



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**

2<sup>ND</sup> QUARTER 2024  
Investment Landscape

# Verus business update

## Since our last Investment Landscape webinar:

- Verus hired Joe Ratliffe as a Performance Analyst in our Los Angeles office
- Brent Nelson, Managing Director | Senior Consultant, received the 2023 Verus North Star Award for championing client success
- Verus will be partnering with Rainier Scholars for a 2024 Summer internship in our Seattle office
- Recent research, found at [verusinvestments.com/research](https://verusinvestments.com/research):
  - *Market concentration & equal weighted indexing*
  - *Ten thoughts for 2024*
  - *What are continuation funds?*

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# Recent Verus research

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

## Topics of interest

### TEN THOUGHTS FOR 2024

Every January we write a list of 10 things we expect to be important in the coming year. Many firms do this—we do something unusual, which is mark ourselves on the success or failure of the previous year’s predictions. Some years we do well in our predictions, some years less well, but we find the self-enforced humility worthwhile when taking on the task of forecasting. This year is no different. We can look back with some pleasure: in a year where many forecasts went awry, five of our ten forecasts can be counted as a success, with two more a partial success, and three misses.

## Other thought leadership

### WHAT ARE CONTINUATION FUNDS?

Continuation funds are an innovative financial tool that have been transforming the landscape of private equity. But this new opportunity leaves many investors wondering: What are they? Who can invest in them? What are the risks? Our video explores this concept and how Verus recommends to assess them.

### MARKET CONCENTRATION & EQUAL-WEIGHTED INDEXING

Equal-weighted indexing presents an intriguing proposition to the issue of market concentration often seen in market cap-weighted indexes, such as the S&P 500. However, a closer look shows that this approach has failed to deliver on many of the qualities that investors may be seeking. This video provides a look into the equal-weighted index strategy and examines its track record from a few vital angles.

# 1<sup>st</sup> quarter summary

## THE ECONOMIC CLIMATE

- Real GDP growth unexpectedly slowed in Q1 to 1.6% quarter-over-quarter (3.0% year-over-year), falling short of economist forecasts for 2.5% growth. The GDP release reflected positive but decelerating spending by households, slowing exports, and less government expenditures. Residential fixed investment accelerated partly driven by new single-family home construction, while private inventory investment fell. **p. 8**
- The U.S. job market has been incredibly resilient, with unemployment rising slightly from 3.7% to 3.8% but labor participation improving from 62.5% to 62.7%. Some economists and investors have begun to partially attribute surprisingly strong labor conditions to substantial immigration (both legal and illegal) in recent years. **p. 14**

## PORTFOLIO IMPACTS

- The 10-year U.S. Treasury yield rose 32 basis points to 4.20% during Q1 on broad acknowledgment that disinflation trends have stalled and that the Federal Reserve may not cut rates in 2024 as significantly as markets had hoped for. **p. 21**
- Market-priced volatility (Cboe VIX Index) remained incredibly low during the quarter, ending at 13.0 in March. Historically, market volatility of this level has coincided with strong upward trending risk markets and investor enthusiasm. **p. 33**

## THE INVESTMENT CLIMATE

- Equity markets delivered another quarter of large gains—much of the performance fueled by richer valuations rather than fundamentals. Credit spreads declined further to very low levels, leading to moderate returns for higher risk credit. Many markets appear to be priced to perfection as recession fears subside. **p. 45**
- U.S. inflation increased in Q1, following a handful of hotter-than-expected inflation and jobs reports. Headline inflation increased from 3.3% to 3.5% year-over-year in March, while core CPI (ex-food & energy) declined slightly from 3.9% to 3.8%. It now seems more likely that inflation ends this year closer to, or above, 3% rather than 2%. **p. 10**

## ASSET ALLOCATION ISSUES

- U.S. equities (S&P 500 +10.6%) once again outpaced international developed equities (MSCI EAFE +5.8%) and emerging market equities (MSCI EM +2.4%) during the quarter. The domestic market has also delivered outperformance over the past year, fueled by the artificial intelligence boom. Telecom (+49.8%) and Technology (+46.0%) saw the biggest gains across the S&P 500. **p. 28**
- Style factor investing underperformed during Q1. Small cap lagged large cap by -5.1% (Russell 2000 +5.2% vs. Russell 1000 +10.3%). Value underperformed Growth by -2.4% (Russell 1000 Value +9.0% vs. Russell 1000 Growth +11.4%). Mega cap companies continue to dominate large cap index performance and affect style behavior. **p. 29**

Equity markets delivered another large rally in Q1, while credit showed mildly positive returns

Stubborn inflation and fewer Fed interest rate cuts seem likely for 2024

# What drove the market in Q1?

## “U.S. Consumer Prices Heat Up in March; Seen Delaying Fed Rate Cut”

### FED FUNDS FUTURES IMPLIED RATES: END OF 2024

Jan 15th	Jan 31st	Feb 15th	Feb 29th	Mar 15th	Mar 31st
3.76%	3.86%	4.37%	4.48%	4.61%	4.66%

Article Source: Reuters, April 10<sup>th</sup>, 2024

## “Resilient U.S. Boosts IMF Forecast for Global Economic Growth”

### IMF WORLD ECONOMIC OUTLOOK 2024 GLOBAL GDP FORECAST

Jan 23	April 23	July 23	Oct 23	Jan 24	April 24
3.1%	3.0%	3.0%	2.9%	3.1%	3.2%

Article Source: U.S. News & World Report, January 30<sup>th</sup>, 2024

## “A Persistently Strong Labor Market Delivers Economic Stability”

### NONFARM PAYROLL GROWTH

Oct	Nov	Dec	Jan	Feb	Mar
165k	182k	290k	256k	270k	303k

Article Source: Forbes, January 27<sup>th</sup>, 2024

## “Earnings, Big Tech Gave Investors Reasons to Buy U.S. Stocks”

### S&P 500 YEAR-OVER-YEAR EARNINGS GROWTH (DECLINE)

Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023
2.3%	-4.7%	-1.7%	-4.2%	4.9%	4.2%

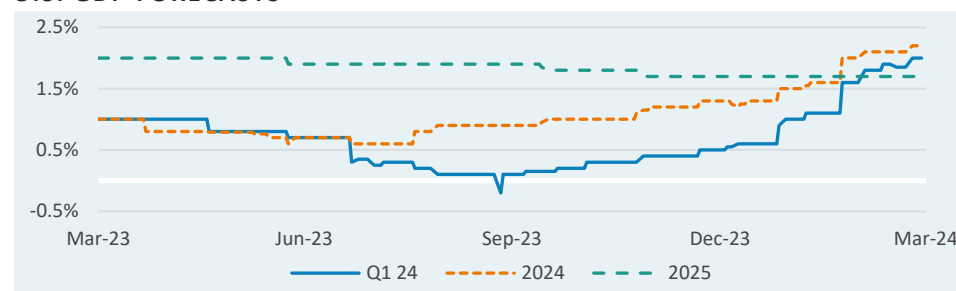
Article Source: Bloomberg, March 2<sup>nd</sup>, 2024

## CPI COMPONENT: SHELTER (YEAR-OVER-YEAR)



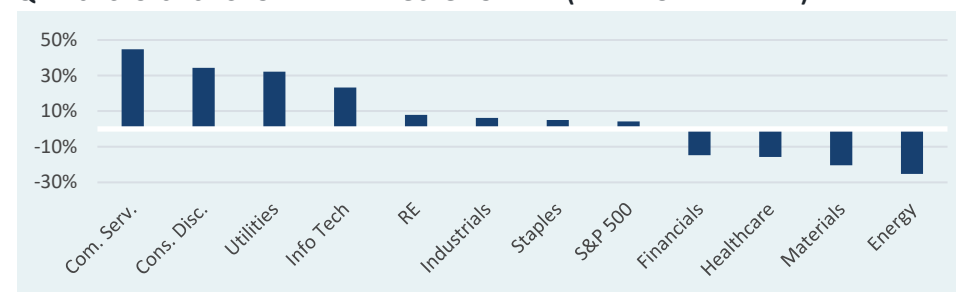
Source: BLS, as of 3/31/24

## U.S. GDP FORECASTS



Source: Bloomberg, as of 3/31/24

## Q4 2023 U.S. SECTOR EARNINGS GROWTH (YEAR-OVER-YEAR)



Source: FactSet, as of 3/31/24

# Economic environment

# U.S. economics summary

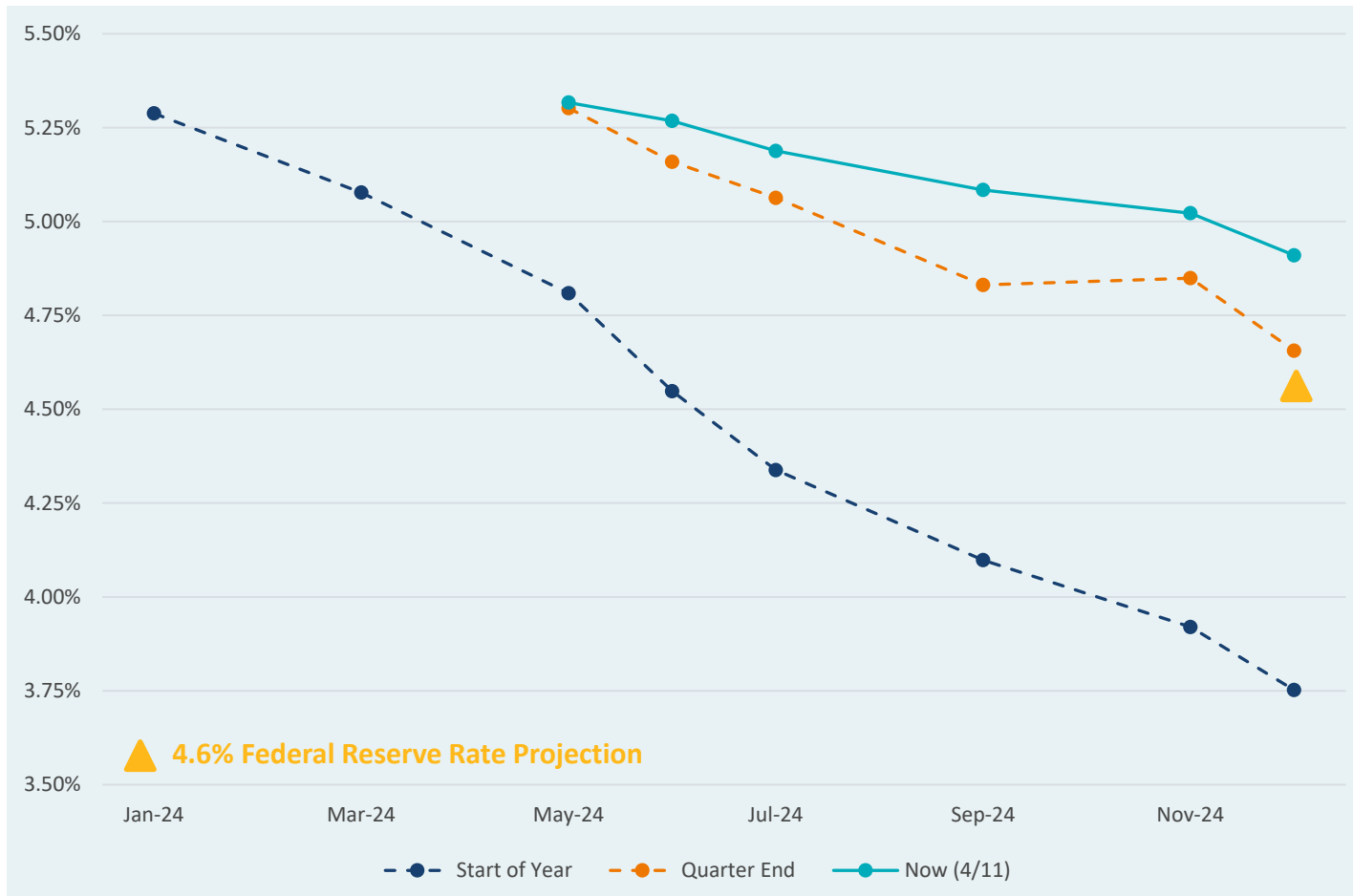
- Real GDP growth unexpectedly slowed in Q1 to 1.6% quarter-over-quarter (3.0% year-over-year), falling short of economist forecasts for 2.5% growth. The GDP release reflected positive but decelerating spending by households, slowing exports, and less government expenditures. Residential fixed investment accelerated partly driven by new single-family home construction, while private inventory investment fell.
- U.S. inflation increased in Q1, following a handful of hotter-than-expected inflation and jobs reports. Headline inflation increased from 3.3% to 3.5% year-over-year in March, while core CPI (ex-food & energy) declined slightly from 3.9% to 3.8%. It seems more likely that inflation ends this year closer to, or above, 3% rather than 2%.
- Inflation adjusted consumer spending has remained moderate, at 2.4% YoY in February. Purchases of services have materially outpaced purchases of goods in recent years, a reversal of the historically unprecedented boom in goods purchases that occurred during the pandemic.
- Employment has been incredibly resilient. Unemployment was stable during Q1, while labor participation increased. Some economists and investors have partially attributed labor market gains to substantial immigration (both legal and illegal) in recent years—with millions of immigrants being of working age and seeking work. Given the level of immigration, we expect official labor data has been, and will continue to be, meaningfully impacted.
- Consumer sentiment has jumped significantly on better financial situations of households, expectations that inflation will further ease, and a steadying economy. At the same time, The NFIB Small Business Optimism index deteriorated to the weakest level since 2012. Inflation remains a top concern, and business owners indicated they could not find qualified candidates to fill job openings.

