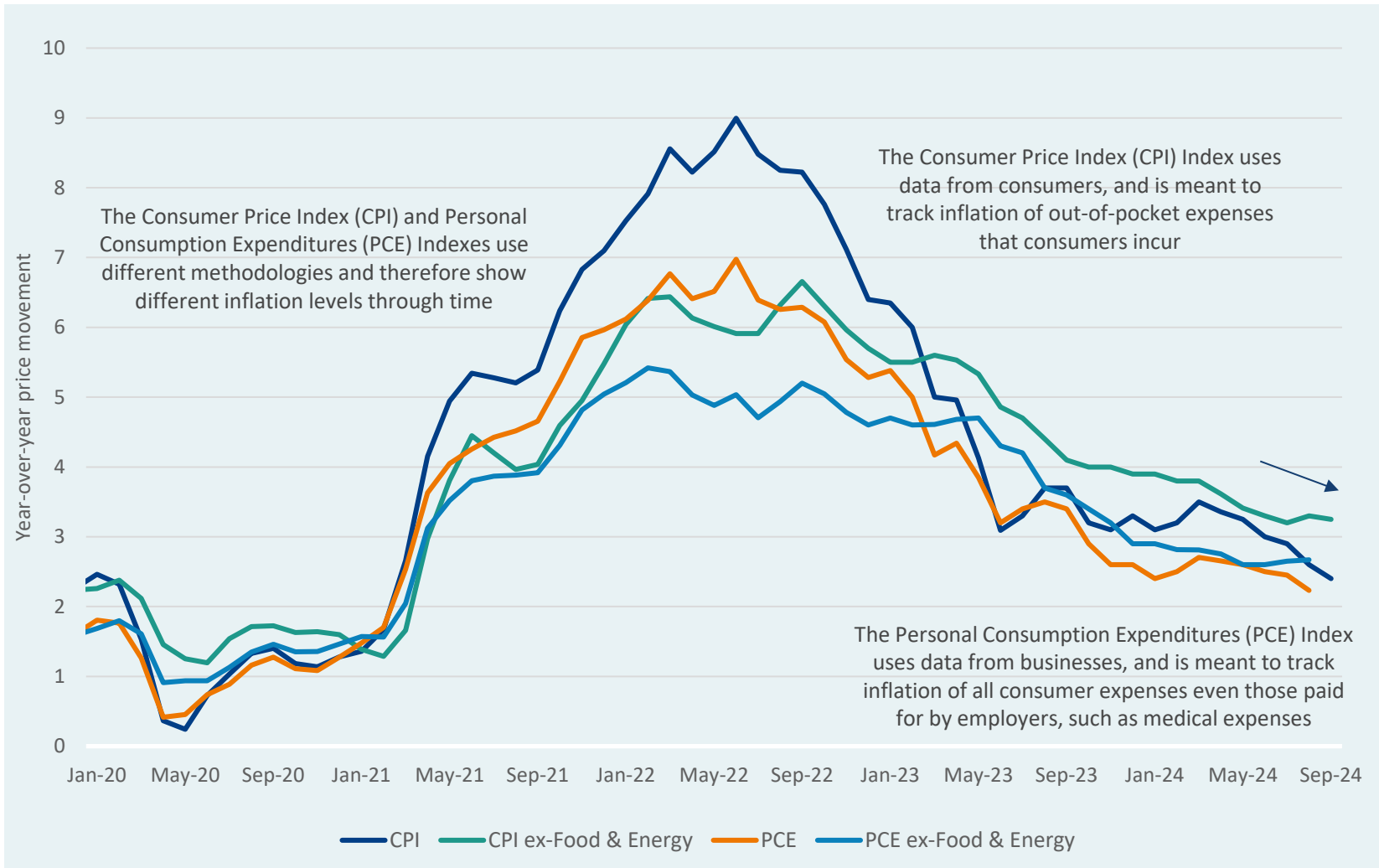
Source: FRED, Verus, of 9/30/24

MONTHLY PRICE MOVEMENT (CPI)



Source: BLS, as of 9/30/24

# Inflation is nearing the Fed's target



The Fed's preferred measure of inflation, PCE, may soon reach the stated 2% target

...though price pressures still exist in the economy

Source: FRED, Verus, as of 9/30/24 – or most recent release

# GDP growth

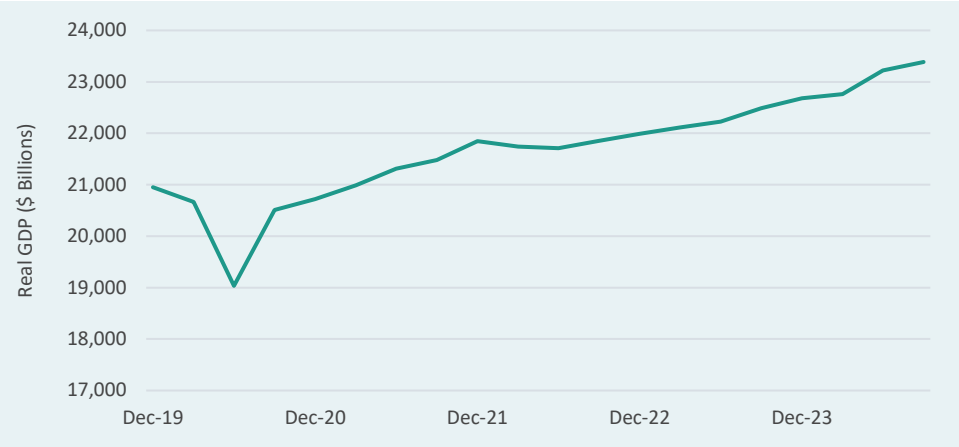
Real GDP growth was robust again during Q3, but slowed slightly from 3.0% to 2.8% quarter-over-quarter, annualized (2.7% year-over-year). Growth continues to be fueled by consumer purchases, which accelerated to a 3.7% annualized pace. Spending was broad based across goods and services. Heightened government defense spending was also a large contributor during the quarter. The moderate deceleration in real GDP growth was mainly caused by less private inventory investment, and a substantial slowing of residential fixed investment.

Although economic conditions remain strong, many economists and investors are wary of the sustainability of consumer

spending growth, given the drawdown of excess savings accumulated during the pandemic, lower personal savings rates, as well as slowing wage growth. The U.S. economy is likely headed towards a more moderate growth phase after many quarters of surprisingly hot growth and spending. Unlike past periods of economic weakening, many trends today could reasonably be summarized as a *return to normalcy*. For example, following the pandemic, the domestic labor market was experiencing a historic mismatch between the number of jobs available and the number of workers available. Resolving that mismatch required a material weakening of the labor market from *extreme tightness* to *relatively strong*, but not a move (yet) towards something that suggests recession.

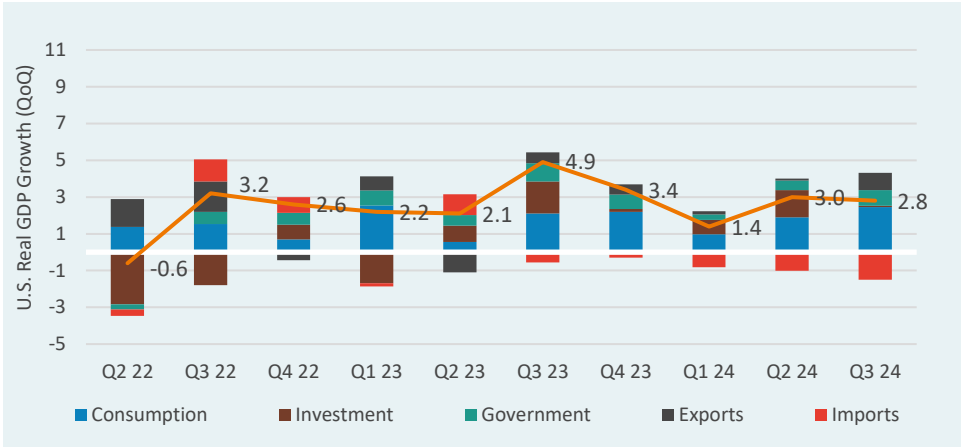
U.S. growth remained robust during Q3, fueled by consumer spending

U.S. REAL GROSS DOMESTIC PRODUCT



Source: FRED, as of 9/30/24

U.S. REAL GDP COMPONENTS (QOQ)



Source: FRED, as of 9/30/24

# Labor market

Signs of weakness in the U.S. labor market are evident, though conditions remain generally robust. Throughout 2024, we have held the view that the path towards lower interest rates would be a bumpy one, and that investors may be disappointed in their expectations for aggressive rate cuts. This view proved valid in August and September as the rate of unemployment reversed course and headed lower to 4.1%. September nonfarm payrolls reflected a 254,000 gain in jobs, dramatically outperforming expectations. This data surprised markets, pushing longer-term bond yields upward and contributing to an asset rally on better economic prospects.

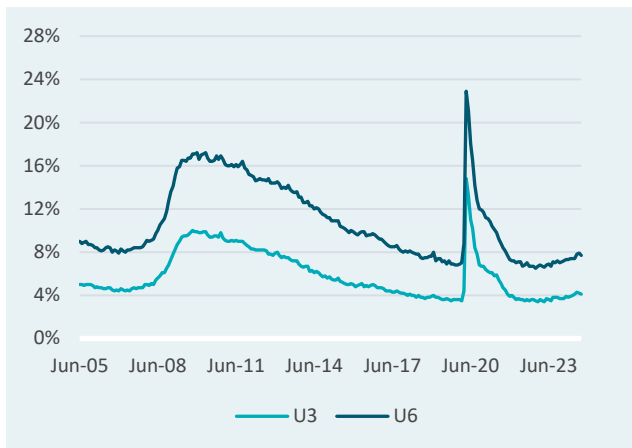
Recent labor trends appear to be unlike many past cycles. Weakness so far has been a product of natural attrition and

less hiring, rather than widespread terminations. These trends could indicate a return to a more balanced job market, rather than a turn towards a sharp economic downturn. Job market *rebalancing* is captured in the recent closing of a wide gap between the number of *available workers* and *available jobs*.

Various types of immigration and the difficulties of quantifying unlawful immigration in official statistics has created much uncertainty in the data. This problem has been acknowledged by senior government officials, including Fed Chair Jerome Powell. The level of unlawful immigration in recent years suggests that estimation errors could be large. Investors should be appropriately cautious when analyzing current data.

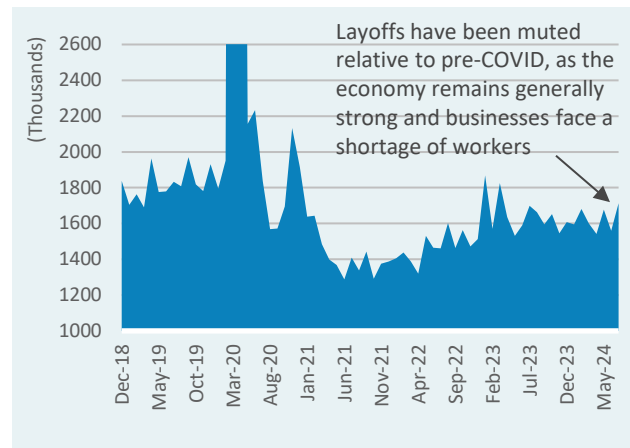
Labor weakness so far has been a product of natural attrition and less hiring, rather than widespread layoffs

## U.S. UNEMPLOYMENT



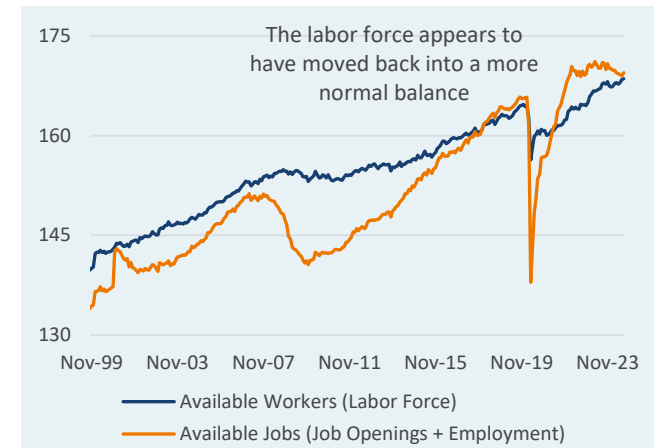
Source: FRED, as of 9/30/24

## LAYOFFS



Source: FRED, as of 7/31/24

## WORKERS AVAILABLE VS. AVAILABLE JOBS



Source: BLS, Verus, as of 8/31/24

# The consumer

Inflation adjusted personal spending growth was 2.9% year-over-year in August and has remained in a 2-3% range for the past two years. This rate indicates moderate economic expansion in line with pre-pandemic rates of growth.

Personal savings rates saw a significant upward adjustment, from 2.9% to 4.9% in July, as the data series was revised to better capture income sources that had been omitted previously. The most recent savings rate was 4.8% in August. This indicates that the consumer is in a healthier position than previously believed, and that fewer Americans are dipping into savings to support their spending.

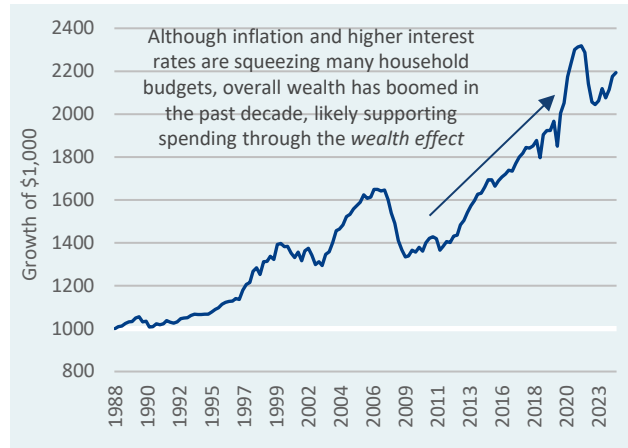
Fueled by large gains from equities and real estate, average household wealth has boomed. While inflation and high prices have in fact squeezed budgets, significant increases in household wealth may be a positive support to consumption. This behavior may be best described by the ‘wealth effect’—an economic theory stating that even if an individual’s income and expenses do not change, if that individual *feels more wealthy*, they tend to have a higher propensity to spend. This theory is often applied to wealth in real estate or investments such as retirement accounts which cannot be accessed immediately.

**REAL PERSONAL SPENDING**



Source: FRED, as of 8/30/24

**AVERAGE HOUSEHOLD NET WORTH (INFLATION-ADJUSTED)**



Source: Verus, FRED, as of 6/30/24

**PERSONAL SAVINGS RATE**



Source: FRED, as of 8/30/24

# Sentiment

Consumer sentiment improved slightly during the third quarter, as illustrated by the University of Michigan Consumer Sentiment survey. Households expressed further frustration about high prices, but optimism on the economy and that inflation will continue to slow. According to the survey, the outlook brightened for Americans all across the economic and political spectrum.