	Most Recent	12 Months Prior
Real GDP (YoY)	3.0% 3/31/24	1.7% 3/31/23
Inflation (CPI YoY, Core)	3.8% 3/31/24	5.6% 3/31/23
Expected Inflation (5yr-5yr forward)	2.3% 3/31/24	2.2% 3/31/23
Fed Funds Target Range	5.25–5.50% 3/31/24	4.75–5.00% 3/31/23
10-Year Rate	4.20% 3/31/24	3.47% 3/31/23
U-3 Unemployment	3.8% 3/31/24	3.5% 3/31/23
U-6 Unemployment	7.3% 3/31/24	6.7% 3/31/23



# Federal Reserve policy

FED FUNDS FUTURES IMPLIED 2024 RATE PATH



Markets started the year pricing in six rate cuts by the end of 2024

Implied pricing now indicates expectations for just two rate cuts, a tighter path relative to the three forecasted rate cuts projected in the Federal Reserve's Summary of Economic Projections

Source: Bloomberg, as of 4/11/24

# Inflation

U.S. inflation increased in Q1, following a handful of hotter-than-expected inflation and jobs reports. Headline inflation increased from 3.3% to 3.5% year-over-year in March, while core CPI (ex-food & energy) declined slightly from 3.9% to 3.8%. It seems more likely that inflation ends this year closer to, or above, 3% rather than 2%. Certain goods and services have further moderated in price growth, such as Used Vehicles and Food, while other price trends remain hot such as Housing and Auto Insurance.

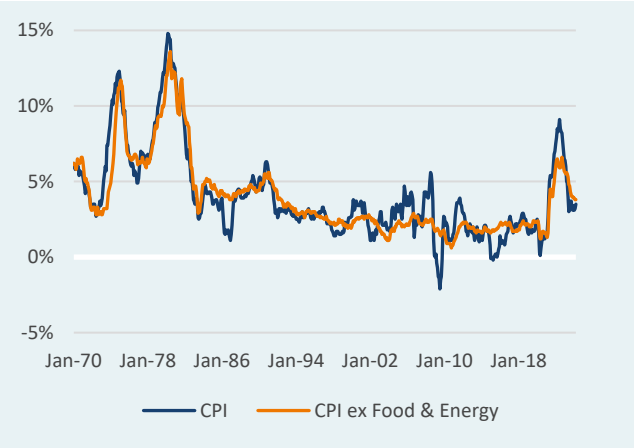
The outsized impact of Shelter—which makes up more than a third of the entire CPI basket—remains a major force keeping inflation elevated. While shelter prices reported by the Bureau

of Labor Statistics have moved closer to real-time price gauges, March’s 0.4% month-over-month increase still reflected an annualized rate of nearly 5%.

Inflation appears to be flattening out rather than continuing lower towards the Federal Reserve 2% target, which has been a catalyst for changing monetary policy expectations. Stubborn inflation combined with strong labor and other economic activity provides little incentive for the Federal Reserve to ease rates. At the beginning of the year the market expected six rate cuts in 2024. That has since fallen to two cuts.

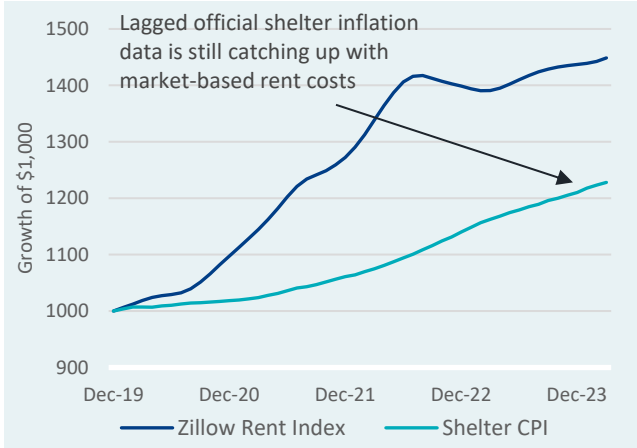
Q1 inflation remains above the Fed’s target, affecting market expectations for a “higher for longer” rate environment

U.S. CPI (YOY)



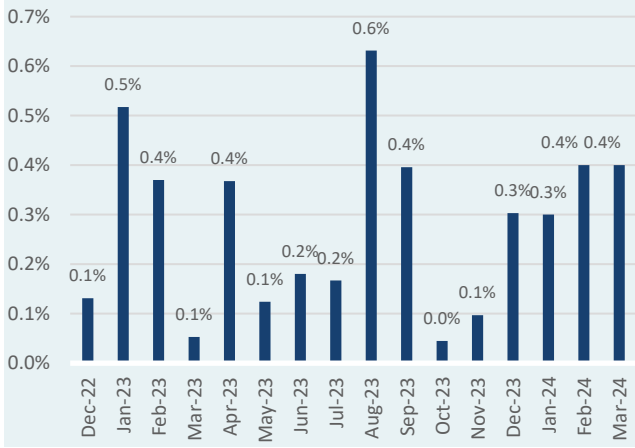
Source: BLS, as of 3/31/24

ZILLOW OBSERVED RENT VS. SHELTER CPI



Source: Zillow Observed Rent Index, FRED, of 3/31/24

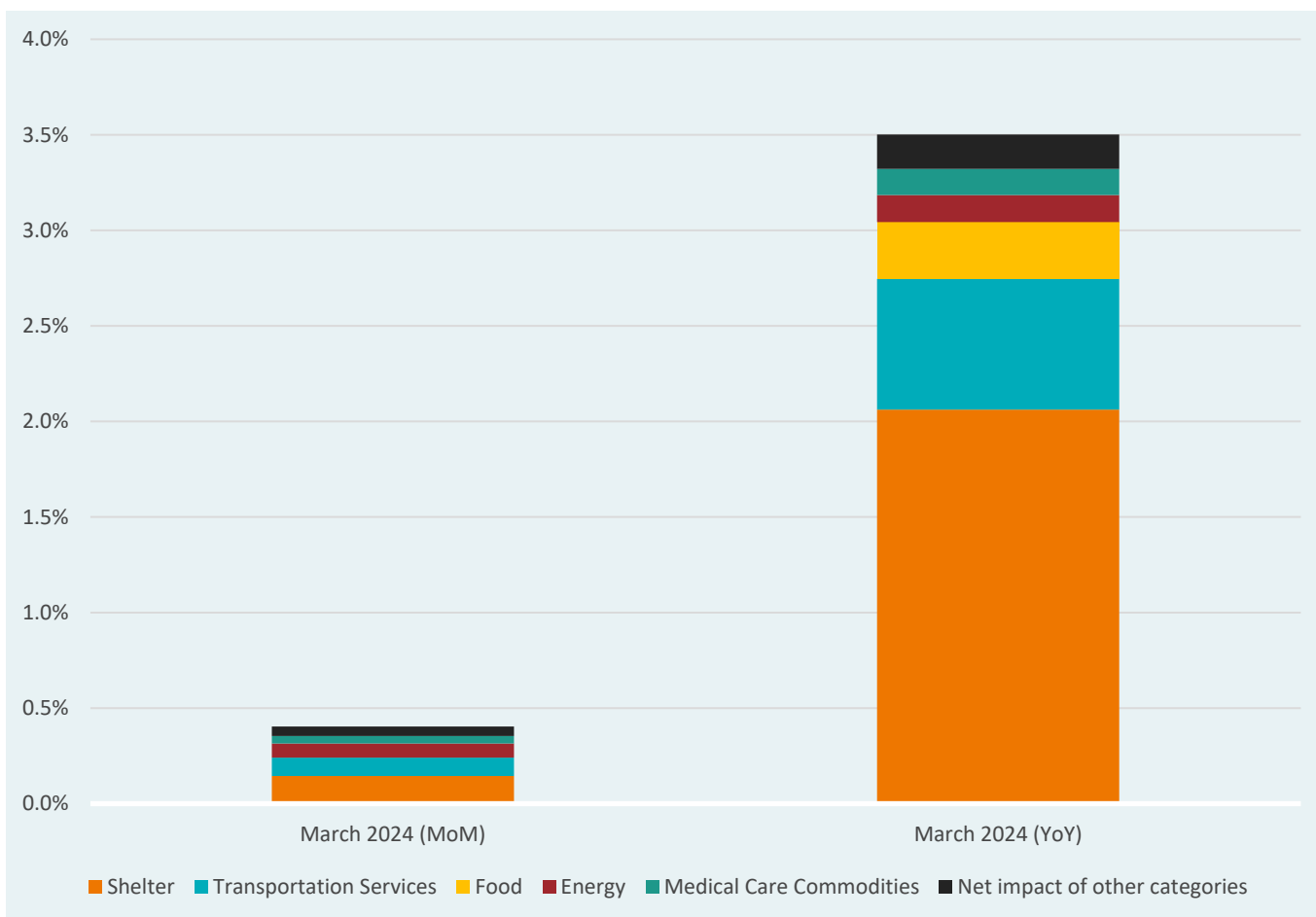
MONTHLY PRICE MOVEMENT (CPI)



Source: BLS, as of 3/31/24

# Inflation: shelter's outsized impact

CONTRIBUTION TO MARCH 2024 CPI



Shelter's contribution to inflation remains outsized, making up more than two-percent of the 3.5% year-over-year headline print

Amongst services, transportation costs have materially increased from the past year, notably amongst motor vehicle insurance (+22.2%) and maintenance and repair (+8.2%)

Source: BLS, as of 3/31/24.

# GDP growth

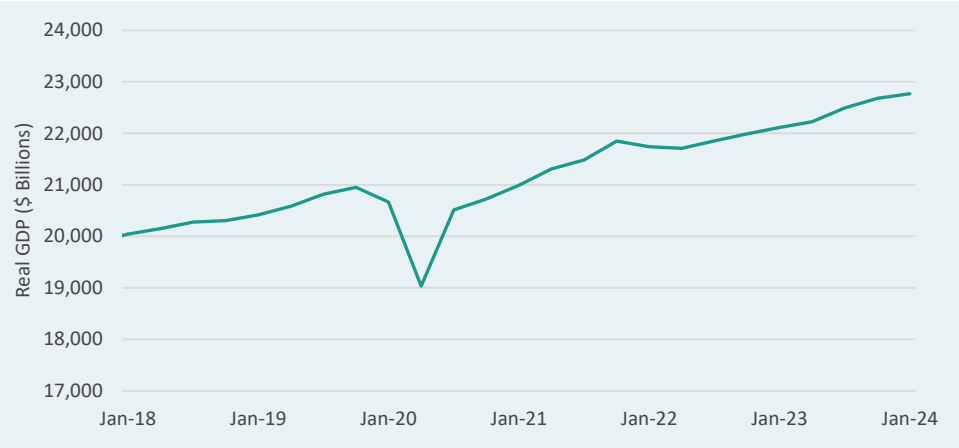
Real GDP growth unexpectedly slowed in Q1 to 1.6% quarter-over-quarter (3.0% year-over-year), falling short of economist forecasts for 2.5% growth. The GDP release reflected positive but decelerating spending by households, slowing exports, and less government expenditures. Residential fixed investment accelerated partly driven by new single-family home construction, while private inventory investment fell.

Slower economic growth in the first quarter appears to have been mostly driven by weakness in exports and imports, as well as a moderation in government spending. Other aspects of the economy such as consumer spending and investment

have slowed in recent quarters but growth remains moderately positive, as high inflation and weaker wage gains have not yet obviously resulted in a decline in spending. The first quarter GDP print marked the first instance of weak economic data after a seemingly months-long series of strong releases, from employment, to consumer sentiment, to spending. This was an abrupt change in direction of the data, and it will be important for investors to monitor whether it marks a true change in trend or is simply a bump in the road with further U.S. strength ahead.

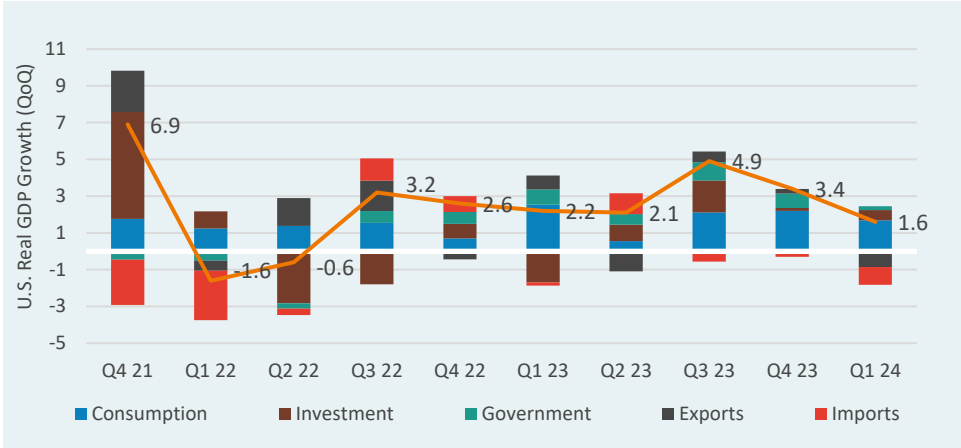
U.S. growth slowed a bit in Q1 but continues to show resilience despite aggressive monetary tightening

U.S. REAL GROSS DOMESTIC PRODUCT



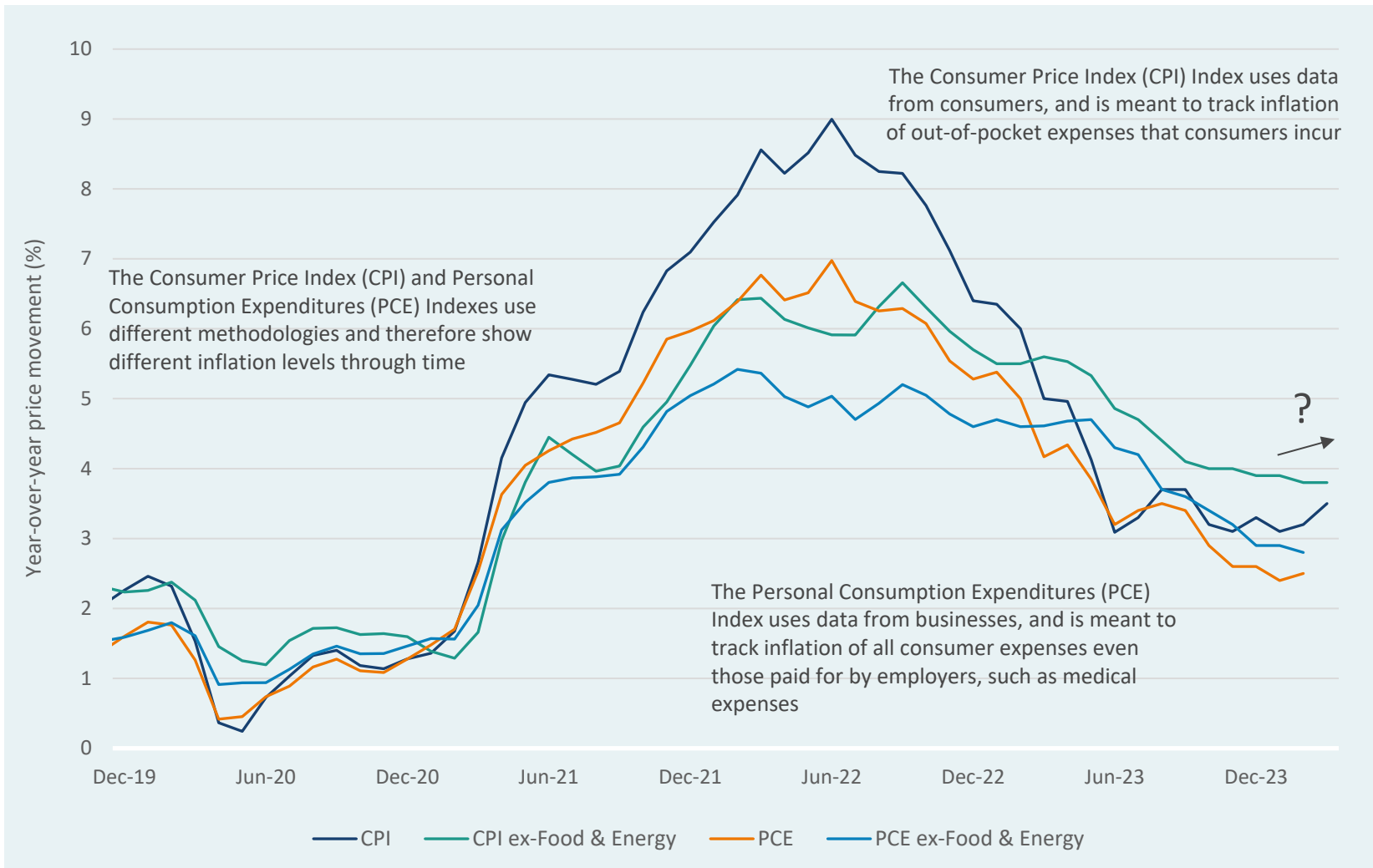
Source: FRED, as of 3/31/24

U.S. REAL GDP COMPONENTS (QOQ)



Source: FRED, as of 3/31/24

# How are inflation conditions evolving?



Recent hot inflation numbers have created concerns that inflation may be stabilizing at a higher level than what is required for interest rate cuts to occur

Source: FRED, Verus, PCE data as of 3/31/24, CPI data as of 2/29/24

# Labor market

The unemployment rate was fairly stable during the quarter, rising slightly from 3.7% to 3.8%. Meanwhile, labor participation improved from 62.5% to 62.7%.

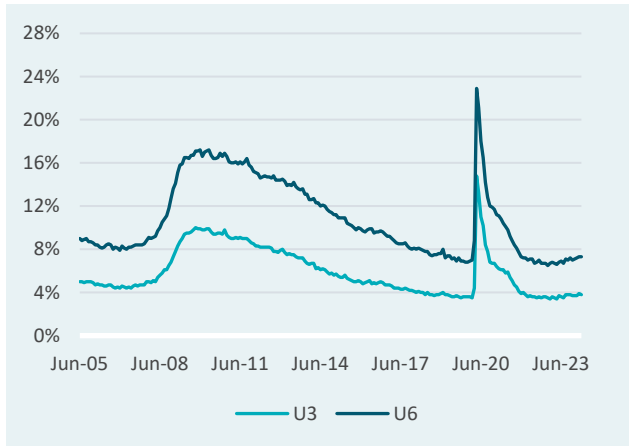
The U.S. job market has been incredibly resilient in the face of higher interest rates, and ongoing employment data releases continue to show outsized labor market gains. Some economists and investors have begun to partially attribute the record labor market gains to substantial immigration (both legal and illegal) into the country in recent years—with millions of immigrants being of working age and seeking employment. Given total immigration estimates, we would

expect that official jobs data, which is based on both phone surveys and also on employer payroll figures, to be meaningfully impacted.

Rebalancing within the labor market continued. The mismatch between the number of *workers available* and the number of *available jobs* was greater than 6 million in early 2022. Nearly two-thirds of that gap has now closed, with steady improvement over the past year.

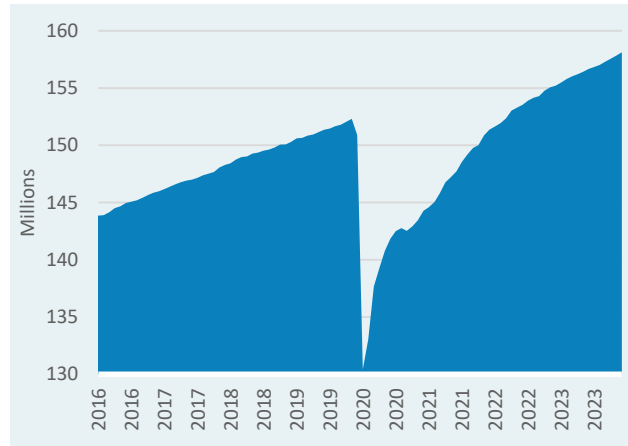
A substantial rise in different types of immigration over recent years may partially describe strong labor data

## U.S. UNEMPLOYMENT



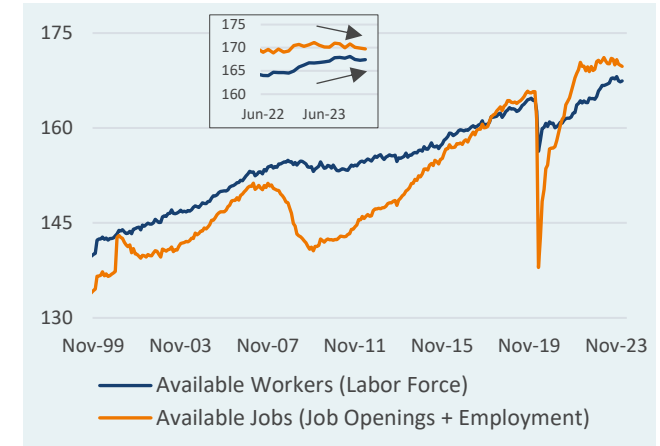
Source: FRED, as of 3/31/24

## TOTAL U.S. EMPLOYMENT



Source: FRED, as of 3/31/24

## WORKERS AVAILABLE VS. AVAILABLE JOBS



Source: BLS, Verus, as of 2/29/24

# The consumer

Inflation adjusted spending has remained moderate, at 2.4% year-over-year in February. Purchases of services have materially outpaced purchases of goods in recent years in terms of growth, since the historically unprecedented boom in goods purchases that occurred during the pandemic. We believe that extreme surge in goods purchases effectively *pulled forward* these purchases from future years, such as in home sales activity, home improvement projects, and recreational vehicle sales, which has led to the recent lull.

but have since fallen back to extremely low levels. The reason for this trend is unclear, though it coincides with a notable improvement in consumer sentiment, which suggests lower savings rates for some households might reflect an improved outlook for the economy and personal finances. However, high prices and cost of living is likely a greater contributing factor. Overall, Americans continue to spend rather freely despite higher costs of goods and services taking up a greater portion of take-home income. This includes nonessential spending such as for travel.

Personal savings rates had been improving through mid-2023

**REAL PERSONAL SPENDING**



Source: FRED, as of 2/29/24

**GOODS VS. SERVICES SPENDING (REAL)**



Source: FRED, as of 2/29/24

**PERSONAL SAVINGS RATE**



Source: FRED, as of 2/29/24

# Sentiment

Consumer sentiment has seen significant improvement over the past year. The University of Michigan Consumer Sentiment survey bounced from 69.7 to 79.4 in Q1 on better financial positions of U.S. households, expectations that inflation will continue to ease, and impressions that the economy has achieved a “steady state”.

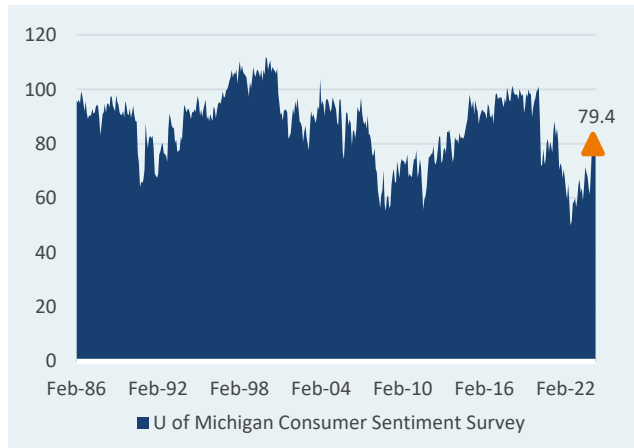
Although the domestic annual inflation rate is now closer to the longer-term average, sentiment surveys continue to reflect discontent with high costs of living. As we have discussed in recent quarters, this effect might be termed the “lower inflation conundrum”. As prices of many goods and services jumped significantly higher during and after the pandemic, the wages of

the average worker did not keep up in many respects. Although price *movement* (official inflation numbers) has come down recently, high prices persist and remain a thorn in household budgets, savings levels, and the overall financial security of Americans. This is reflected in sentiment survey responses.

The NFIB Small Business Optimism index has deteriorated to the weakest level since 2012. Inflation has been reported as a top business concern, and 37% of business owners indicated they could not find qualified candidates to fill job openings, overall reflecting a poor business climate.