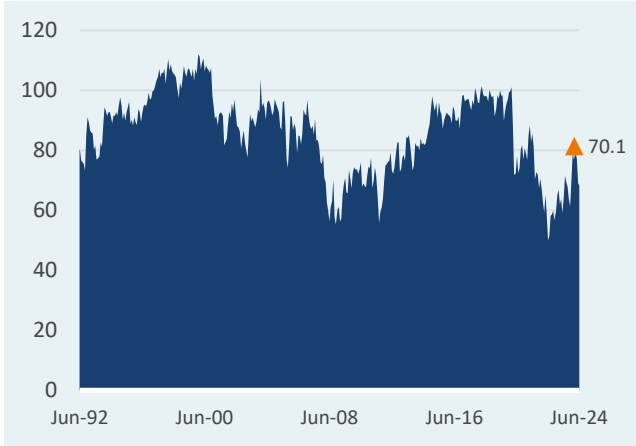
The latest consumer confidence reading from the Conference Board slightly increased from the prior quarter, but consumers expressed pessimism around labor market conditions. Concerns were reported regarding fewer hours and job openings. While interest rate cuts have likely led

consumers to plan on buying big-ticket items like cars and homes, families' perception of their financial conditions ultimately declined over the quarter.

The NFIB Small Business Optimism index was significantly depressed during the quarter, now marking 33 months below the 50-year average. NFIB Chief Economist Bill Dunkelberg stated "Small business owners are feeling more uncertain than ever. Uncertainty makes owners hesitant to invest in capital spending and inventory, especially as inflation and financing costs continue to put pressure on their bottom lines."

Consumer sentiment improved slightly during Q3, while small business sentiment remained very depressed

**CONSUMER SENTIMENT (UNIV. OF MICHIGAN)**



Source: University of Michigan, as of 9/30/24

**CONSUMER CONFIDENCE (CONFERENCE BOARD)**



Source: Conference Board, as of 9/30/24

**NFIB SMALL BUSINESS SENTIMENT**



Source: NFIB, as of 9/30/24

# Housing

It is very likely that the Federal Reserve’s September interest rate cut was the first of a series of cuts. This could be positive for potential home buyers and housing affordability, though it will depend on how cuts to the Federal Funds Rate relate to longer-term interest yields, which impact the mortgage rates that are offered to home buyers (the 30-year mortgage rate average fell to 6.1% at the end of Q3, down from a high of 7.8% in late 2023). This will also depend on the way in which home prices react to lower mortgage interest rates—if a rush of home buying activity pushes home prices upward, higher prices could overwhelm the cost savings of lower mortgage rates in terms of total cost of homeownership.

While home prices continue to climb, up 5% year-over-year in July, according

to S&P CoreLogic Case-Shiller, rent prices have reportedly flattened out nationwide. An analysis from Redfin suggests that rents were only up 0.9% year-over-year in August, as the recent boom in construction and building of new apartment units has helped to mitigate price pressure.

The cost of buying vs. owning is currently at historic extremes, given the intense deterioration of home ownership affordability. This has been further worsened as rent prices flattened out over the past year and home prices moved upward. Even in U.S. metro areas with the most attractive balance between renting and buying, it is more attractive to rent. In more expensive cities such as San Francisco and Seattle, the cost of owning is more than double the cost of renting, as illustrated below.

**30-YEAR MORTGAGE RATE (%)**



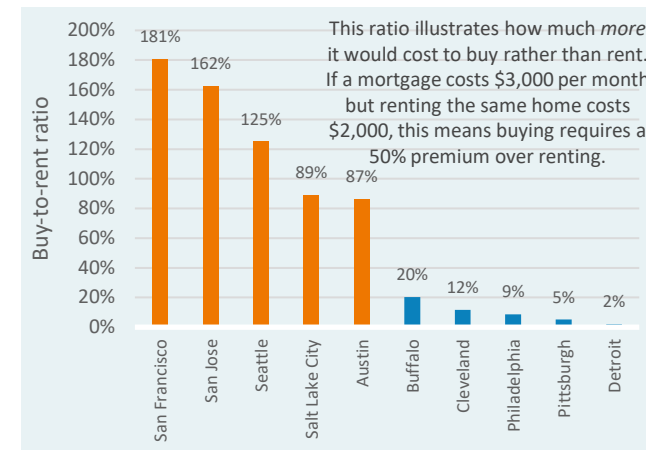
Source: Freddie Mac, as of 9/30/24

**EXISTING HOME SALES**



Source: National Association of Realtors, as of 8/31/24

**HOUSING AFFORDABILITY: 5 MOST EXPENSIVE & 5 LEAST EXPENSIVE METRO AREAS**



Source: Bankrate analysis of Redfin’s median sale price data and Zillow rent data, as of February 2024

# International economics summary

- The Eurozone faces slowing growth, with recession potentially imminent for Germany. A global shift in consumer purchase patterns towards *services* and away from *goods* has likely had a major impact on manufacturing-heavy economies. These effects are biting especially hard in export-heavy economies such as Germany and Japan. China’s struggling economy is having widespread impacts on global growth, as well as energy and other commodity prices.
- Falling inflation and moderating economic growth creates conditions central banks may see as conducive to interest rate cuts. The European Central Bank and Federal Reserve kicked off a rate cutting cycle during the quarter. The Bank of Japan stands out from the crowd, deciding earlier this year to raise rates modestly. The bank sees Japan’s economy growing faster than potential and wishes to normalize rates carefully.
- One year has passed since the Hamas attack on Israel, and the beginning of

the Israel-Hamas war. The conflict has now broadened out as Israel engages with the Iranian-backed militia Hezbollah, which is designated a terrorist group by much of the western world. Over the past month, Israel and Iran have clashed directly, substantially increasing risks of widespread war in the Middle East.

- China announced an aggressive economic stimulus program in the form of fiscal and monetary support. Those moves followed a People’s Bank of China rate cut from 2.3% to 2.0%. Chinese equities rallied more than 30% in the last few weeks of September. It is not yet clear whether these developments will be sufficient to help turnaround the Chinese economy, which faces serious structural issues.
- India continues to be the fastest-growing major economy in the world, posting strong real GDP growth (+6.7%) on the back of a rapidly growing manufacturing sector and large investments in public infrastructure.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	2.7% 9/30/24	2.4% 9/30/24	4.1% 9/30/24
Eurozone	0.6% 6/30/24	1.7% 9/30/24	6.4% 8/31/24
Japan	(1.0%) 6/30/24	2.2% 9/30/24	2.5% 8/31/24
BRICS Nations	4.8% 6/30/24	2.0% 9/30/24	5.3% 12/31/23
Brazil	3.3% 6/30/24	4.4% 9/30/24	6.6% 8/31/24
Russia	4.1% 6/30/24	8.6% 9/30/24	2.4% 8/31/24
India	6.7% 6/30/24	5.5% 9/30/24	7.8% 9/30/24
China	4.6% 9/30/24	0.4% 9/30/24	5.1% 9/30/24

NOTE: India lacks reliable government unemployment data. Unemployment rate shown above is estimated from the Centre for Monitoring Indian Economy. The Chinese unemployment rate represents the monthly surveyed urban unemployment rate in China.



# International economics

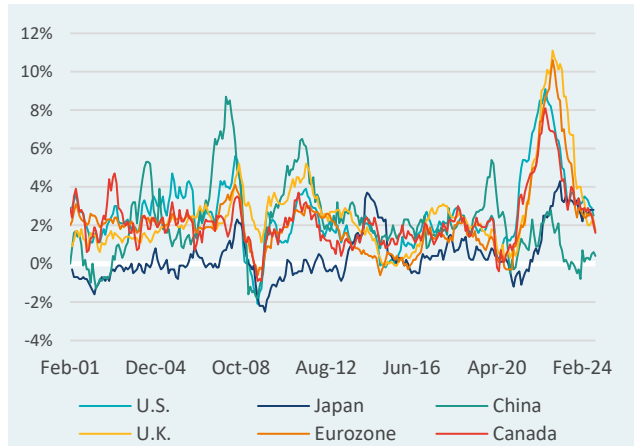
Many developed economies have shown slowing growth recently, as softer spending and a manufacturing slowdown contribute to weakness. These effects are biting especially hard in export-heavy economies such as Germany and Japan. It is difficult to attribute economic weakness on a single cause, though China's struggling economy and a global consumer spending trend towards services rather than goods are likely playing a part. Central bank interest rate hikes mean bigger ticket goods purchases such as automobiles, homes, and home furnishings, are more difficult to afford. As interest rates come down, this trend could reverse. The U.S. economy stands out as exceptionally strong in the current environment.

Inflation rates in the developed world have fallen towards pre-pandemic levels more quickly than had been expected. Many inflation drivers that

had occurred during the pandemic, such as global supply chain issues, government stimulus, and higher energy prices, have seen a reversal. This has helped inflation to normalize without a major shock to spending.

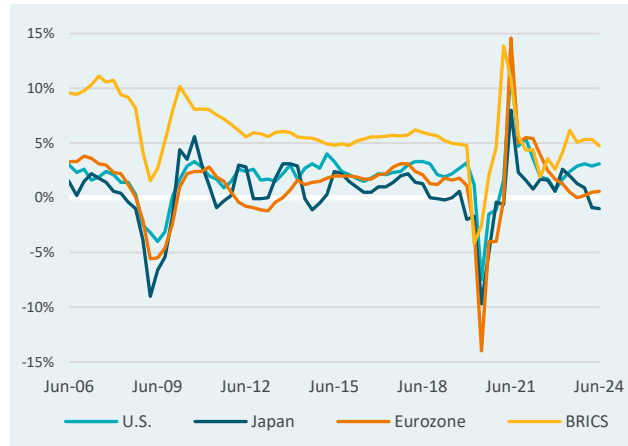
In September, China announced an aggressive economic stimulus program, after three years of ongoing mild support. President Xi pledged both fiscal and monetary support, with specific focus on the ailing real estate market, and stimulus to mitigate the downward trajectory of the stock market. Those moves followed a People's Bank of China rate cut from 2.3% to 2.0%. It is not yet clear whether these developments will be sufficient to help turn around the Chinese economy, which faces serious structural issues such as a declining population, shrinking workforce, and nationwide excess inventory of real estate.

**INFLATION (CPI YEAR-OVER-YEAR)**



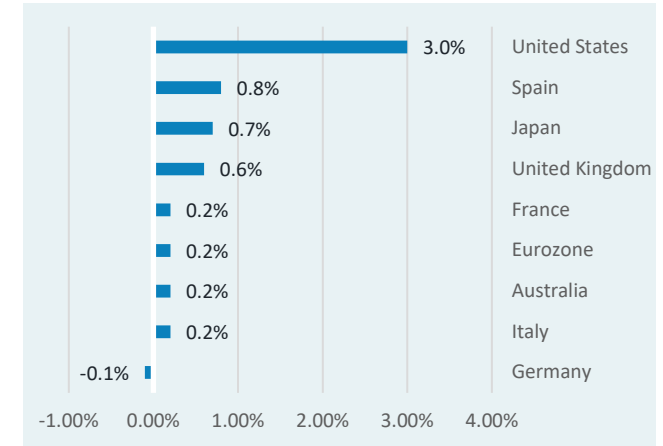
Source: BLS, Verus, as of 9/30/24

**REAL GDP GROWTH (YEAR-OVER-YEAR)**



Source: BLS, Verus, as of 6/30/24

**Q2 REAL GDP GROWTH (QOQ)**



Source: BLS, Verus, as of Q2 2024

# Fixed income rates & credit

# Fixed income environment

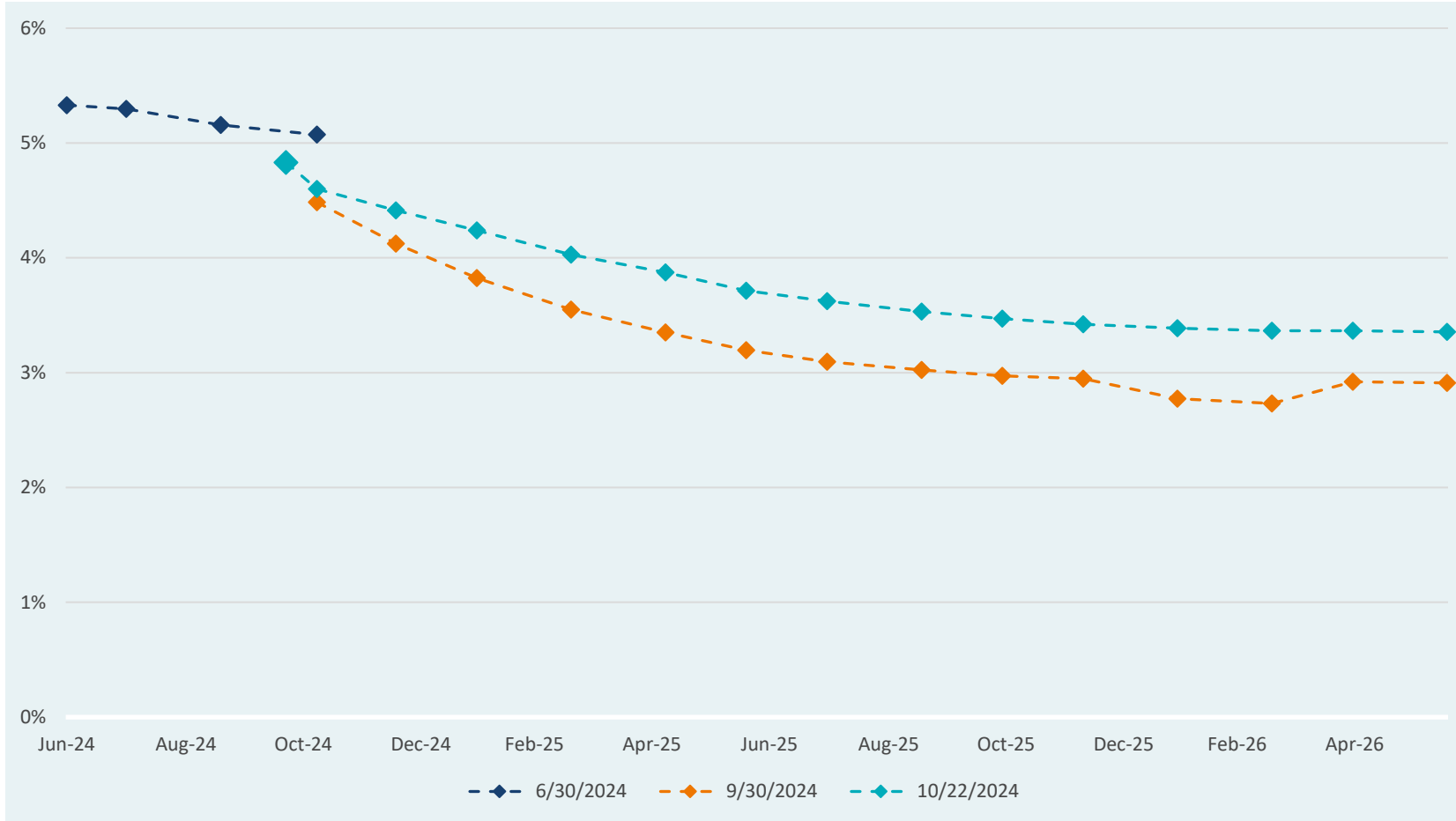
- On September 18<sup>th</sup>, the Federal Reserve cut interest rates by 50 bps, bringing the target rate from 5.25-5.50% to 4.75-5.00%. This larger cut surprised many investors who still see inflation risks and a generally strong economy. This move likely kicks off a multi-year period of cuts as the Fed brings interest rates towards what they believe to be a more neutral level. Investors have now focused sharply on what the neutral interest rate level, or “R-star”, might be today.
- The 10-year U.S. Treasury yield fell from 4.36% to 3.79% during the quarter, alongside a series of economic data releases that suggested inflation is moving further towards the Fed’s 2% target, and that the labor market is softening. Interestingly, yields moved slightly higher in late September after the Fed rate cut.
- Most credit indices saw positive returns, rising with the rest of the fixed income universe. However, greater credit risk only provided marginally higher returns, with high yield outperforming investment grade by +0.1%. Bank Loans (S&P/LSTA Leveraged Loan) underperformed other major fixed income indices, as the floating rate nature (and ultra-low duration) of bank loans meant these bonds did not benefit from the decline in yields.
- The U.S. yield curve *uninverted* during the quarter, indicated by the 10-year minus the 2-year Treasury yield, as shorter-term interest rates dropped along with more aggressive Federal Reserve rate cut expectations. This ended more than two years of yield curve inversion.
- Default activity remained low in Q3 as the economy remained strong. High yield bond default rates continued to decline, falling to 1.4%, down from 2.2% a year ago and well below the long-term annual average of 3.4%. However, distressed exchange activity was high. Total distressed credit volume was roughly \$13.5 billion, the second largest quarterly total on record (since Q4 2008).