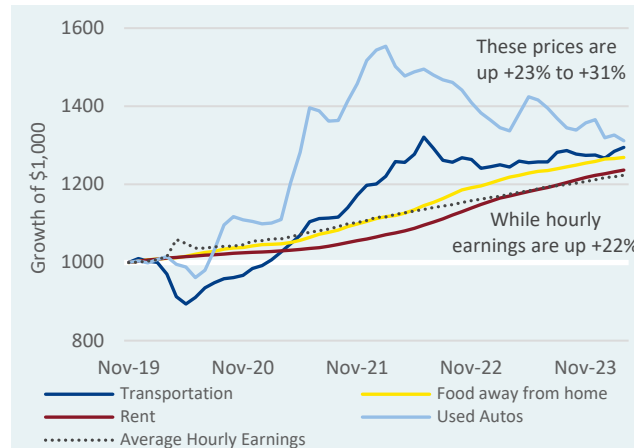
Consumer sentiment improved during Q1, while small business optimism dropped to the weakest level since 2012

## CONSUMER SENTIMENT



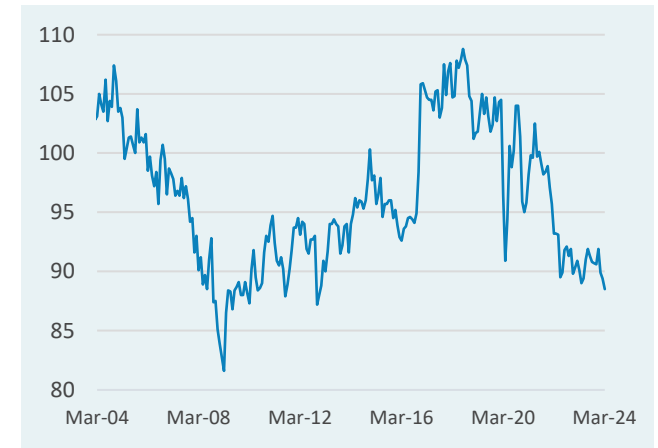
Source: University of Michigan, as of 3/31/24

## HOUSEHOLDS STILL FEELING THE SQUEEZE



Source: FRED, Verus, as of 3/31/24

## NFIB SMALL BUSINESS SENTIMENT



Source: NFIB, as of 3/31/24



# Housing

Domestic housing market activity picked up in Q1. Existing home sales increased 10% quarter-over-quarter, and the number of homes listed for sale rose by a similar magnitude. According to Redfin, the median home sales price was up +5.3% in March from the prior year. After an extended period of high mortgage rates and difficult affordability, it is possible that many sellers and buyers are accepting market conditions and choosing to no longer wait on the sidelines.

Housing affordability improved slightly but remains extremely poor, with the 30-year average fixed mortgage rate jumping slightly from 6.6% to 6.8%. Prospects for lower interest rates and therefore better affordability have diminished as investors expect fewer upcoming rate cuts from the Federal Reserve, though a rebound in home sales activity may suggest that the

market has stabilized. Real estate markets can stay out of balance in terms of affordability for very long periods of time. A path to affordability in the current environment is not yet clear, as interest rates will most likely stay high, and homeowners are not willing to, and seemingly do not need to, adjust their selling prices downwards.

Mortgage delinquency levels of single-family homeowners remain muted, at 1.69% as of Q4. This compares to 2.34% in Q4 of 2019 prior to the onset of the pandemic. Conditions have been supported by steadily increasing home prices that have led to robust home equity balances, as well as ultra-low interest rates following COVID-19 which allowed for attractive refinancing opportunities and lower monthly payments.

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



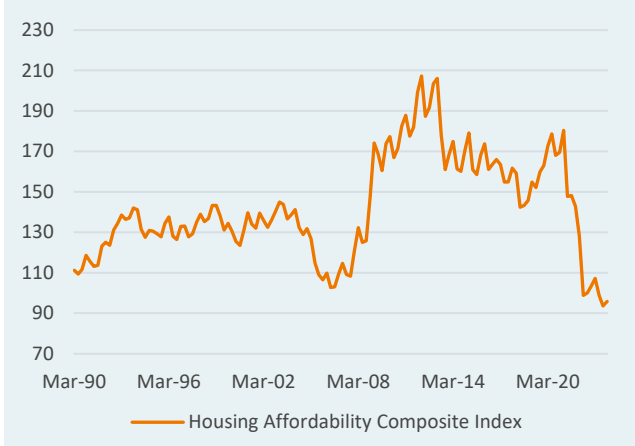
Source: Freddie Mac, as of 3/31/24

**EXISTING HOME SALES**



Source: FRED, as of 2/28/24

**HOUSING AFFORDABILITY**



Source: FRED, as of 12/31/23 – Housing affordability is calculated as the cost of a median priced single-family home at the current mortgage rate, as a percentage of the median family income

# International economics summary

— The broad global narrative remains similar to last quarter, as global metrics paint a picture of slowing yet resilient economic growth. While a hotter March inflation print in the U.S. changed expectations around the policy path of the Federal Reserve, inflation in international developed economies has shown greater signs of moderation, putting central banks such as the European Central Bank and Bank of England on a path to policy easing.

— Developed economies continue to juggle economic growth and inflation. Price pressures have shown signs of easing across the Eurozone and U.K., with inflation sitting at 2.4% and 3.2%, respectively. Despite inflation moderation, conditions remain weak across the Eurozone, with GDP nearly flat on a year-over-year basis and unemployment elevated at 6.5%.

— In Japan, growth conditions also remain shaky, as the country nearly avoided a technical recession

following an upward revised GDP release. While the BOJ formally ended its zero-interest rate policy, the Japanese Yen weakened further against the U.S. dollar after unclear guidance from the BOJ and expectations for higher U.S. interest rates. The Japanese economic story remains challenged despite positive performance of the equity market.

— Growth in emerging markets continues to offset slowing activity in developed economies, as year-over-year GDP growth of 8.4% and 5.3% in India and China outpace most of the globe. China remains in the headlines given that economic and technological rivalry with the U.S. persists. Despite sentiment challenges, growth has remained above the target of 5%, even in the face of a lagging property market and financial stress seen amongst local-government financing vehicles and regional banks.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	3.0% 3/31/24	3.5% 3/31/24	3.8% 3/31/24
Eurozone	0.1% 12/31/23	2.4% 3/31/24	6.5% 2/29/24
Japan	1.2% 12/31/23	2.6% 3/31/24	2.6% 2/29/24
BRICS Nations	5.3% 12/31/23	1.7% 3/31/24	4.8% 12/31/22
Brazil	2.1% 12/31/23	3.9% 3/31/24	7.8% 2/29/24
Russia	4.9% 12/31/23	7.7% 3/31/24	2.8% 2/29/24
India	8.4% 12/31/23	4.9% 3/31/24	7.6% 3/31/24
China	5.3% 3/31/24	0.1% 3/31/24	5.2% 3/31/24

*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.*

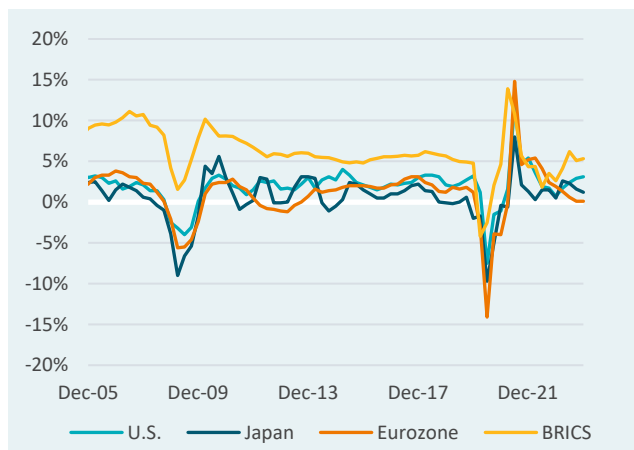
# International economics

We believe the global narrative remains intact, and that many economies are set to slow in 2024 but will likely avoid recession. While hotter inflation data in the U.S. has led to changed policy expectations, inflation in international developed economies showed signs of moderation, putting central banks like the European Central Bank (ECB) and Bank of England (BOE) on a path to policy easing. The market is pricing three 25 bps interest rate cuts from the ECB and the BOE by end-of-year.

The IMF's April World Economic Outlook (WEO) communicated a much more balanced economic environment, as steady growth and disinflation has resulted in a lower likelihood of a "hard landing". The IMF sees global growth at 3.2% for 2024 and 2025, with the 2024 growth estimate revised up +0.1% from the January WEO update.

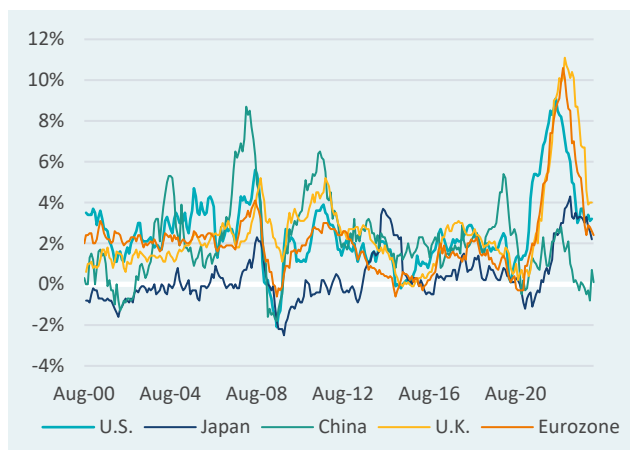
Going forward, we see material downside risks but also potential growth catalysts to the upside. Continuing and escalating conflicts in the Middle East and Eastern Europe have raised fears around energy market disruption, especially when considering that rising oil and natural gas prices were a major contributor to the recent four-decade-high bout of inflation. On the other hand, growth catalysts such as accelerated computing and artificial intelligence offer a broad range of applicability and impact that, although difficult to quantify, could act as a substantial driver of productivity and growth in the future. Additionally, if inflation pressures were to ease more quickly than expected, allowing for easier monetary policies, this may fuel growth and markets forward.

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



Source: Bloomberg, as of 12/31/23

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



Source: Bloomberg, as of 3/31/24 – or most recent release

**IMF APRIL 2024 GDP FORECASTS**



Source: IMF April World Economic Outlook, as of 4/16/24

# Fixed income rates & credit

# Fixed income environment

- The 10-year U.S. Treasury yield rose 32 basis points from 3.88% to 4.20% during Q1 on broad acknowledgment that disinflation trends have stalled and that the Federal Reserve may not cut rates in 2024 as significantly as markets had hoped for. Yields across the Treasury curve increased, with shorter-term rates rising more than longer-term.
- Domestic high-quality, duration-sensitive bonds experienced slight losses during the quarter, while most credit indices saw positive returns. High yield gained +1.5% (Bbg U.S. Corporate High Yield), while bank loans rose +2.5% (S&P/LSTA Leveraged Loan). Longer duration investment grade corporate bonds (Bloomberg U.S. Long Corporate Credit) declined by -1.7% during the quarter as both rising interest rates and concerns about inflation detracted from performance.
- The U.S. yield curve has remained inverted since June 6<sup>th</sup>, 2022, marking the longest yield curve inversion on

record. This is indicated by the 10-year minus 2-year Treasury yield—ending the quarter at -39bps, down slightly from -35bps in Q4. While the yield curve has historically been a reliable predictor of recession, economic growth remains robust.

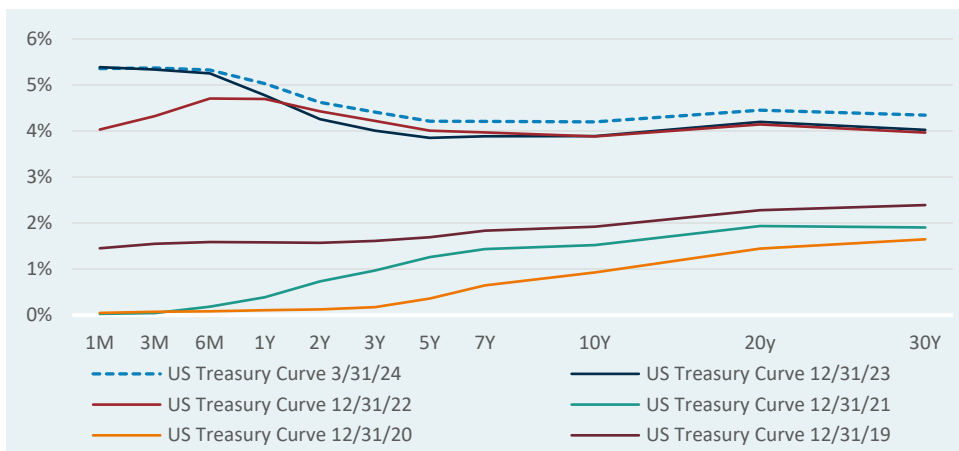
- Although default activity remains low, volumes increased as slowing economic growth and rising borrowing costs acted as headwinds. During the period, \$20.6 billion of bank loan and high yield bonds were affected by default or distressed exchanges, up from \$15.8 billion in the prior quarter. Notable company defaults included Jo-Ann’s (Retail), Hornblower (Travel & Leisure), and RobertShaw (Technology).
- Structured credit hedge funds, which focus on credit sectors such as CLOs, ABS (auto, credit card, etc), MBS, and CMBS, continue to deliver strong returns relative to traditional high yield and remain competitive versus leveraged loan indices.

	QTD Total Return	1 Year Total Return
Core Fixed Income (Bloomberg U.S. Aggregate)	(0.8%)	1.7%
Core Plus Fixed Income (Bloomberg U.S. Universal)	(0.5%)	2.7%
U.S. Treasuries (Bloomberg U.S. Treasury)	(1.0%)	0.1%
U.S. Treasuries: Long (Bloomberg U.S. Treasury 20+)	(3.8%)	(7.3%)
U.S. High Yield (Bloomberg U.S. Corporate HY)	1.5%	11.2%
Bank Loans (S&P/LSTA Leveraged Loan)	2.5%	12.4%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	(2.1%)	4.9%
Emerging Market Debt Hard (JPM EMBI Global Diversified)	2.0%	11.3%
Mortgage-Backed Securities (Bloomberg MBS)	(1.0%)	1.4%

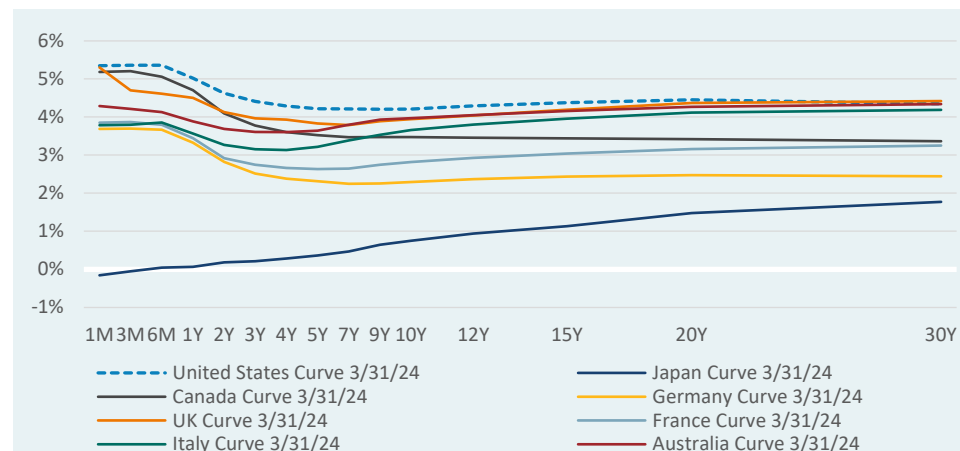
Source: Bloomberg, as of 3/31/24

# Yield environment

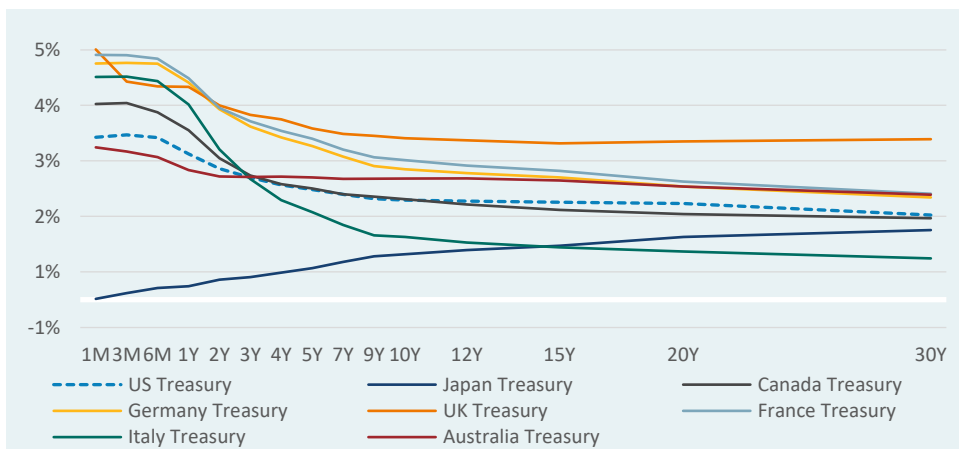
## U.S. YIELD CURVE



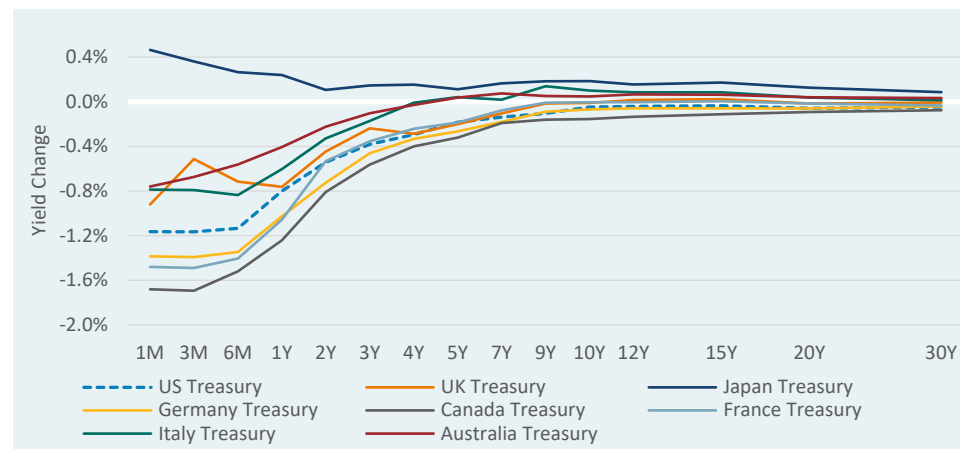
## GLOBAL GOVERNMENT YIELD CURVES



## YIELD CURVE CHANGES OVER LAST FIVE YEARS



## IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 3/31/24

# Credit environment

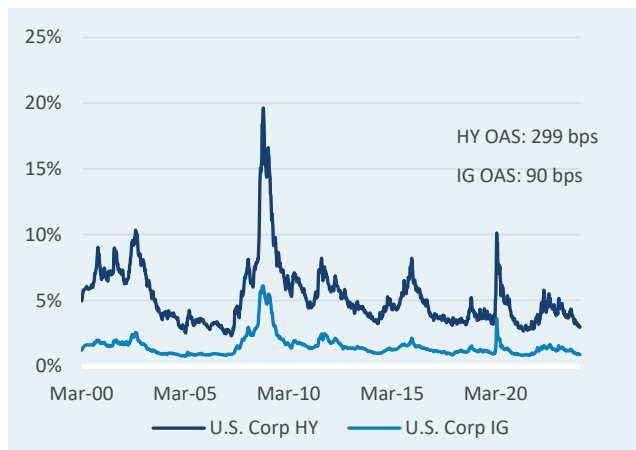
During the first quarter, credit markets delivered mixed returns with lower-quality credits such as high yield bonds and bank loans leading. Bank loans rose +2.5% (CS Leveraged Loans), while high yield bonds increased by +1.5% (Bbg U.S. Corporate High Yield). Longer duration investment grade corporate bonds (Bloomberg U.S. Long Corporate Credit) fell by -1.7% as pressure from both rising interest rates and higher expected inflation acted as a headwind to performance.

Returns across credit ratings were mixed during Q1. Higher-quality BB-rated bonds returned +1.3% compared to +1.0% for B-rated and +1.3% for and CCC-rated bonds, respectively. Lower-quality bank loans experienced strong returns with CCC-rated loans rising by +6.0%,

compared to +2.5% and +1.9% for BB- and B-rated loans, respectfully,

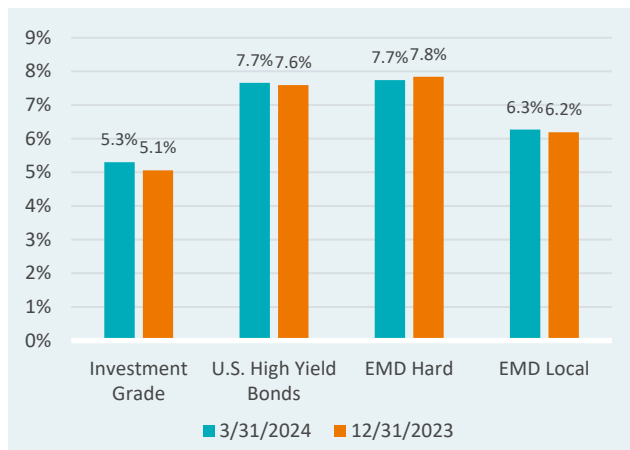
Credit spreads were slightly narrower during the quarter as stronger-than-expected economic growth eased concerns related to potential recession. Lower-quality high yield bond spreads fell by 0.2% to roughly 3.2%, while investment grade spreads decreased by roughly 0.1% to 1.2%. Broadly, spreads remain below their long-term historical averages, which suggests that investors are staying confident about the ability of those businesses to service debt. That said, slower U.S. economic growth could lead to wider credit spreads as investors might seek safety in higher quality assets.

## SPREADS



Source: Barclays, Bloomberg, as of 3/31/24

## YIELD TO WORST



Source: Bloomberg, J.P. Morgan as of 3/31/24

## CREDIT SPREAD (OAS)

Market	3/31/24	3/31/23
Long U.S. Corp	1.1%	1.6%
U.S. Inv Grade Corp	0.9%	1.4%
U.S. High Yield	3.1%	4.6%
U.S. Bank Loans*	3.9%	3.7%

Source: Barclays, Credit Suisse, Bloomberg, as of 3/31/24  
\*Discount margin (4-year life)

# Default & issuance

Default activity increased during the quarter as slowing economic growth and rising borrowing costs acted as headwinds. During the period, \$20.6 billion of bank loan and high yield bonds were affected by default or distressed exchanges, up from \$15.8 billion in the prior quarter. Notable company defaults included Jo-Ann's (Retail), Hornblower (Travel & Leisure), and RobertShaw (Technology).

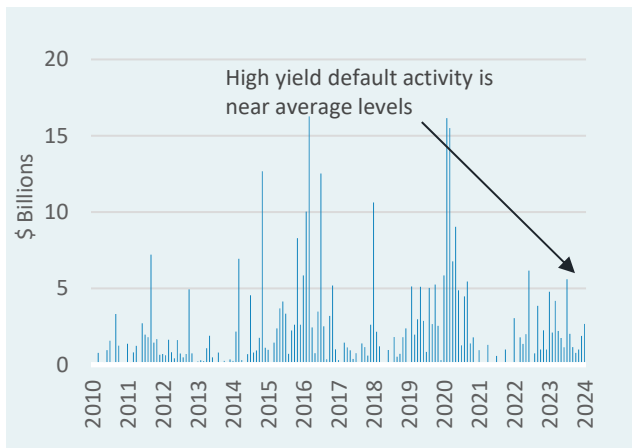
Year-to-date, the combined total of defaults and exchanges tracked slightly behind last year's pace by roughly -3.0%.

High yield bond default rates increased to 2.6%, up from 1.9% a year earlier, but were still below the long-term annual average of roughly 3.4%. High-yield default recovery rates ended the quarter at 33.1%, up slightly from

32.8% at the end of 2023, but below the long-term average of roughly 40%.

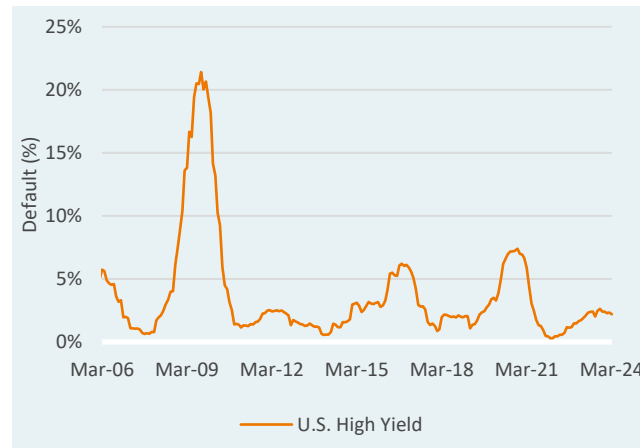
The issuance of investment grade credit increased significantly from the prior quarter, by \$328.0 billion (\$531.0 billion from \$208.0 billion). Despite higher borrowing costs, high-yield bond issuance climbed slightly to \$86.6 billion during the quarter (up from \$42.0 billion in Q4). On a year-over-year basis, the volume of both investment-grade and high yield issuance increased by roughly \$181.0 billion, (\$636.0 billion from \$436.0 billion). Low credit spreads improve the relative attractiveness of borrowing, which was likely a factor driving recent strong issuance.