	QTD Total Return	1 Year Total Return
Core Fixed Income (Bloomberg U.S. Aggregate)	5.2%	11.6%
Core Plus Fixed Income (Bloomberg U.S. Universal)	5.2%	12.1%
U.S. Treasuries (Bloomberg U.S. Treasury)	4.7%	9.7%
U.S. Treasuries: Long (Bloomberg U.S. Treasury 20+)	8.0%	15.2%
U.S. High Yield (Bloomberg U.S. Corporate HY)	5.3%	15.7%
Bank Loans (S&P/LSTA Leveraged Loan)	2.1%	9.6%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	9.0%	13.4%
Emerging Market Debt Hard (JPM EMBI Global Diversified)	6.2%	18.6%
Mortgage-Backed Securities (Bloomberg MBS)	5.5%	12.3%

Source: Standard & Poor’s, J.P. Morgan, Bloomberg, as of 9/30/24

# A new interest rate regime

Looking at the upcoming expected path of the Fed Funds rate (short-term rate)



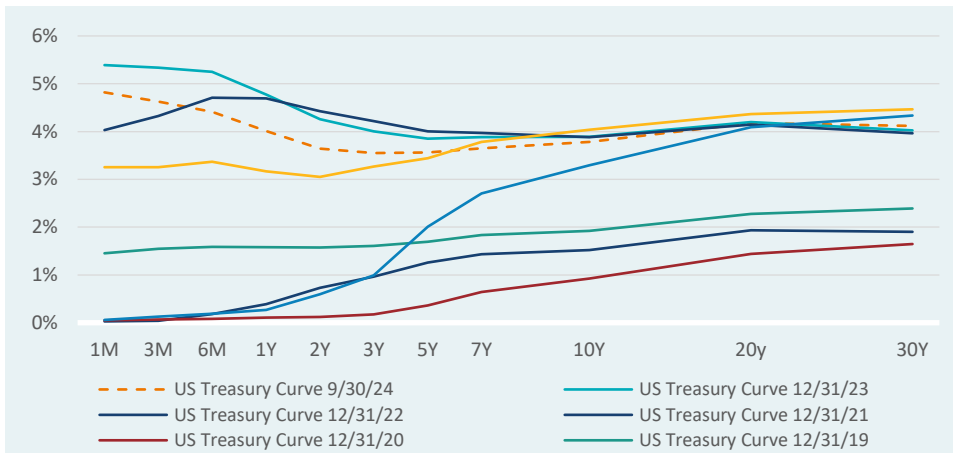
Investors are pricing in considerable near-term rate cuts

Sticky inflation and/or ongoing economic strength could lead to disappointment if the Fed takes a more restrained stance

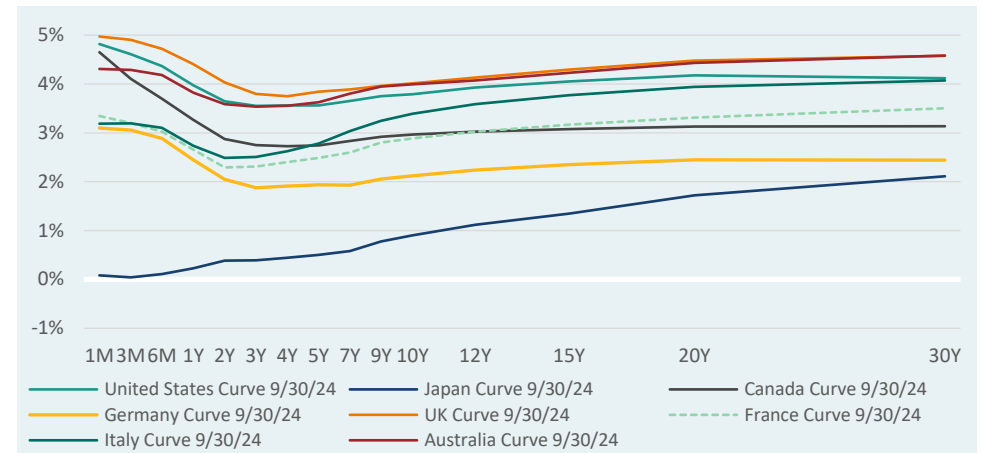
Source: Verus, as of 10/22/24

# Yield environment

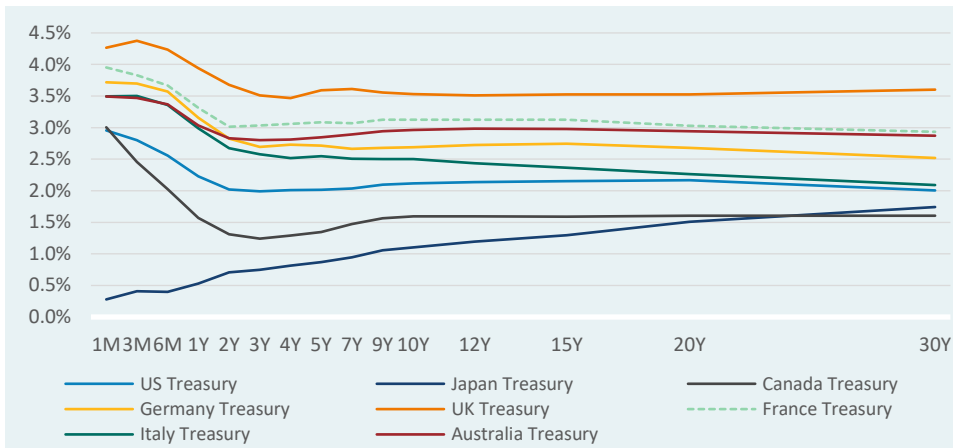
U.S. YIELD CURVE



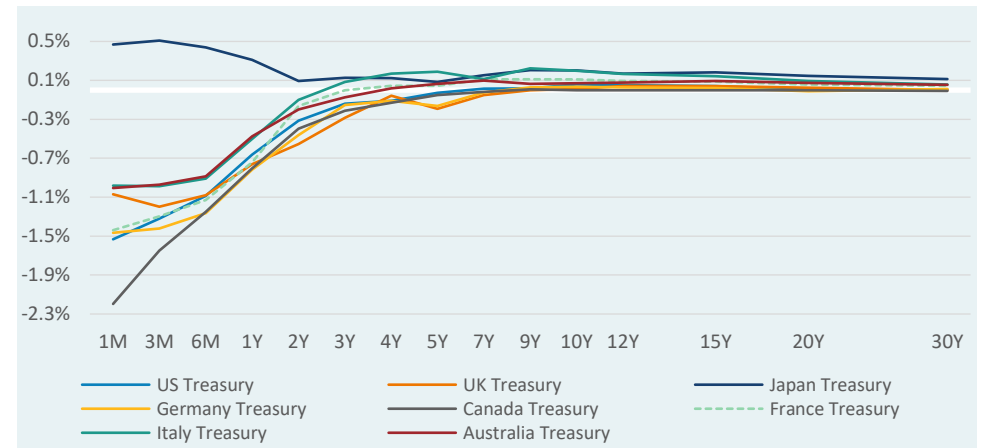
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 9/30/24

# Credit environment

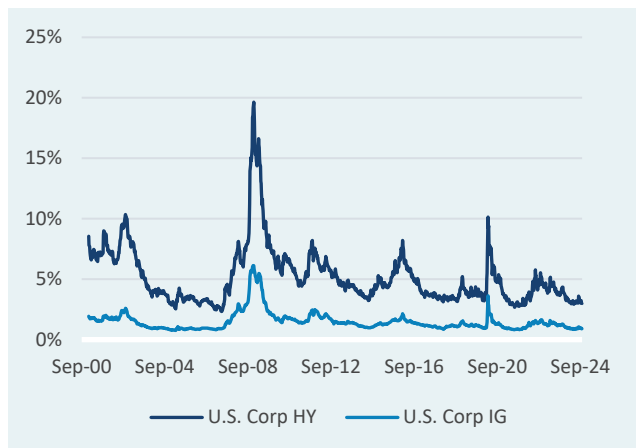
During the third quarter, longer duration credit outperformed shorter duration as U.S. interest rates headed downward. Long duration investment grade corporate bonds (Bloomberg U.S. Long Corporate Credit) gained 8.1% while lower quality credit markets also delivered strong returns—high yield and bank loans added +5.3% (Bloomberg U.S. Corporate High Yield) and +2.1% (CS Leveraged Loans), respectively.

Returns within the high yield bond market were broadly positive. Lower quality credits saw the strongest performance. Bonds rated CCC, which include distressed credit, returned +11.6%, compared to higher quality BB-rated bonds which returned +4.3%. Non-distressed CCC-rated bonds also delivered robust returns, gaining +6.9%. Similarly, lower quality

bank loans outperformed higher quality, with CCC-rated loans returning +2.6%, compared to +2.0% and +1.9% for B- and BB-rated loans.

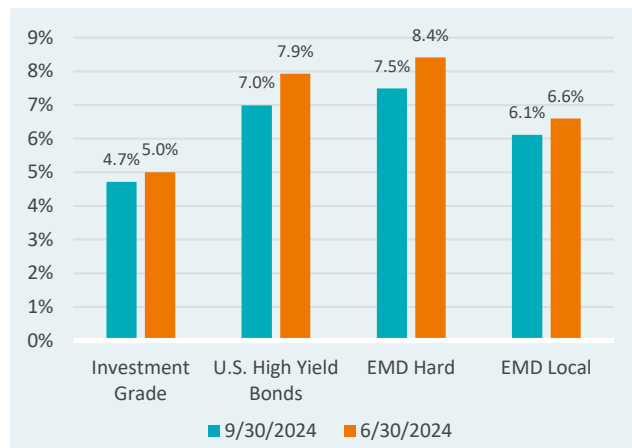
Credit spreads broadly declined alongside an easing of perceived U.S. recession risk. Lower-quality high yield bond spreads fell by roughly 0.2%, to 3.0%, while investment grade spreads tightened slightly to 0.9%. Broadly, across credit ratings, spreads remain well below their long-term historical averages. While some technical factors may be contributing to relative tightness, spreads suggest that investors are fairly confident in the ability of businesses to service debt in the future.

## SPREADS



Source: Barclays, Bloomberg, as of 9/30/24

## YIELD TO MATURITY



Source: Bloomberg, J.P. Morgan as of 9/30/24

## CREDIT SPREAD (OAS)

Market	9/30/24	9/30/23
Long U.S. Corp	1.1%	1.3%
U.S. Inv Grade Corp	0.9%	1.2%
U.S. High Yield	3.0%	3.9%
U.S. Bank Loans*	4.7%	5.2%

Source: Barclays, Credit Suisse, Bloomberg, as of 9/30/24

\*Discount margin (4-year life)

# Default & issuance

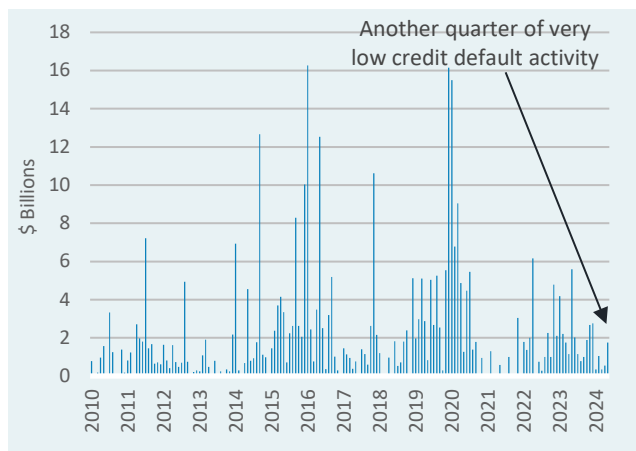
Default activity remained low during the quarter as economic growth was solid and strong economic data releases around the labor market and spending suggested a lower chance of near-term recession. During the period, \$11.1 billion of bank loans and high yield bonds were affected by default or distressed exchanges, down from roughly \$15.0 billion in the prior quarter. Year-to-date, 27 companies have defaulted, totaling more than \$3.0 billion in bonds and \$15.4 billion in loans.

While defaults have remained subdued, distressed exchange activity has been high. During the quarter, total distressed credit volume was roughly \$13.5 billion, the second largest quarterly total on record (since Q4 2008). Despite a rise in exchanges, the year-to-date combination of defaults and distressed exchanges of \$56.1 billion trailed the pace of 2023 by -13%.

High yield bond default rates continued to decline, falling to 1.4%, down from 2.2% a year ago, and are well below the long-term annual average of 3.4%. Recovery rates ended the quarter at 37.7%, down slightly from Q2, but up from the calendar year 2023 level of 32.8%.

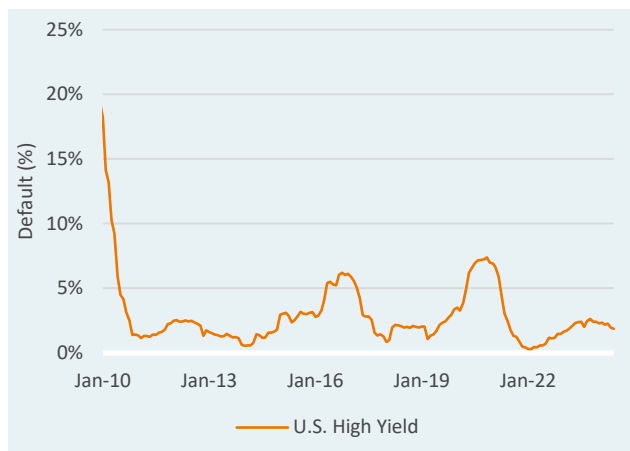
New issuance volume for high yield bonds and bank loans was mixed during the quarter. High yield bond issuance was \$74.0 billion, compared to \$79.4 billion in Q2, while bank loan issuance increased to \$204 billion, up from \$148.4 billion. Lower interest rates likely acted as a catalyst for bank loan issuance activity. Importantly, credit spreads remain near their all-time lows, which allows companies to issue and refinance their debt at more competitive rates.