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



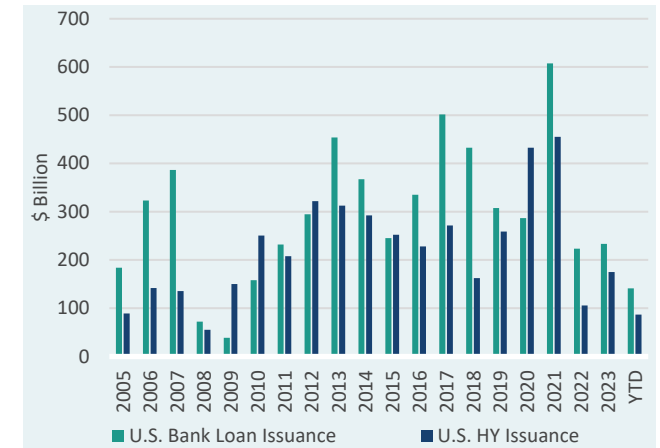
Source: BofA Merrill Lynch, as of 3/31/24

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



Source: BofA Merrill Lynch, as of 3/31/24 – par weighted

**DEVELOPED MARKET ISSUANCE (\$ BILLIONS)**



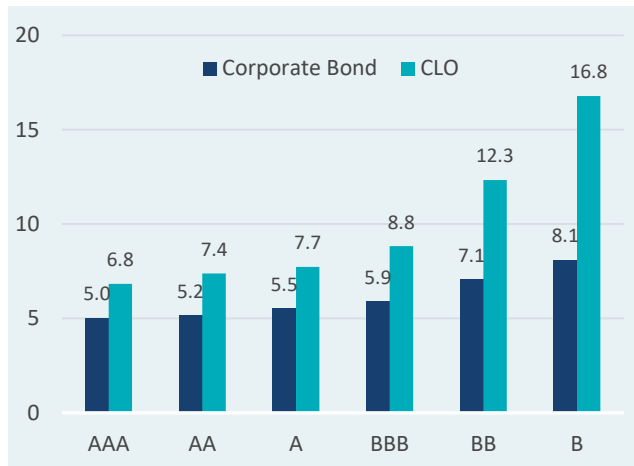
Source: BofA Merrill Lynch, all developed markets, as of 3/31/24



# Credit hedge funds

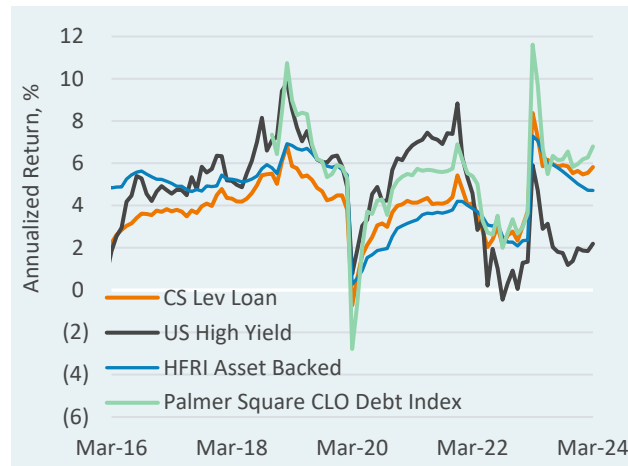
- Structured credit hedge funds, which focus on credit sectors such as CLOs, ABS (auto, credit card, etc), MBS, and CMBS, continue to deliver strong returns relative to traditional high yield and remain competitive relative to leveraged loan performance.
- Yields in those securitized markets remain wide in contrast to equivalent rating-risk corporate yields, with CLOs offering 150-300bps of spread in the IG tranches and up to 800bps in sub-investment grade tranches. Other sectors, such as CMBS, offer significantly wider spreads, evidence of the uncertainty and stress unfolding in the commercial property market.
- Distressed credit hedge funds performed well after the pandemic due to the amount of dry powder these strategies typically keep on hand and the abundance of opportunities created by market stress during that period. Strategies have kept up with high yield in the last 12-18 months and have seen their opportunity set gradually improve as interest rates remain elevated.

**CLO VS CORPORATE BOND YIELDS (%)**



Source: Bloomberg, BofA, Federal Reserve, MPI. As of 3/31/24

**3 YEAR ROLLING RETURN**



Source: CS, HFR, Bloomberg, Palmer Square, MPI

**1 YEAR ROLLING RETURN**



Source: Bloomberg, EurekaHedge, MPI

# Equity

# Equity environment

- U.S. equities (S&P 500 +10.6%) continued an impressive rally during the first quarter, once again outpacing international developed equities (MSCI EAFE +5.8%) and emerging markets (MSCI EM +2.4%). The domestic market has also delivered outperformance over the past year, fueled by the artificial intelligence boom. Telecom (+49.8%) and Technology (+46.0%) saw the biggest gains during the period.
- The U.S. dollar gained in value during Q1, likely buoyed by the higher for longer interest rate narrative. A reassessment of the Federal Reserve policy path for 2024 has improved the outlook for the dollar, as currencies which offer higher interest rates, and relatively attractive prospects for continued higher interest rates, tend to better hold their value. Losses from unhedged Japanese currency exposure has been extreme (-9.3% over the quarter, -25.2% over the past year, as indicated by the TOPIX Index).
- Style investing underperformed during Q1. Small cap lagged large cap by -5.1% (Russell 2000 +5.2% vs. Russell 1000 +10.3%). Value underperformed Growth by -2.4% (Russell 1000 Value +9.0% vs. Russell 1000 Growth +11.4%). Style premia has also suffered over the past full year. Small cap underperformed large cap by -10.2% while value stocks underperformed growth by -18.7%.
- Market-priced volatility (Cboe VIX Index) remained incredibly low during the quarter, ending at 13.0 in March. Historically, market volatility of this level has coincided with strong upward trending risk asset prices and investor enthusiasm.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
U.S. Large Cap (S&P 500)	10.6%		29.9%	
U.S. Small Cap (Russell 2000)	5.2%		19.7%	
U.S. Equity (Russell 3000)	10.0%		29.3%	
U.S. Large Value (Russell 1000 Value)	9.0%		20.3%	
US Large Growth (Russell 1000 Growth)	11.4%		39.0%	
Global Equity (MSCI ACWI)	8.2%	9.6%	23.2%	25.4%
International Large (MSCI EAFE)	5.8%	10.5%	15.3%	22.4%
Eurozone (EURO STOXX 50)	10.3%	13.1%	20.1%	23.6%
U.K. (FTSE 100)	3.0%	4.0%	10.7%	9.1%
Japan (TOPIX)	10.0%	19.3%	24.0%	49.2%
Emerging Markets (MSCI Emerging Markets)	2.4%	4.4%	8.2%	10.7%

Source: Russell Investments, MSCI, STOXX, FTSE, JPX, as of 3/31/24

# Domestic equity

U.S. equities notched another quarter of outperformance over international developed and emerging market shares, with the S&P 500 finishing up +10.6%. Market momentum carried forward from the end of 2023, as large cap equities advanced off a boost to corporate earnings from developments in accelerated computing and artificial intelligence. At the same time, economic indicators reflected resilience across labor and economic activity, alleviating some fears around potential recession.

Large technology company performance has helped push the broader index higher, as the Magnificent Seven contributed around 37% of the S&P 500's total return in the first quarter, per Morningstar. A combination of Nvidia, Microsoft, Meta, and Amazon drove 47% of total returns. The Magnificent 7

stocks fueled nearly two-thirds of index performance in 2023. These figures exemplify the outsized impact large companies have had on broader domestic equity returns, both to the downside and upside.

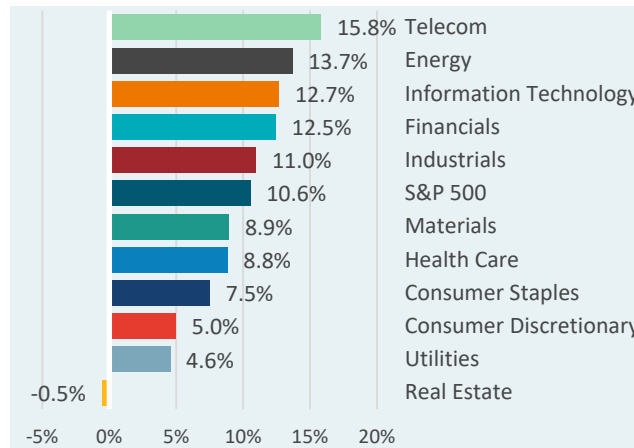
On the other hand, these strong price gains have moved valuations towards the richer side of the historical range, and the term “priced for perfection” has become more popular amongst the news lexicon. U.S. shares have also been relatively unbothered by changing expectations for the Federal Reserve rate hiking path. The higher for longer narrative has had a large negative impact on bond markets, but apparently little impact on risk assets, so far.

**S&P 500 PRICE INDEX**



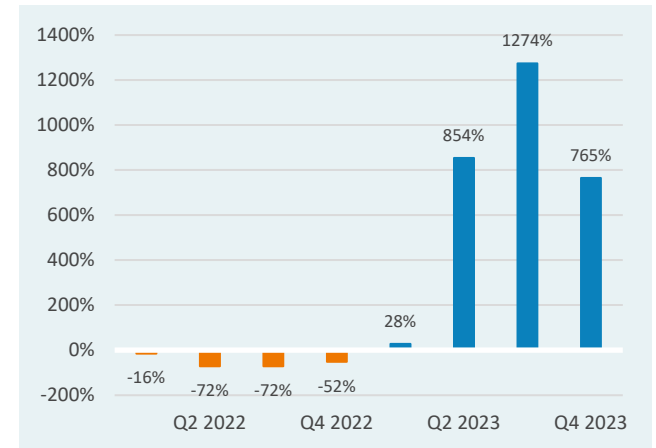
Source: Bloomberg, as of 3/31/24

**Q1 2024 SECTOR PERFORMANCE**



Source: Morningstar, as of 3/31/24

**NVIDIA EPS GROWTH (YEAR-OVER-YEAR)**



Source: Nvidia, as of 3/31/24. GAAP Diluted EPS

# Domestic equity size & style

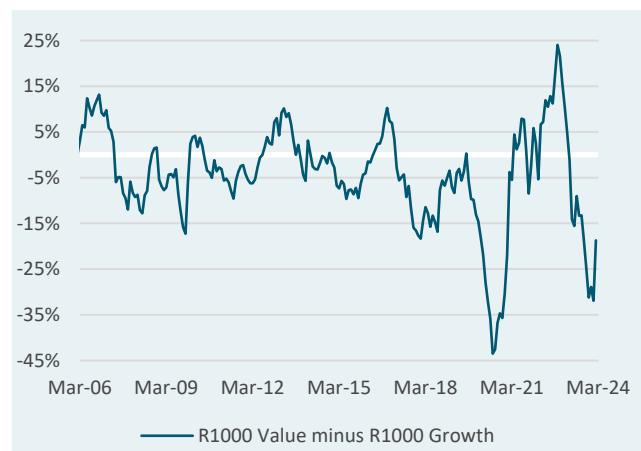
Small cap and value style investing underperformed during Q1. Small cap lagged large cap by -5.1% (Russell 2000 +5.2% vs. Russell 1000 +10.3%). Value underperformed Growth by -2.4% (Russell 1000 Value +9.0% vs. Russell 1000 Growth +11.4%). These style premia also suffered over the past full year. Small cap underperformed large cap by -10.2% while value stocks underperformed growth by -18.7%.

Mega cap companies continue to dominate large cap index performance. The “Magnificent 7” securities, including Amazon, Netflix, Google, Meta, Nvidia, Apple, and Tesla, drove the index into drawdown territory during 2022, contributed to a strong bounce back rally in 2023, then have pushed the index higher still in 2024. However, performance of this group

has been a bit mixed year-to-date, with Apple and Tesla lagging the overall index materially. Index concentration has created headwinds for the performance of active managers, on average, and dominant growth stocks have pushed the overall index towards a higher multiple while depressing dividend yields.

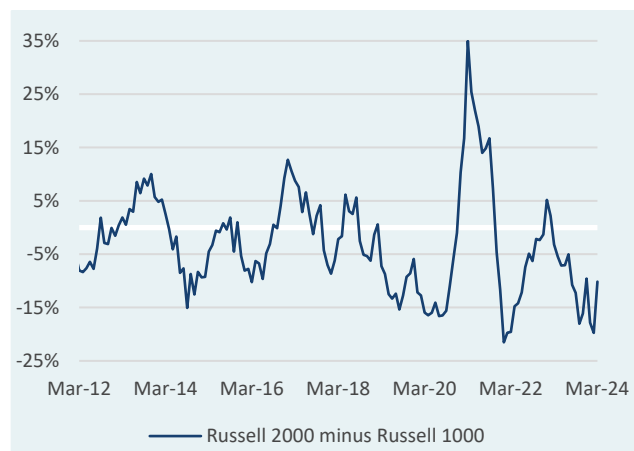
Variability in the behavior of style factors, often driven by idiosyncratic sector moves and broader macro themes, continues to provide evidence that style investing should typically be a longer-term endeavor. Short-term factor timing decisions should in most circumstances be pursued only in the rare occasion of obvious market mispricing and a foreseen catalyst for price correction.