**U.S. HY MONTHLY DEFAULTS (PAR WEIGHTED)**



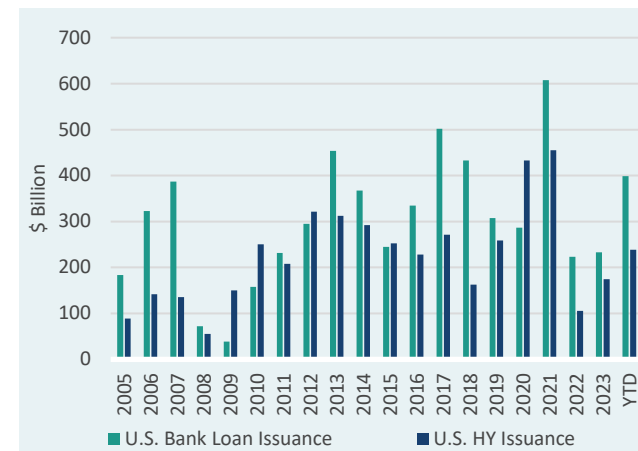
Source: BofA Merrill Lynch, as of 9/30/24

**U.S. HY SECTOR DEFAULTS (LAST 12 MONTHS)**



Source: BofA Merrill Lynch, as of 9/30/24 – par weighted

**U.S. ISSUANCE (\$ BILLIONS)**



Source: BofA Merrill Lynch, as of 9/30/24

# Credit hedge funds & high yield spreads

- Credit hedge funds tend to outperform high yield when spreads are compressed, based on data since 2000. When high yield spreads are especially wide, high yield typically outperform both U.S. Treasuries and credit hedge funds by a wide margin.
- Current high yield spread levels are well within the first quartile (i.e. are low relative to history), reflecting recent sustained economic growth, easing inflation fears, and the beginning of a rate cut cycle driven by lower inflation and a *soft landing* rather than concerns of recession or weakness.
- This supports our view that now may be an attractive time to consider alternative credit funds as a means of earning a premium over comparable liquid markets. Less liquid, more complex areas of the credit market typically offer premium yields, more idiosyncratic trading opportunities, and fund managers often possess more tools for generating alpha.
- Now may also be an appropriate time to plan for future spread widening, in setting up dedicated “trigger” vehicles with traditional or alternative managers to pre-commit to investing in liquid credit markets at certain spread thresholds, when those markets tend to offer the best return premium.

## HF CREDIT AVERAGE EXCESS RETURN VS HIGH YIELD BY SPREAD QUARTILE SINCE JULY 2000

Prior month High Yield Spread over Intermediate Treasury	Avg Monthly Excess Return of HY over Intermediate Treasury	Avg Monthly Excess Return of HF Credit over High Yield Bonds			
		HFRI Convert Arb	HFRI Distressed	HFRI L/S Corporate	HFRI Asset Backed
< 4.2% (Current spread is 3.6%)	0.12%	0.11%	0.13%	0.45%	0.30%
4.2 – 5.4%	0.51%	(0.12%)	(0.03%)	(0.02%)	0.09%
5.4 – 7.3%	0.47%	0.07%	(0.10%)	0.09%	0.08%
> 7.3%	1.13%	(0.33%)	(0.54%)	(0.54%)	(0.28%)

Source: Bloomberg, HFR, MPI. Time period: July 2000 – September 2024. Indexes used: BB US Intermediate Treasury, BB US Corporate High Yield, HFRI RV: Convertible Arbitrage, HFRI ED: Distressed/Restructuring, HFRI RV: Fixed Income: Corporate, HFRI RV: Fixed Income: Asset Backed



# Equity

# Equity environment

- Global markets delivered strong performance during the quarter, with fairly consistent results across broad regions. Emerging markets (MSCI EM +8.7%) led, followed by international developed equities (MSCI EAFE +7.3%), and lastly the domestic market (S&P 500 +5.9%). Dollar weakness provided particular benefits to investors in international developed equities.
- Market expectations for Federal Reserve rate cuts became aggressive, after the Fed cut by 50 basis points on September 18<sup>th</sup>. This likely contributed to dollar weakness, since expectations for lower rates make U.S. dollar holdings less attractive.
- S&P 500 blended year-over-year earnings growth was +3.4%, as of October 18th. Once again, technology companies led the way on earnings, providing growth of +15.2%, while Healthcare ranked second at +10.9%. Materials (-2.7%) and Energy (-20.9%) both

acted as a drag on overall index earnings.

- Small cap and value reversed their run of underperformance. Small cap led large cap by +3.2% (Russell 2000 +9.3% vs. Russell 1000 +6.1%) in Q3, while value outperformed growth by +6.2% (Russell 1000 Value +9.4% vs. Russell 1000 Growth +3.2%). Despite size and style factors performing well during Q3, both have done poorly over the past full year, with small cap and value underperforming by -8.9% and -14.4%, respectively.
- On August 5th, volatility spiked 42 points to 66, marking the largest one day jump in volatility in modern market history. This was widely attributed to significant investor unwinding of carry trade positions (borrowing in Yen to purchase U.S. equities) following a weak labor market data release and an unexpected interest rate hike from the Bank of Japan.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
U.S. Large Cap (S&P 500)	5.9%		36.4%	
U.S. Small Cap (Russell 2000)	9.3%		26.8%	
U.S. Equity (Russell 3000)	6.2%		35.2%	
U.S. Large Value (Russell 1000 Value)	9.4%		27.8%	
US Large Growth (Russell 1000 Growth)	3.2%		42.2%	
Global Equity (MSCI ACWI)	6.6%	5.1%	31.8%	30.8%
International Large (MSCI EAFE)	7.3%	1.5%	24.8%	20.9%
Eurozone (EURO STOXX 50)	6.6%	2.9%	29.4%	25.1%
U.K. (FTSE 100)	8.0%	1.9%	23.5%	12.9%
Japan (TOPIX)	(4.9%)	(4.0%)	21.7%	22.2%
Emerging Markets (MSCI Emerging Markets)	8.7%	6.7%	26.1%	25.2%

Source: Standard & Poor's, FTSE, MSCI, STOXX, JPX, as of 9/30/24

# Domestic equity

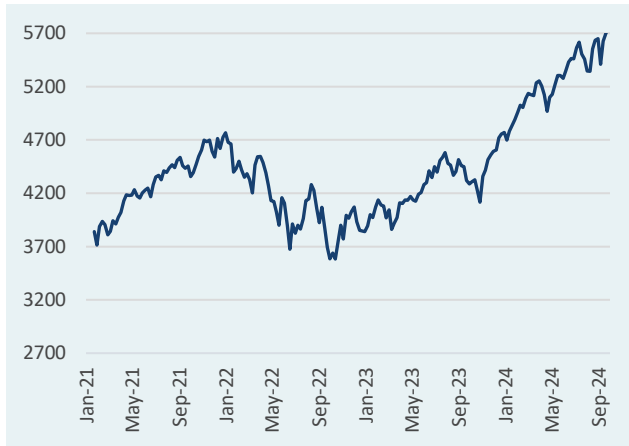
U.S. equities underperformed both international and emerging market shares—the S&P 500 ended Q3 up +5.9%. Market momentum was fueled by strengthening earnings expectations and a solid macro environment. Easing inflation and a normalizing labor market allowed for the Fed to kick off its rate cutting cycle on September 18<sup>th</sup> with a 50 bps cut. Many other central banks have also pivoted towards lower interest rates.

S&P 500 blended year-over-year earnings growth was +3.4%, as of October 18<sup>th</sup>. If earnings growth remains positive, it will mark a fifth straight quarter of positive earnings growth for large cap domestic equities. Once again, the Technology sector has led the way in earnings,

providing gains of +15.6%, year-over-year. The Communication Services sector was close behind at a +10.6% pace. Industrials (-8.4%) and Energy (-26.0%) both acted as a drag on the index.

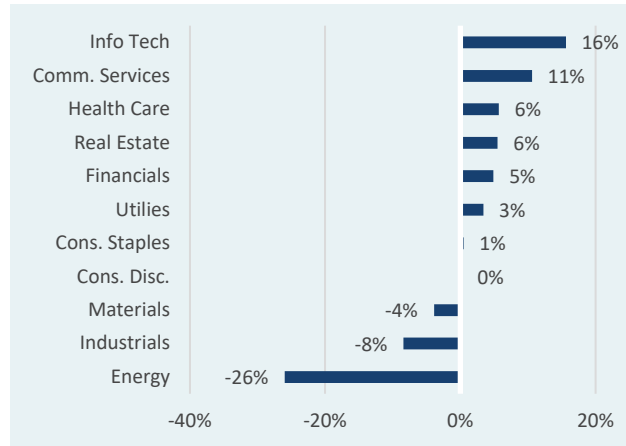
Robust price gains have continued to push valuations higher for the S&P 500, further generating concerns that U.S. equities are *priced for perfection*. Despite this, a resilient economy, interest rate cuts, and decreasing inflation risks arguably provide some fundamental justification for richer prices. Investors will be looking for these conditions to persist, specifically the trajectory of earnings and a path to profitability for recent substantial investments into artificial intelligence capabilities.

**S&P 500 PRICE INDEX**



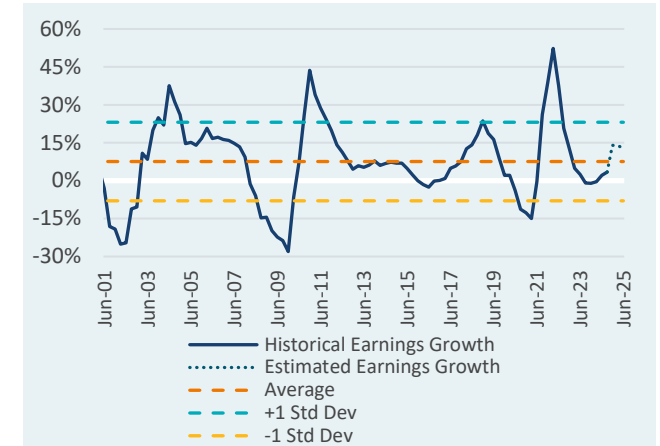
Source: Standard & Poor's, as of 9/30/24

**S&P 500 BLENDED EPS GROWTH (YOY)**



Source: Factset, as of 9/30/24

**S&P 500 EPS GROWTH (YEAR-OVER-YEAR)**



Source: Factset, Verus, as of 10/18/24

# Domestic equity size & style

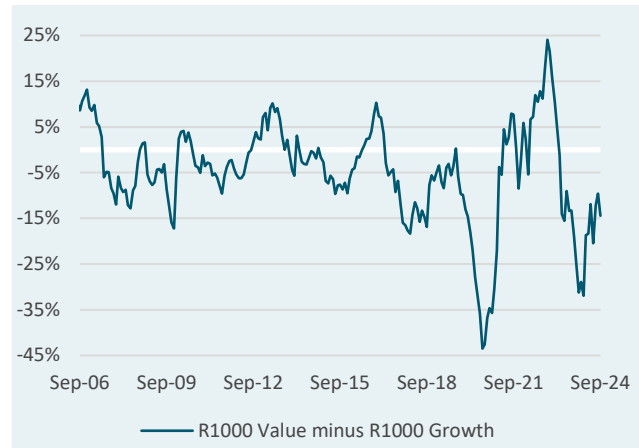
Small cap and value reversed their run of underperformance. Small cap led large cap by +3.2% (Russell 2000 +9.3% vs. Russell 1000 +6.1%) in Q3, while value outperformed growth by +6.2% (Russell 1000 Value +9.4% vs. Russell 1000 Growth +3.2%). Despite size and style factors performing well during the quarter, both have done poorly over the past year, with small cap and value underperforming by -8.9% and -14.4%, respectively.

Sector performance differences continue to fuel significant volatility across size and style factors. The Information

Technology sector, which has a much greater concentration to Growth stocks, has delivered outside performance. Mega cap technology companies have led other S&P 500 constituents during the past year. On the other hand, the Energy sector which has a much greater concentration of Value stocks, has lagged the overall index considerably over the same time period. For investors who engage in tactical factor timing, the current environment has likely proved particularly difficult to do so profitably.

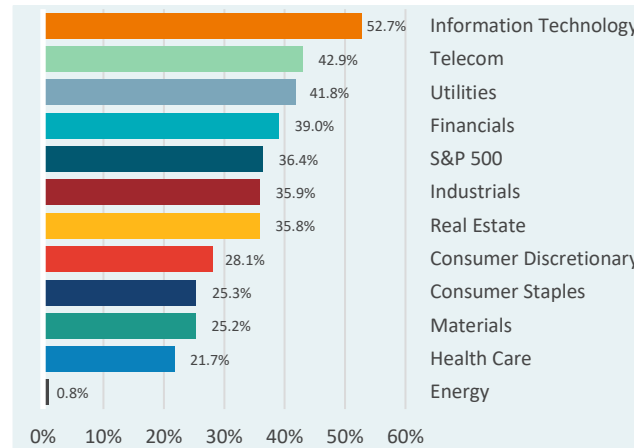
Despite a strong showing in Q3, small cap and value underperformed by -8.9% and -14.4% over the past year, respectively

VALUE VS. GROWTH 1-YR ROLLING



Source: FTSE, as of 9/30/24

S&P 500 SECTOR RETURNS (PAST 1 YEAR)



Source: Standard & Poor's, as of 9/30/24

1-YEAR SIZE & STYLE PERFORMANCE

	Value	Core	Growth
Large Cap	27.8%	35.7%	42.2%
Mid Cap	29.0%	29.3%	29.3%
Small Cap	25.9%	26.8%	27.7%

Source: FTSE, as of 9/30/24

# International developed equity

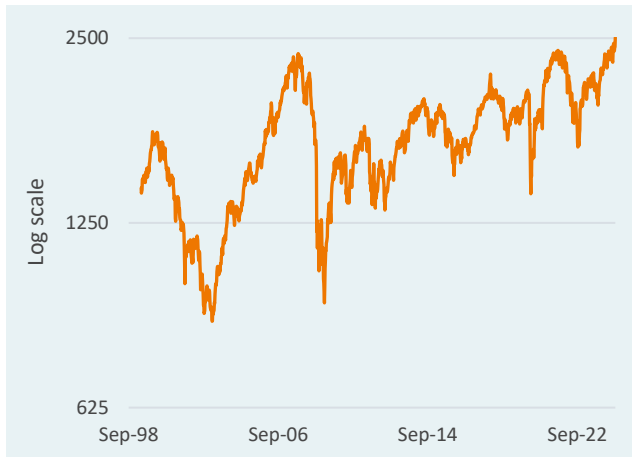
International developed shares (MSCI EAFE +7.3%) outperformed the U.S. market (S&P 500 +5.9%) during the quarter, but trailed emerging market equities (MSCI EM +8.7%). It should be noted that most of this performance was due to currency movements, rather than equity market performance. Unhedged currency exposure contributed +5.8% of the +7.3% index total return.

On a hedged basis, the international developed equity market underperformed the rest of the world (MSCI EAFE Hedged +1.5%). Many developed economies face more sluggish growth, with Europe's largest economy, Germany, now expected to contract -0.2% this year. High energy prices and increased competition with China have weighed on

European manufacturing. The European Union announced duties on these foreign exports with the goal of protecting their manufacturing sector. The European Central Bank has also implemented an accelerated rate cutting cycle in comparison to the U.S., where inflation is under the 2% target, and rate cuts may be necessary to stimulate growth.

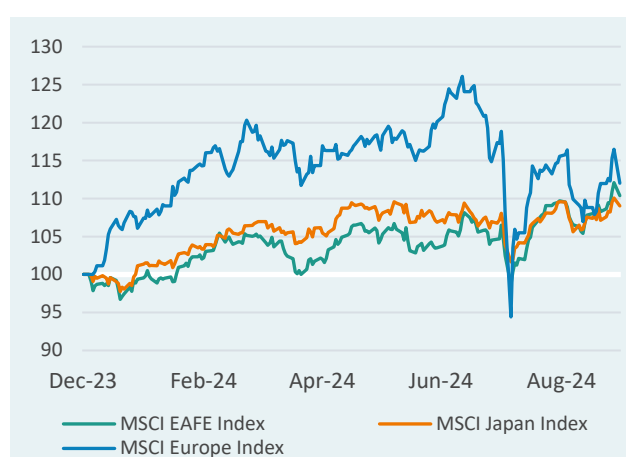
Japanese equities saw significant volatility in Q3, as an unexpected rate hike followed by weak U.S. economic data triggered what appeared to be the unwinding of a carry trade, triggering a sharp sell-off. Japanese equities recovered most of these losses, but the MSCI Japan (hedged) ended the quarter down -4.0%.

INTERNATIONAL DEVELOPED EQUITY



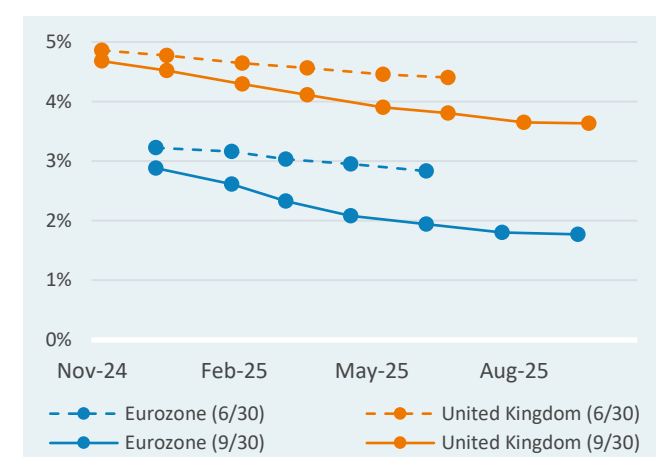
Source: MSCI, as of 9/30/24

MSCI EAFE PERFORMANCE



Source: MSCI, as of 9/30/24

ECB & BOE RATE EXPECTATIONS VS Q2



Source: Bloomberg, as of 9/30/24

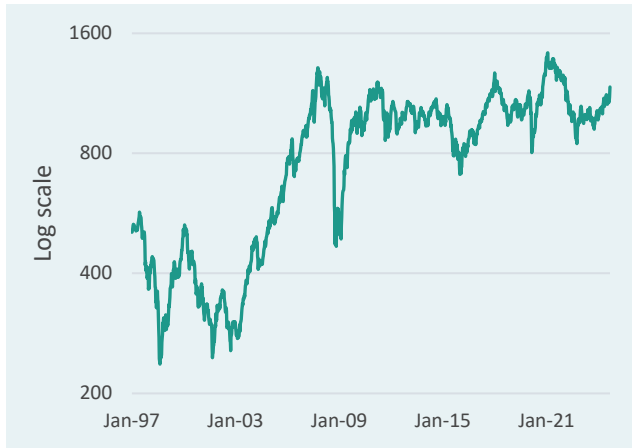
# Emerging market equity

Emerging market equities (MSCI EM +8.7%) outperformed both international developed (MSCI EAFE +7.3%) and domestic equities (S&P 500 +5.9%) over the quarter. After dragging the index lower for multiple years, Chinese equities delivered an aggressive rally in September on government stimulus news, though in early October this reversed and much of those gains were lost.

China announced an aggressive economic stimulus program in September, with President Xi pledging both fiscal and

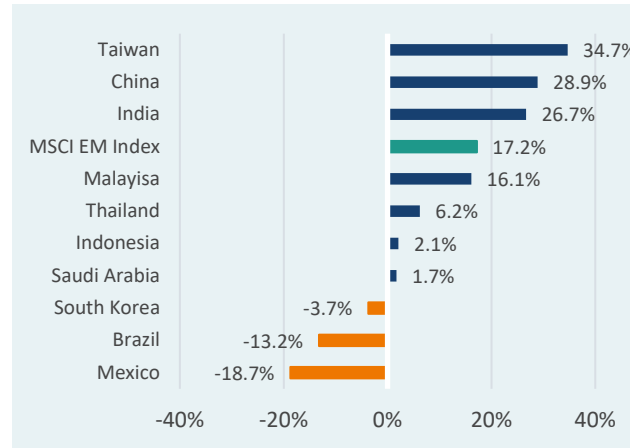
monetary support. Spending was specifically aimed at the ailing real estate market, and at mitigating the downward trajectory of the stock market. Those moves followed the People's Bank of China rate cut from 2.3% to 2.0%. It is not yet clear whether these developments will be sufficient to help turn around the Chinese economy, which faces serious structural issues such as a declining population, shrinking workforce, and a real estate crisis due to substantial excess inventory.

EMERGING MARKET EQUITY



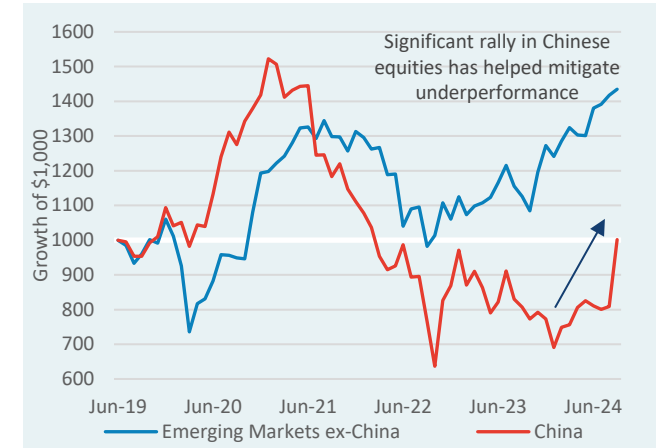
Source: MSCI, as of 9/30/24

MSCI EM 2024 SECTOR RETURNS YTD (USD)



Source: MSCI, J.P. Morgan, as of 9/30/24

CHINA UNDERPERFORMANCE PARTLY REVERSED



Source: MSCI, as of 9/30/24

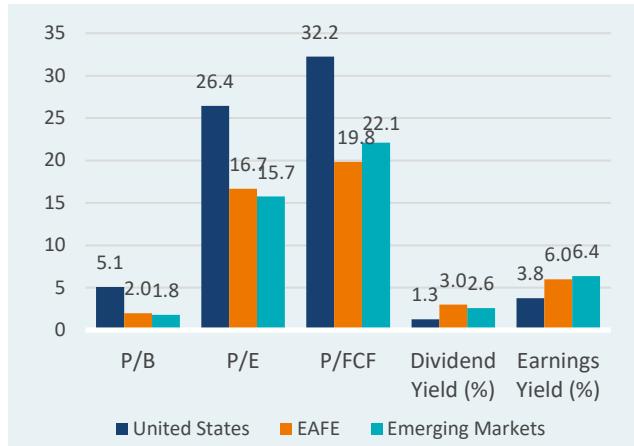
# Equity valuations

Valuations moved higher in Q3, fueled by central bank rate cut news, further signs of inflation normalization, and a generally great corporate earnings outlook. The U.S. continues to trade at a large premium to other markets, though high multiples can be partly attributed to the importance of the Information Technology sector in the index (which tends to demand a higher price-to-earnings ratio than other sectors), a stronger expected earnings growth rate, and a business environment that has more effectively fostered innovation.

a larger role in the index, these effects have pushed total index dividend yield to a historically depressed level of 1.4%, as of September 30<sup>th</sup>. Meanwhile, non-U.S. stocks offer a 3.3% dividend yield (MSCI ACWI ex-U.S.). This is a large gap and has rarely occurred historically. However, changes in yield appear partly due to fundamental changes in marketplace characteristics, such as a greater proportion of the index being comprised of high growth companies that choose to reinvest a greater share of earnings, rather than paying those earnings out in the form of dividends.

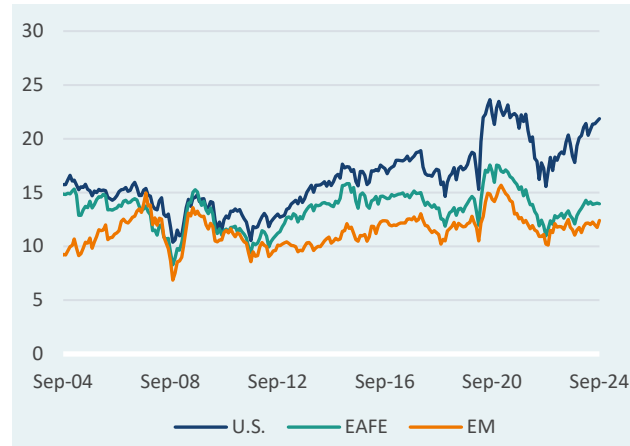
As U.S. stock valuations head upwards and growth stocks play

**MSCI VALUATION METRICS (3-MONTH AVG)**



Source: MSCI, Verus, as of 6/30/24 – Trailing P/E

**FORWARD PRICE/EARNINGS RATIO**



Source: MSCI, Verus, as of 9/30/24

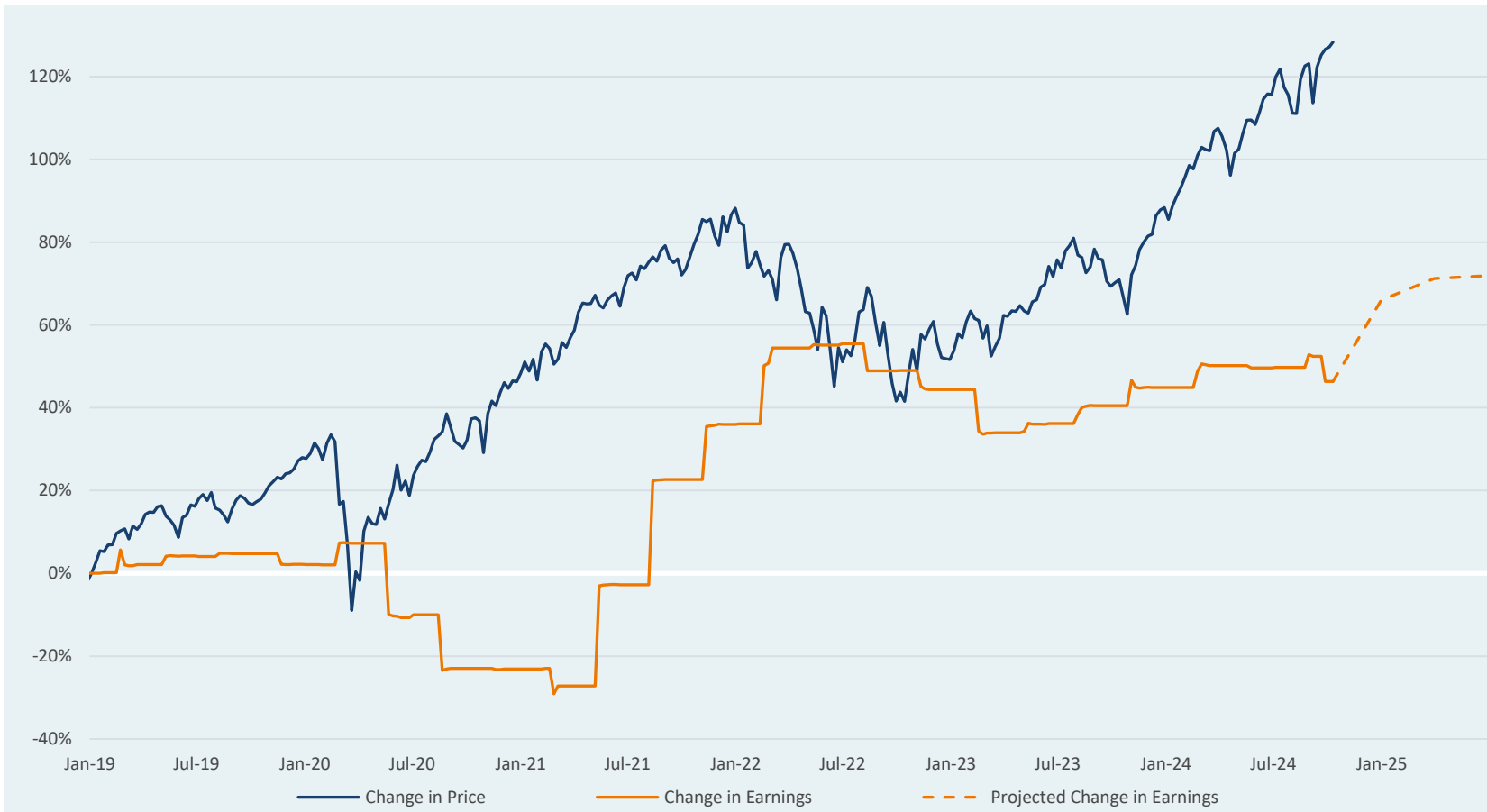
**S&P 500 HISTORICAL DIVIDEND YIELD**



Source: Standard & Poor's, Verus, as of 9/30/24

# Lofty U.S. equity valuations, but strong earnings are expected

S&P 500 PRICE GROWTH VS. EARNINGS GROWTH (SINCE 2019)



Valuations are in the 94th percentile relative to history, meaning multiples have only been this expensive 6% of the time.