VALUE VS. GROWTH 1-YR ROLLING



Source: FTSE, as of 3/31/24

SMALL CAP VS LARGE CAP 1-YR ROLLING



Source: FTSE, as of 3/31/24

1-YEAR SIZE & STYLE PERFORMANCE

	Value	Core	Growth
Large Cap	20.3%	29.9%	39.0%
Mid Cap	20.4%	22.3%	26.3%
Small Cap	18.8%	19.7%	20.3%

Source: FTSE, as of 3/31/24

# International developed equity

International developed shares notched a strong first quarter, although returns trailed domestic equities. The MSCI EAFE index returned +5.8% in unhedged U.S. dollar terms, materially lower than the hedged return of +10.5%. The dollar's advance was likely fueled by higher rate expectations for the Federal Reserve, along with expected policy easing decisions from the European Central Bank and Bank of Japan, both of which are positive for the U.S. dollar (i.e. led to losses for unhedged investors).

Resilient global economic growth has been a tailwind to performance amongst international developed shares. All major regional equities (Eurozone, Japan, and United Kingdom)

saw positive returns over the period.

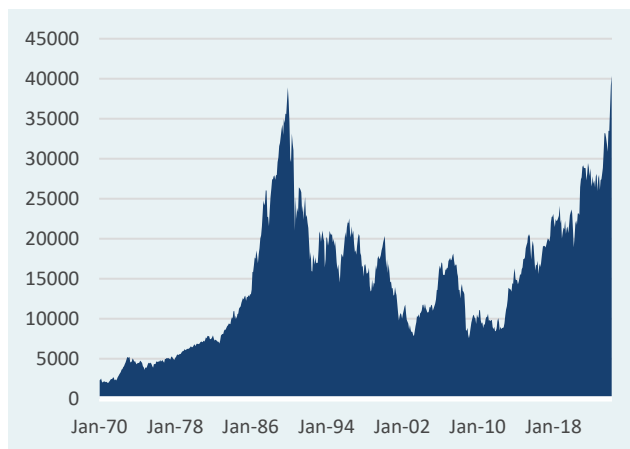
While performance has been better than expected, future growth catalysts remain uncertain. Falling Eurozone inflation boosted regional risk assets, as inflation fell from 3.1% to 2.4% in March. Easing inflation has taken some pressure off the ECB, resulting in rising expectations for rate cuts in June. In Japan, equities have carried forward positive momentum from 2023, evident by the Nikkei achieving a 34-year high in February. Easy monetary policy from the BOJ continues to provide a boost to local earnings, while poor inflation and wage growth metrics have provided little evidence for the BOJ to quickly move away from their low interest rate policy.

## INTERNATIONAL DEVELOPED EQUITY



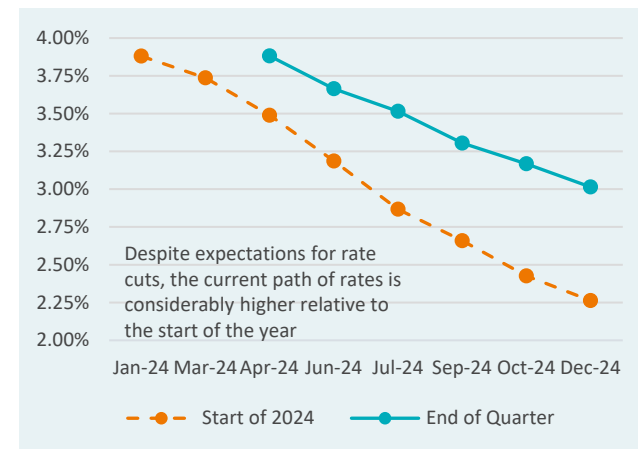
Source: MSCI, as of 3/31/24

## NIKKEI 225 INDEX



Source: Bloomberg, Nikkei, as of 3/31/24

## ECB RATE EXPECTATIONS



Source: Bloomberg, as of 3/31/24

# Emerging market equity

Emerging markets have delivered mild gains year-to-date, rising +2.4%, and are up +8.2% over the past year. Chinese equities have continued to act as a drag the index, down -2.2% in 2024, and -17.1% over the past year.

From a sector perspective, the momentum behind accelerated computing carried into emerging markets, as the information technology sector outperformed (+9.5%), driven by gains from South Korea & Taiwan. Peru, Turkey, and Columbia were the best performing countries in the first quarter, seeing gains of +15.5%, +14.1%, and +12.5% - broadly gaining off strength in oil and copper.

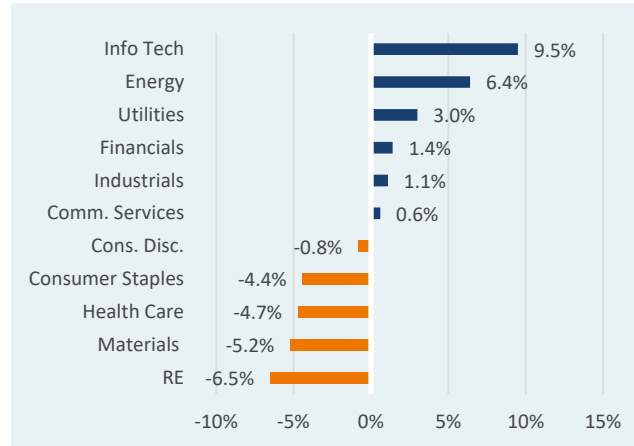
China remains a large question mark among emerging market country exposures, facing significant structural headwinds in the form of a declining population, imbalances in the real estate market, and a reversal in sentiment from the international community which contributed to a broad withdrawal of foreign direct investment, for example. Additionally, many U.S.-based institutional investors have centered on the possibility of top-down government restrictions on China investment that, if imposed, could result in losses to existing exposure as this could cause a way of selling activity. An invasion of Taiwan remains another risk, though we believe the chances of this are remote.

## EMERGING MARKET EQUITY



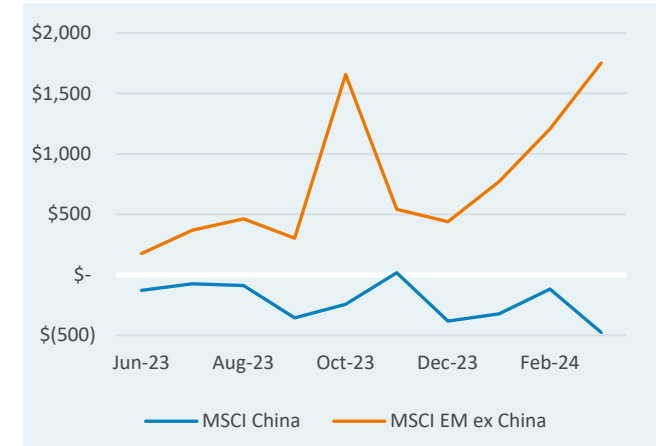
Source: MSCI, as of 3/31/24

## MSCI EM Q1 2024 SECTOR RETURNS (USD)



Source: MSCI, J.P. Morgan, as of 3/31/24

## ISHARES ETF MONTHLY FUND FLOWS (\$M USD)



Source: BlackRock, Bloomberg, as of 3/31/24

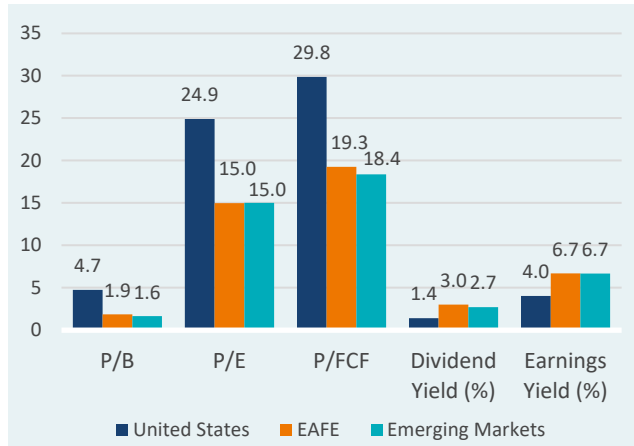
# Equity valuations

Valuations drifted upward during the quarter, as the equity rally has been driven partially by higher price multiples. Larger multiples and a greater concentration of growth stocks in the index, which tend to have lower dividend payout ratios, have led the S&P 500 to offer a nearly all-time low dividend yield of 1.4%. In an environment where investors can receive more than a 5% yield from risk-free cash, this is testament to the rising attractiveness of fixed income relative to equities.

Domestic equities are priced at a 40% premium over international developed markets, and have shown little sensitivity so far to investors'

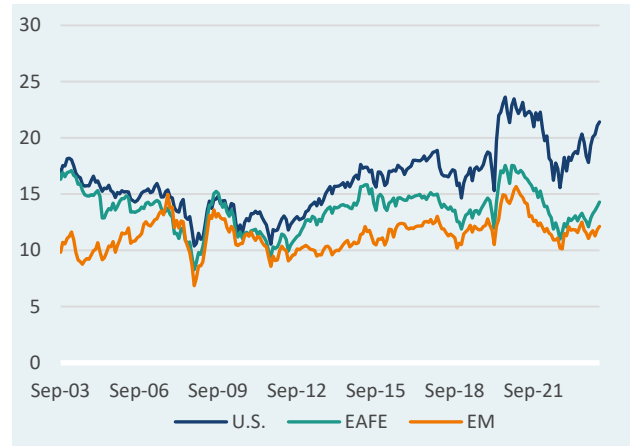
repricing of the interest rate path in 2024. Future stock market returns must come from either: corporate earnings growth, expansion of stock multiples (meaning stocks become more expensive), higher dividend yields (an increase in dividend payments), or higher inflation (assuming businesses pass this on by raising prices in line with inflation). In the current environment of already high stock multiples, a very low dividend yield, and high corporate profit margins, the likelihood of seeing another decade of performance like investors have received over the past ten years seems low.

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



Source: Bloomberg, as of 3/31/24

**FORWARD PRICE/EARNINGS RATIO**



Source: MSCI, Bloomberg, as of 3/31/24

**S&P 500 HISTORICAL DIVIDEND YIELD**



Source: S&P, Bloomberg, as of 3/31/24



# Market volatility

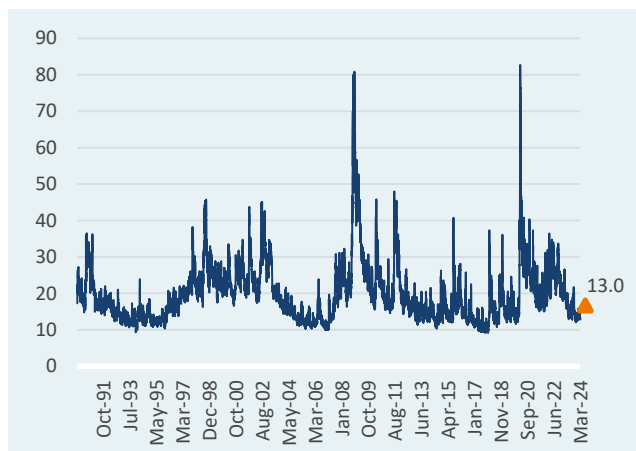
Market-priced volatility (Cboe VIX Index) remained incredibly low during the quarter, ending at 13.0 in March. Historically, market volatility of this level has coincided with strong upward trending risk markets and investor enthusiasm.

The realized past one-year volatility of global equity markets has moderated, with U.S. equity volatility at 13.6%—very close to current VIX implied volatility. The relative volatility of markets has moved back in line with historical behavior—U.S. equities showing the lowest volatility, followed closely by international developed equities, and with emerging market equities delivering greater risk.

However, many investors might be surprised to know that international developed equities have shown similar risk to U.S. equities over the long term, if currency movements are excluded. It is unhedged currency exposure that has historically caused the difference in risk.

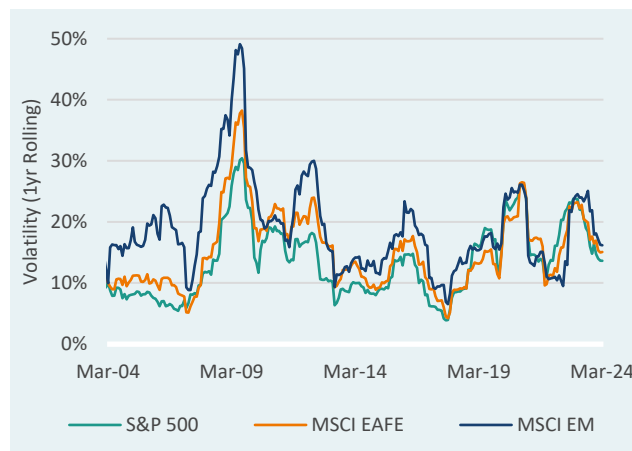
Bond market implied volatility has moderated considerably from extreme levels of 2023. This is indicated by the “MOVE” Index—which calculates the implied volatility of U.S. Treasury securities. However, notable uncertainty remains around inflation, the Federal Reserve’s interest rate path and the extent of rate cuts (if any) in 2024, and economic growth.