But higher valuations may be partly justified by strong earnings forecasts

Source: Standard & Poor's, Verus, as of 10/10/24



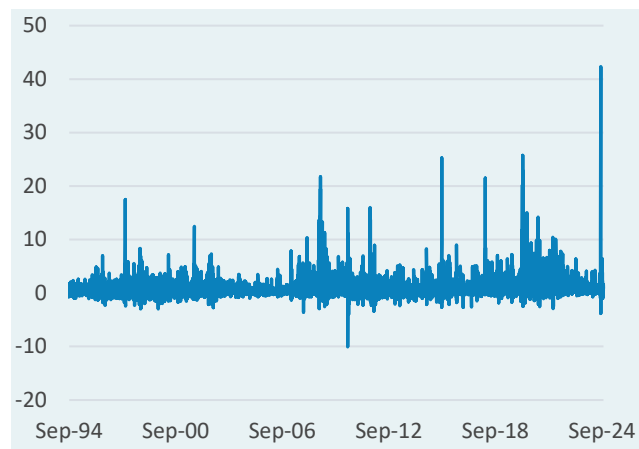
# Market volatility

Market-priced volatility (Cboe VIX Index) rose during Q3, starting the quarter at 12.4% and ending at 16.7%—closer to the longer-term average of 19.5%. On August 5<sup>th</sup>, volatility spiked 42 points to 66, making the largest one day jump in volatility in modern market history. The previous record was set during market turmoil among COVID-19 lockdowns. This market shock in August was widely attributed to unwinding of carry trade positions (borrowing in Yen to purchase U.S. equities) following a weak labor market data release, as well as an unexpected interest rate hike from the Bank of Japan. Volatility has since subsided, and markets have recovered much of their losses. With valuations at elevated levels, it would not be surprising to see further market shakiness.

Bond market volatility remains significantly above the longer-term average, but has trended downward as inflation risk has eased, and economic conditions have outperformed expectations. The Federal Reserve path to lower interest rates, and bumps that will inevitably occur along that path, could result in elevated fixed income volatility.

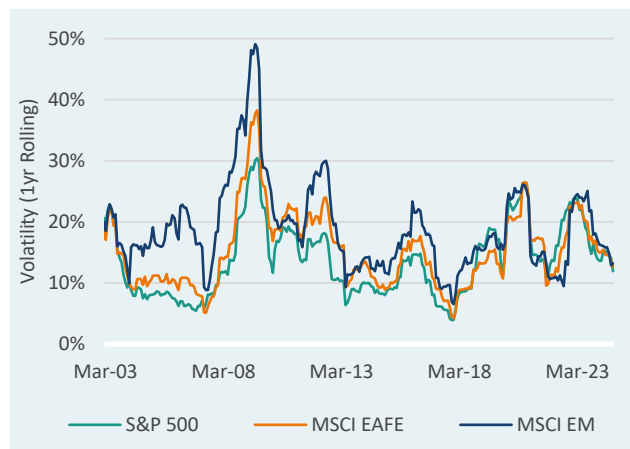
Recent realized one-year volatility has drifted to very low levels, despite uncertainty around inflation and interest rates, geopolitical risk flareups, and the upcoming election. Domestic and foreign markets showed similar volatility levels during that time.

**U.S. IMPLIED VOLATILITY (VIX)**



Source: Cboe, as of 9/30/24

**REALIZED VOLATILITY**



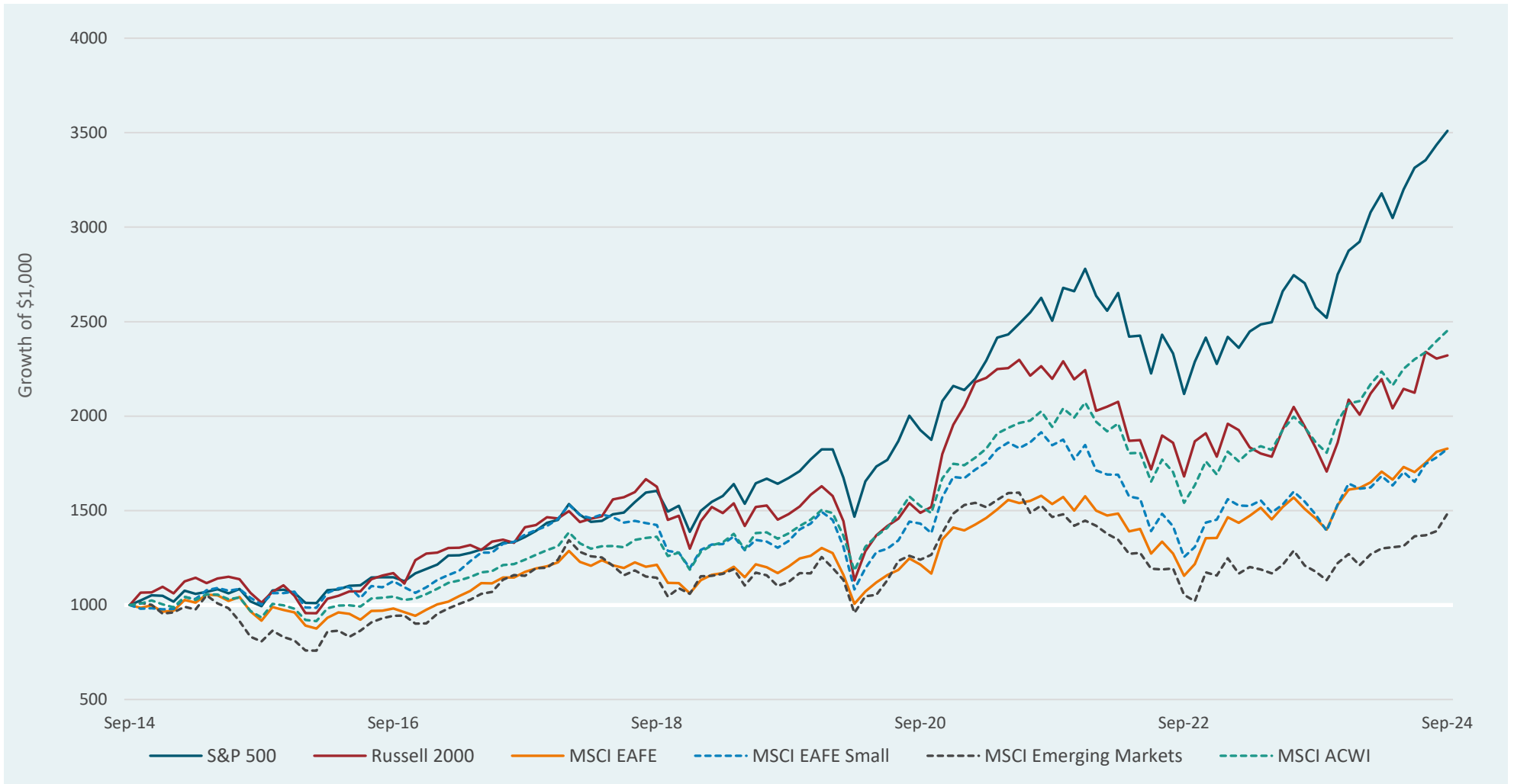
Source: Standard & Poor's, MSCI, Verus, as of 9/30/24

**U.S. TREASURY IMPLIED VOL ("MOVE" INDEX)**



Source: BofA, as of 9/30/24

# Long-term equity performance



Source: Standard & Poor's, FTSE, MSCI, Verus, as of 9/30/24

# Other assets

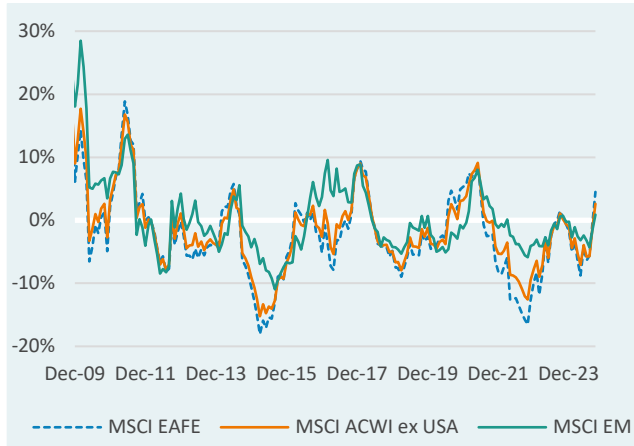
# Currency

U.S. dollar weakness resulted in gains for investors with unhedged foreign currency exposure. Market expectations for Federal Reserve rate cuts have become fairly aggressive over the past month, following the surprise 50 basis point cut on September 18<sup>th</sup>. This has contributed to dollar weakness— expectations for lower rates in the future make holding the U.S. dollars less attractive.

Investors without a currency hedging program gained +5.8% from their international developed equity exposure (MSCI EAFE) during the quarter due to currency movements, and +3.9% over the past year. The return impact from unhedged Japanese currency exposure, which has delivered extreme losses in recent quarters, sharply reversed direction and resulted in a +10.9% gain (represented by the TOPIX Index).

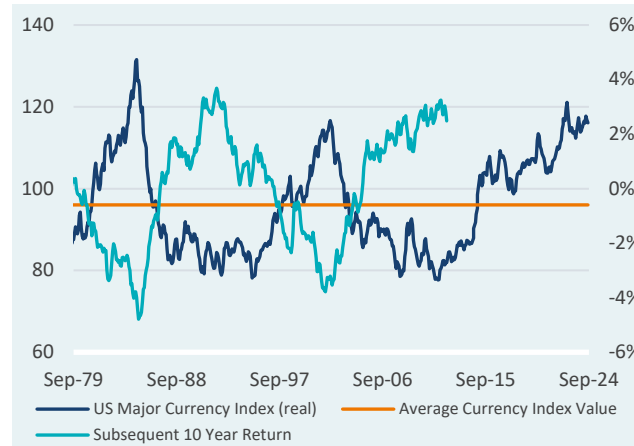
A more thoughtful portfolio approach to currency exposure has provided the dual benefit of lower portfolio volatility and also higher returns—a rare proposition in markets. This approach involves reducing the uncompensated risk of unhedged foreign currency exposure, and instead of unhedged exposure, making a passive investment in the currency market by investing in currencies with higher interest rates, currencies that are undervalued, and currencies that are showing positive price momentum. This approach, represented by the MSCI Currency Factor Mix Index—has offered a positive one-year rolling return over most periods with far lower volatility than the unhedged currency exposure that many investors hold. The past year of intense currency market volatility is testament to this approach.

## EFFECT OF CURRENCY (1-YEAR ROLLING)



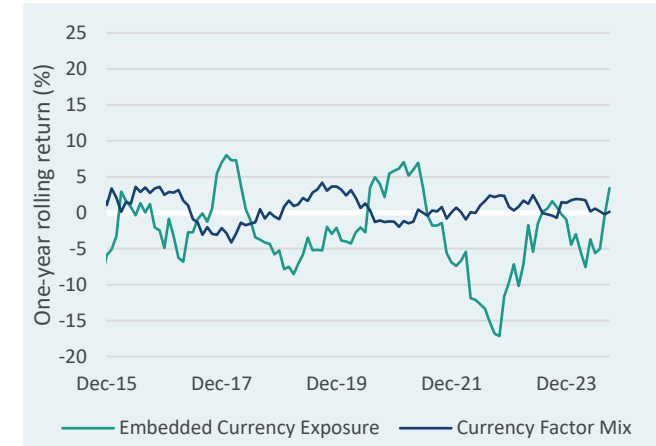
Source: MSCI, Verus, as of 9/30/24

## U.S. DOLLAR MAJOR CURRENCY INDEX



Source: FRED, Verus, as of 9/30/24

## EMBEDDED CURRENCY VS CURRENCY FACTORS



Source: MSCI, Verus, as of 9/30/24 "Embedded Currency Exposure" is the currency return impact from not hedging currency risk

# Appendix

# Periodic table of returns

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	5-Year	10-Year
Large Cap Growth	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	38.5	28.3	16.1	42.7	24.5	19.7	16.5
Large Cap Equity	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	34.6	27.6	9.4	26.5	21.2	15.6	13.1
Emerging Markets Equity	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	0.0	28.5	21.0	27.1	1.5	18.7	16.9	10.7	9.2
Large Cap Value	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	-1.5	26.5	20.0	26.5	-4.7	18.2	16.7	7.8	8.9
Small Cap Growth	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	-3.5	25.5	18.3	25.2	-7.5	16.9	13.2	9.3	8.8
International Equity	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	-4.8	22.4	14.0	17.7	-13.0	15.4	13.0	9.4	6.4
60/40 Global Portfolio	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	-6.0	22.0	10.3	14.8	-14.5	14.6	12.5	8.2	8.2
Small Cap Equity	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	-8.3	18.6	7.8	11.3	-14.5	11.5	11.2	8.8	5.0
Small Cap Value	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	-9.3	18.4	7.5	8.9	-17.3	9.8	9.2	5.7	5.7
Hedge Funds of Funds	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-11.0	8.7	4.6	6.5	-19.1	6.3	6.0	5.3	3.6
Commodities	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	7.0	-11.2	7.8	2.8	2.8	-20.1	5.5	5.9	3.8	4.0
US Bonds	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-12.9	7.7	0.5	0.0	-20.4	5.0	4.4	5.7	1.5
Cash	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-13.8	6.4	0.5	-1.5	-26.4	-7.9	4.0	2.1	1.8
Real Estate	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-14.6	2.1	-3.1	-2.5	-29.1	-7.9	-1.2	0.3	0.0

- Large Cap Equity
- Large Cap Value
- Large Cap Growth
- Small Cap Equity
- Small Cap Value

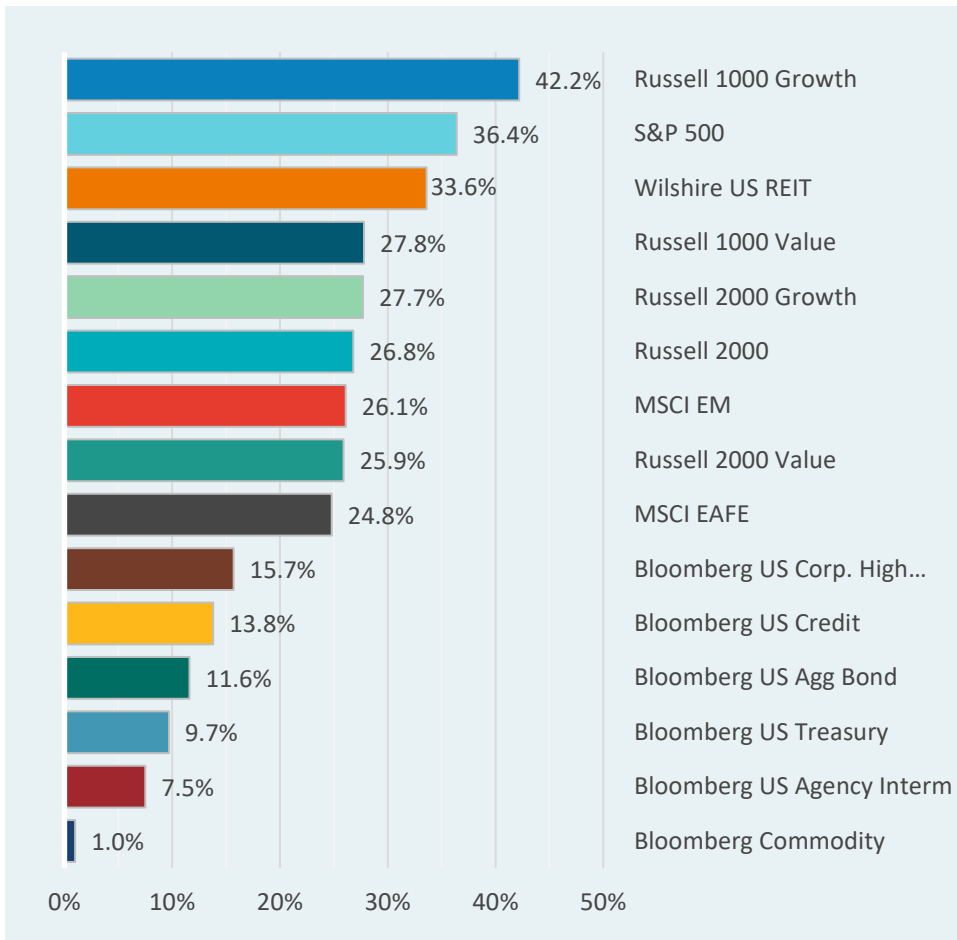
- Small Cap Growth
- International Equity
- Emerging Markets Equity
- US Bonds
- Cash

- Commodities
- Real Estate
- Hedge Funds of Funds
- 60% MSCI ACWI/40% Bloomberg Global Bond

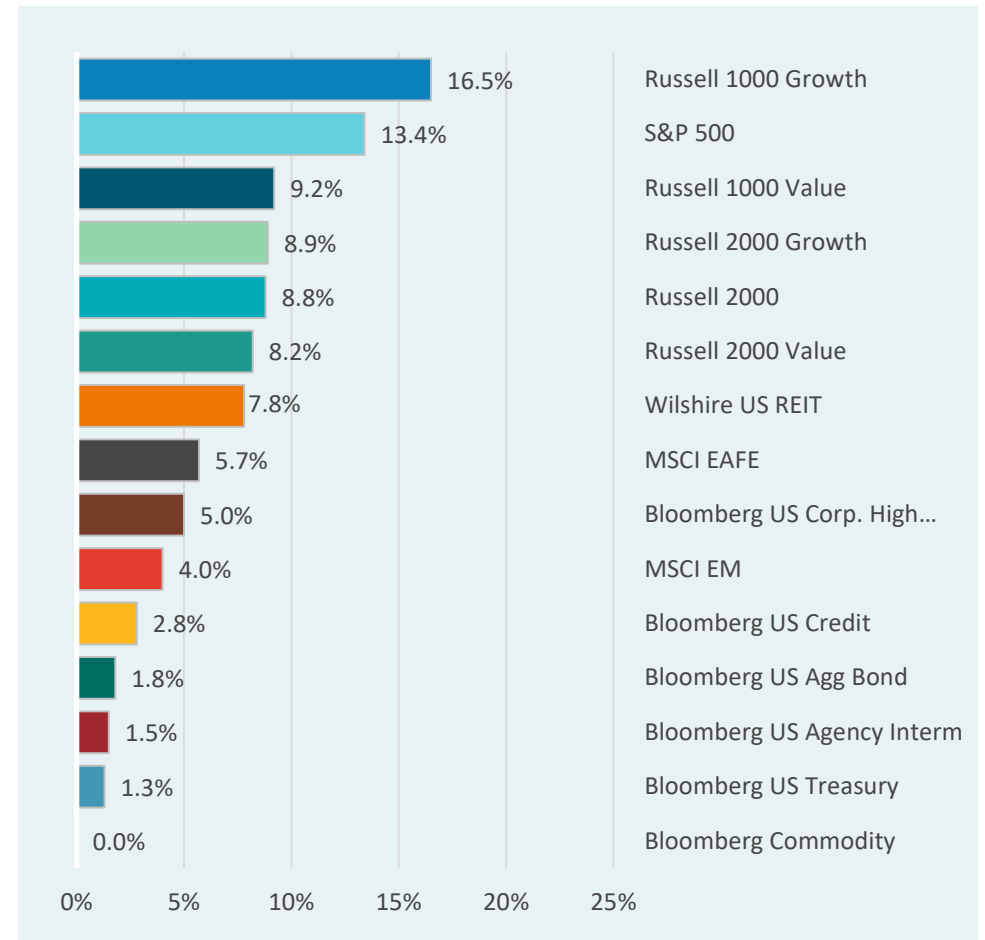
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, Bloomberg US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, Bloomberg Global Bond. NCREIF Property Index performance data as of 6/30/24.

# Major asset class returns

ONE YEAR ENDING SEPTEMBER



TEN YEARS ENDING SEPTEMBER



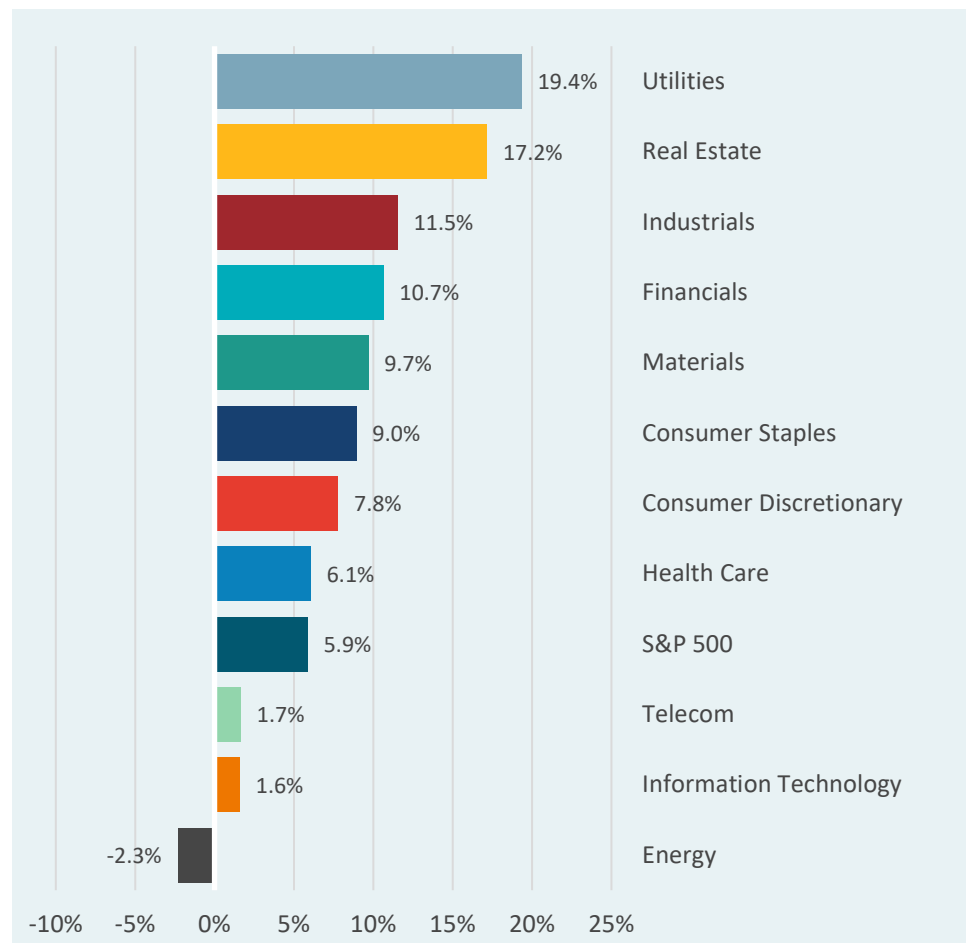
\*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

Source: Morningstar, as of 9/30/24

Source: Morningstar, as of 9/30/24

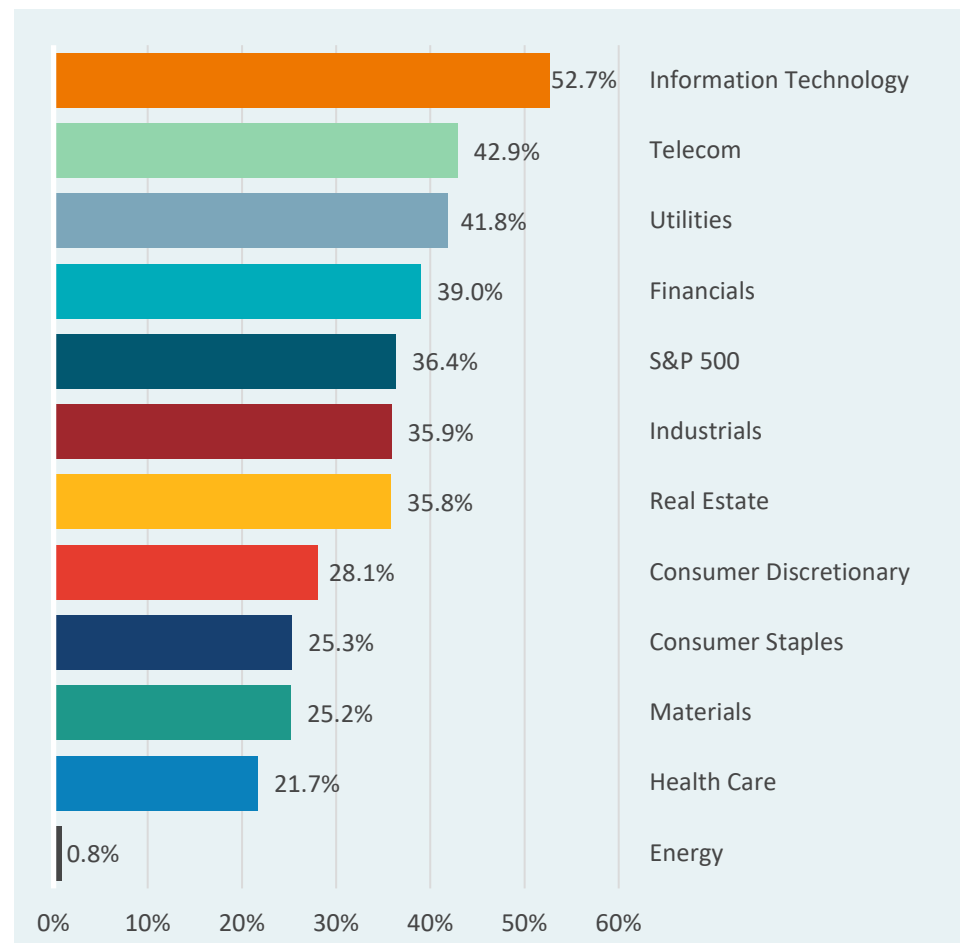
# S&P 500 sector returns

QTD



Source: Morningstar, as of 9/30/24

ONE YEAR ENDING AUGUST

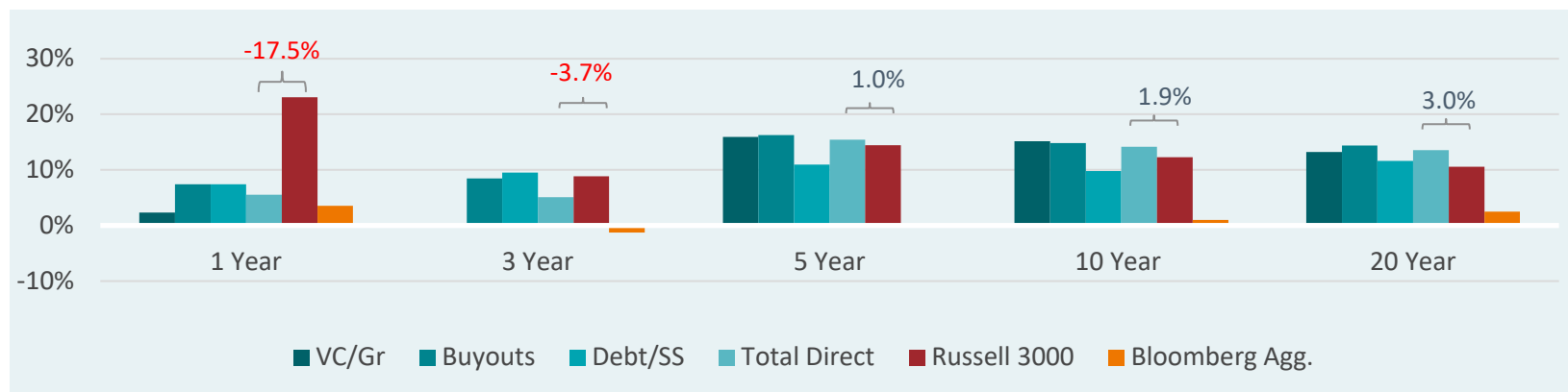


Source: Morningstar, as of 9/30/24



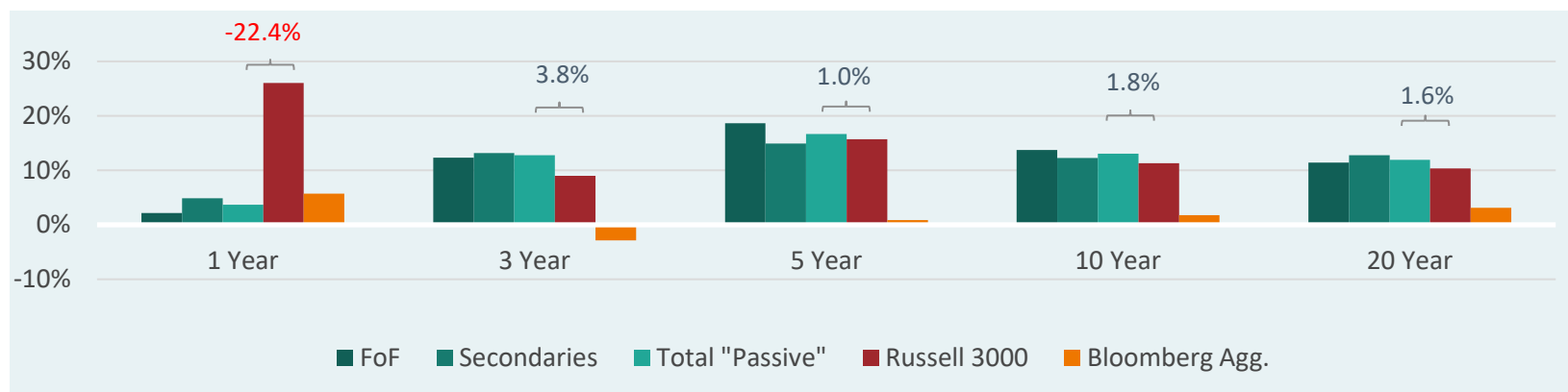
# Private equity vs. traditional assets performance

## DIRECT PRIVATE EQUITY FUND INVESTMENTS



Direct P.E Fund Investments vs. public equities has been mixed.

## "PASSIVE" STRATEGIES

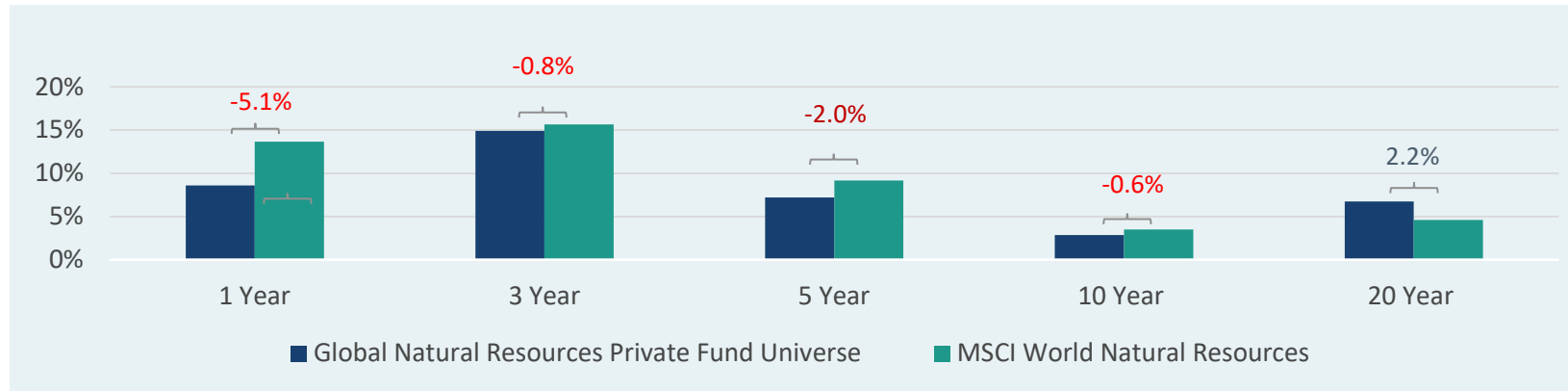


"Passive" strategies outperformed comparable public equities across all time periods, aside from the 1-year.

Sources: FTSE PME: U.S. Direct Private Equity returns are as of June 30, 2024, whereas "Passive" strategies as of March 31, 2024. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.

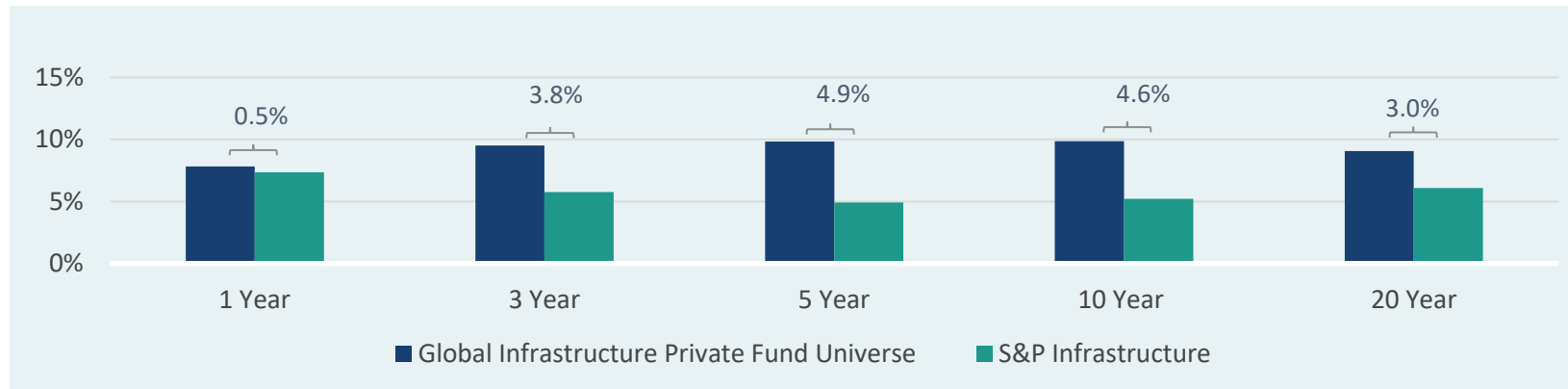
# Private vs. liquid real assets performance

## GLOBAL NATURAL RESOURCES FUNDS



N.R. funds underperformed the MSCI World Natural Resources benchmark across most periods.

## GLOBAL INFRASTRUCTURE FUNDS

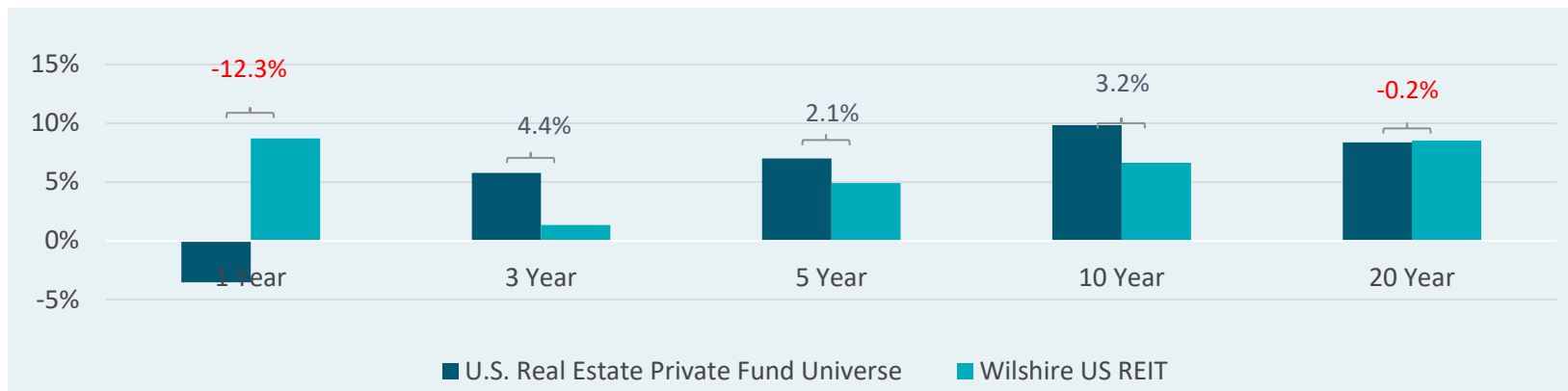


Infra. funds outperformed the S&P Infra. across all periods.

Sources: FTSE PME: Global Natural Resources (vintage 1999 and later, inception of MSCI World Natural Resources benchmark) and Global Infrastructure (vintage 2002 and later, inception of S&P Infrastructure benchmark) universes as of June 30, 2024. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

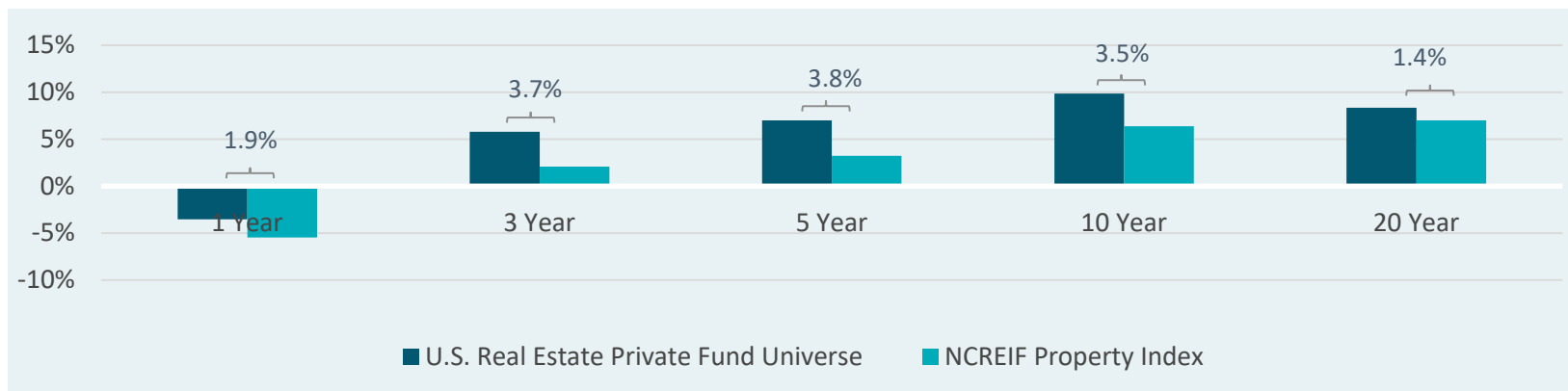
# Private vs. liquid and core real estate performance

## U.S. PRIVATE REAL ESTATE FUNDS VS. LIQUID UNIVERSE



U.S. Private R.E. funds performance vs. the Wilshire U.S. REIT Index has been mixed.

## U.S. PRIVATE REAL ESTATE FUNDS VS. CORE FUNDS



U.S. Private R.E. Funds outperformed the NCREIF Property Index across all time periods.

Sources: FTSE PME: U.S. Real Estate universes as of June 30, 2024. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real estate universes.

# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	2.1	5.9	22.1	36.4	11.9	16.0	13.4
S&P 500 Equal Weighted	2.3	9.6	15.2	28.8	8.2	12.8	11.1
DJ Industrial Average	2.0	8.7	13.9	28.8	10.0	11.8	12.0
Russell Top 200	2.1	5.2	23.3	37.7	12.6	17.2	14.1
Russell 1000	2.1	6.1	21.2	35.7	10.8	15.6	13.1
Russell 2000	0.7	9.3	11.2	26.8	1.8	9.4	8.8
Russell 3000	2.1	6.2	20.6	35.2	10.3	15.3	12.8
Russell Mid Cap	2.2	9.2	14.6	29.3	5.8	11.3	10.2
<b>Style Index</b>							
Russell 1000 Growth	2.8	3.2	24.5	42.2	12.0	19.7	16.5
Russell 1000 Value	1.4	9.4	16.7	27.8	9.0	10.7	9.2
Russell 2000 Growth	1.3	8.4	13.2	27.7	(0.4)	8.8	8.9
Russell 2000 Value	0.1	10.2	9.2	25.9	3.8	9.3	8.2

## INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
MSCI ACWI	2.3	6.6	18.7	31.8	8.1	12.2	9.4
MSCI ACWI ex US	2.7	8.1	14.2	25.4	4.1	7.6	5.2
MSCI EAFE	0.9	7.3	13.0	24.8	5.5	8.2	5.7
MSCI EM	6.7	8.7	16.9	26.1	0.4	5.7	4.0
MSCI EAFE Small Cap	2.6	10.5	11.1	23.5	(0.4)	6.4	6.2
<b>Style Index</b>							
MSCI EAFE Growth	0.4	5.7	12.3	26.5	1.9	7.7	6.6
MSCI EAFE Value	1.4	8.9	13.8	23.1	8.9	8.3	4.6
<b>Regional Index</b>							
MSCI UK	0.3	7.9	15.4	23.3	9.8	7.9	4.1
MSCI Japan	(0.6)	5.7	12.4	21.6	2.7	7.1	6.4
MSCI Euro	1.8	6.9	12.8	27.3	6.7	9.1	5.7
MSCI EM Asia	8.0	9.5	21.6	29.7	0.8	7.2	5.6
MSCI EM Latin American	0.1	3.7	(12.5)	2.8	7.2	2.1	0.6

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
Bloomberg US TIPS	1.5	4.1	4.9	9.8	(0.6)	2.6	2.5
Bloomberg US Treasury Bills	0.5	1.4	4.1	5.6	3.5	2.3	1.7
Bloomberg US Agg Bond	1.3	5.2	4.4	11.6	(1.4)	0.3	1.8
Bloomberg US Universal	1.4	5.2	4.9	12.1	(1.1)	0.7	2.2
<b>Duration</b>							
Bloomberg US Treasury 1-3 Yr	0.8	2.9	4.1	6.8	1.3	1.5	1.4
Bloomberg US Treasury Long	2.0	7.8	2.4	15.4	(8.4)	(4.3)	1.1
Bloomberg US Treasury	1.2	4.7	3.8	9.7	(1.8)	(0.2)	1.3
<b>Issuer</b>							
Bloomberg US MBS	1.2	5.5	4.5	12.3	(1.2)	0.0	1.4
Bloomberg US Corp. High Yield	1.6	5.3	8.0	15.7	3.1	4.7	5.0
Bloomberg US Agency Interm	0.9	3.1	4.2	7.5	0.5	1.1	1.5
Bloomberg US Credit	1.7	5.7	5.2	13.8	(1.1)	1.1	2.8

## OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Index</b>							
Bloomberg Commodity	4.9	0.7	5.9	1.0	3.7	7.8	0.0
Wilshire US REIT	2.6	15.2	14.9	33.6	4.6	5.4	7.8
CS Leveraged Loans	0.7	2.1	6.6	9.7	6.3	5.6	4.9
S&P Global Infrastructure	3.8	13.4	18.0	30.9	9.6	6.9	6.3
Alerian MLP	(0.4)	0.7	20.0	23.6	25.3	12.5	1.6
<b>Regional Index</b>							
JPM EMBI Global Div	1.8	6.2	8.6	18.6	(0.4)	0.9	3.3
JPM GBI-EM Global Div	3.4	9.0	4.9	13.4	0.6	0.6	0.6
<b>Hedge Funds</b>							
HFRI Composite	0.3	1.3	6.2	10.7	3.4	7.0	4.9
HFRI FOF Composite	0.2	1.1	6.0	9.3	2.3	5.3	3.6
<b>Currency (Spot)</b>							
Euro	0.8	4.1	1.0	5.4	(1.3)	0.5	(1.2)
Pound Sterling	2.1	6.1	5.2	9.9	(0.2)	1.7	(1.9)
Yen	1.8	12.5	(1.4)	4.3	(8.0)	(5.5)	(2.6)

Source: Morningstar, HFRI, as of 9/30/24

# Definitions

**Bloomberg US Weekly Consumer Comfort Index** - tracks the public's economic attitudes each week, providing a high-frequency read on consumer sentiment. The index, based on cell and landline telephone interviews with a random, representative national sample of U.S. adults, tracks Americans' ratings of the national economy, their personal finances and the buying climate on a weekly basis, with views of the economy's direction measured separately each month. ([www.lanqerresearch.com](http://www.lanqerresearch.com))

**University of Michigan Consumer Sentiment Index** - A survey of consumer attitudes concerning both the present situation as well as expectations regarding economic conditions conducted by the University of Michigan. For the preliminary release approximately three hundred consumers are surveyed while five hundred are interviewed for the final figure. The level of consumer sentiment is related to the strength of consumer spending. ([www.Bloomberg.com](http://www.Bloomberg.com))

**NFIB Small Business Outlook** - Small Business Economic Trends (SBET) is a monthly assessment of the U.S. small-business economy and its near-term prospects. Its data are collected through mail surveys to random samples of the National Federal of Independent Business (NFIB) membership. The survey contains three broad question types: recent performance, near-term forecasts, and demographics. The topics addressed include: outlook, sales, earnings, employment, employee compensation, investment, inventories, credit conditions, and single most important problem. (<http://www.nfib-sbet.org/about/>)

**NAHB Housing Market Index** – the housing market index is a weighted average of separate diffusion indices for three key single-family indices: market conditions for the sale of new homes at the present time, market conditions for the sale of new homes in the next six months, and the traffic of prospective buyers of new homes. The first two series are rated on a scale of Good, Fair, and Poor and the last is rated on a scale of High/Very High, Average, and Low/Very Low. A diffusion index is calculated for each series by applying the formula  $(\text{Good-Poor} + 100)/2$  to the present and future sales series and  $(\text{High/Very High-Low/Very Low} + 100)/2$  to the traffic series. Each resulting index is then seasonally adjusted and weighted to produce the HMI. Based on this calculation, the HMI can range between 0 and 100.

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