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



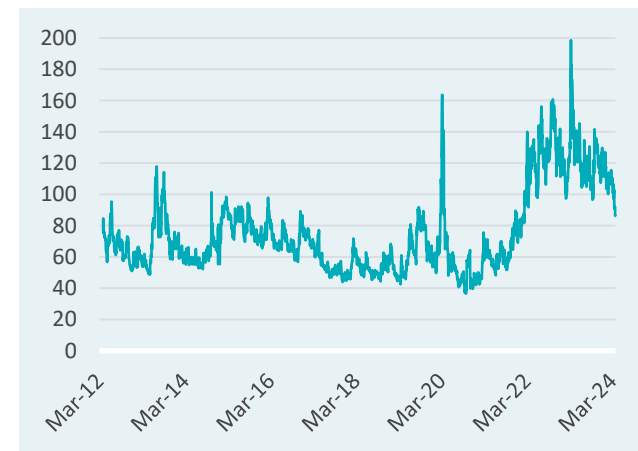
Source: Cboe, as of 3/31/24

**REALIZED VOLATILITY**



Source: S&P, MSCI, as of 3/31/24

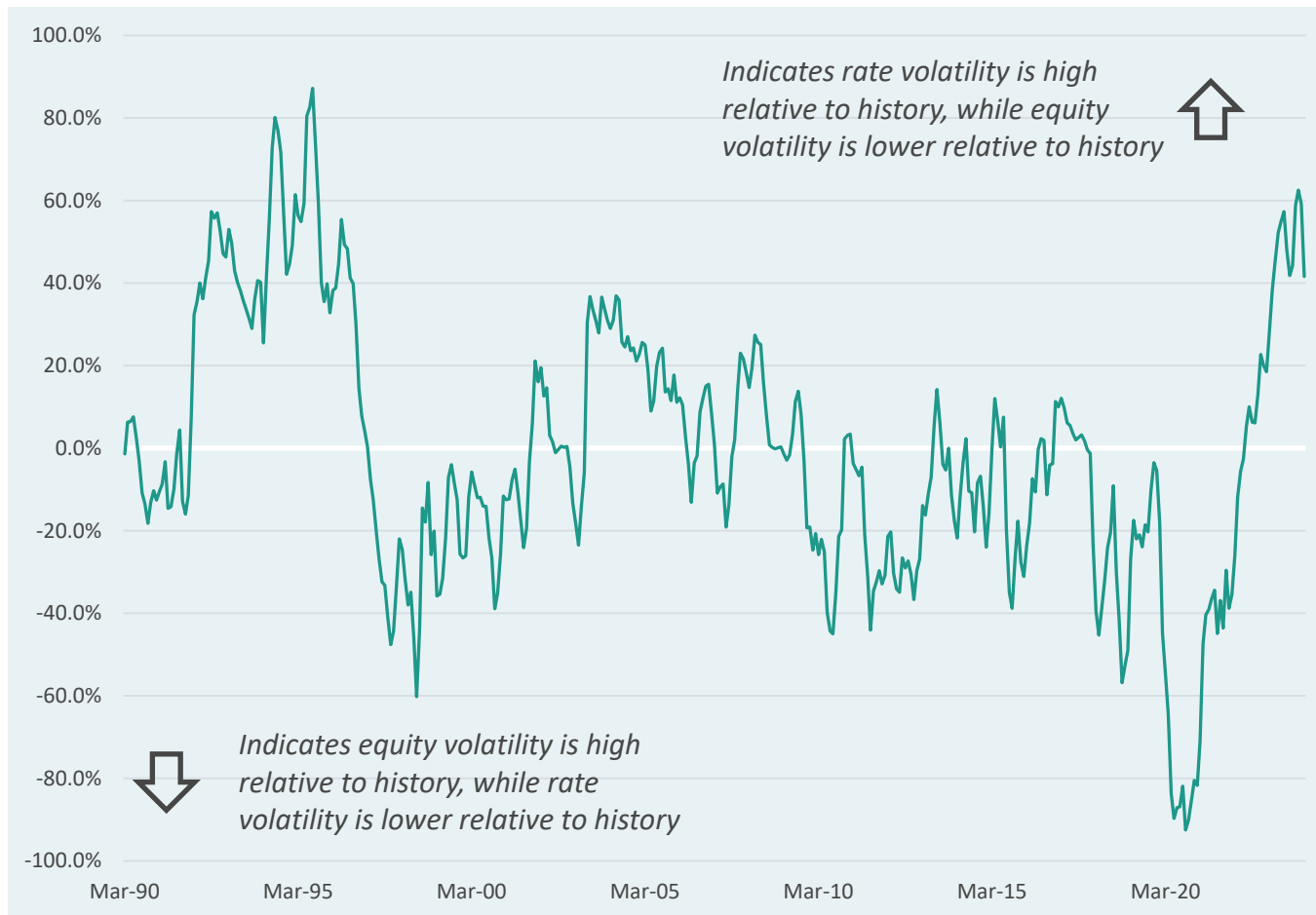
**U.S. TREASURY IMPLIED VOL (“MOVE” INDEX)**



Source: Bloomberg, as of 3/31/24

# Implied volatility: domestic rates vs. equity

RATES VS. EQUITIES VOLATILITY: HISTORICAL PERCENTILE SPREAD

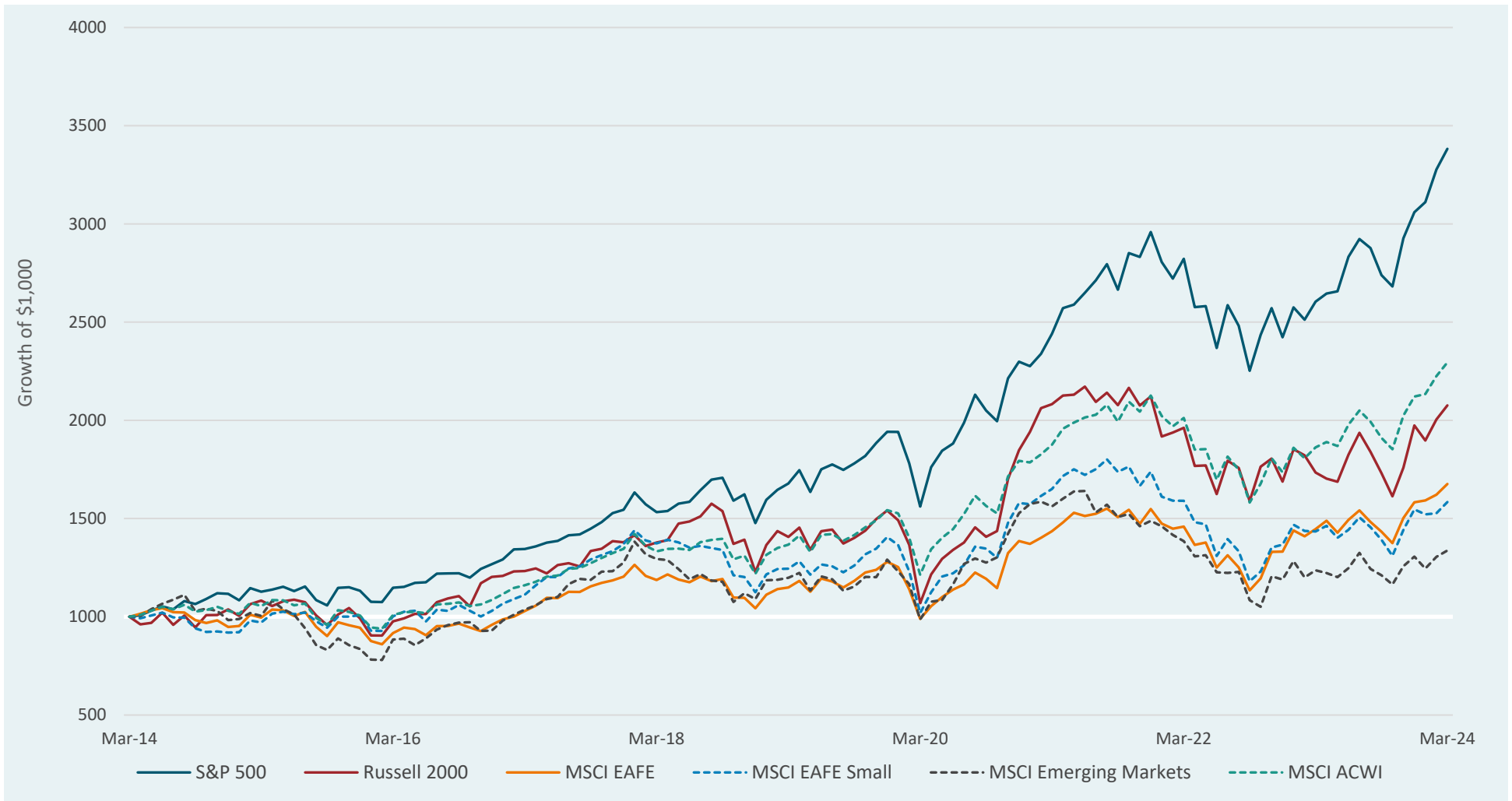


This chart looks at the relationship between rate and equity volatility by comparing historical percentiles dating back to 1990. By taking a spread between the rate and equity percentile, we get a clear picture of environments when implied volatility is relatively higher for one asset class compared to the other.

Our chart shows that we have not seen an environment like this since 1995 (which is also viewed as the Fed's only "soft landing").

Source: ICE BofA, CBOE, as of 3/31/24

# Long-term equity performance



Source: MPI, as of 3/31/24

# Other assets

# Currency

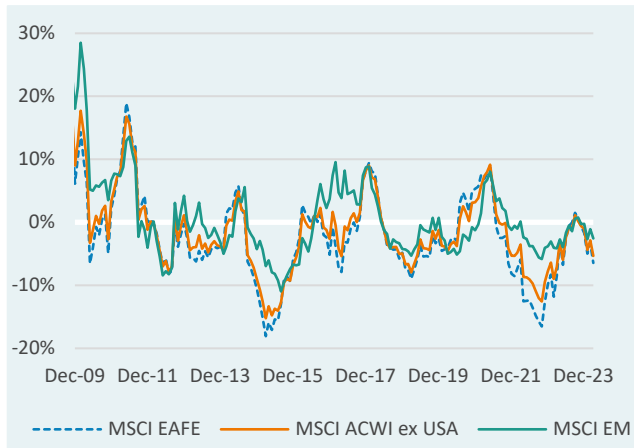
The U.S. dollar gained in value during the quarter, likely buoyed by the *higher for longer* interest rate narrative. A reassessment of the Federal Reserve policy path for 2024 has improved the outlook for the dollar, as currencies which offer higher interest rates, and relatively attractive prospects for continued higher interest rates, tend to better hold their value.

Investors without a currency hedging program in place lost -4.7% from their international developed equity exposure (MSCI EAFE) during the quarter and -7.1% over the past year. Losses from unhedged Japanese currency exposure have been extreme (-9.3% over the quarter, -25.2% over the past year, based on the TOPIX Index), while unhedged European equity exposure losses due to currency have been milder (-2.8% over the quarter, -2.5% over

the past year, based on the EURO Stoxx 50 Index).

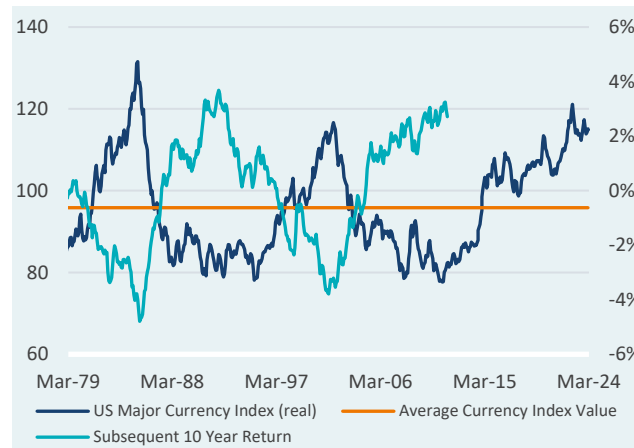
This past year marks another period of uncompensated volatility and losses caused by unhedged currency market exposure. The benefits which a more thoughtful currency approach might deliver have been on display for a number of years. This approach involves reducing the uncompensated risk of unhedged foreign currency exposure, and instead of unhedged exposure to currency markets, 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.

**EFFECT OF CURRENCY (1-YEAR ROLLING)**



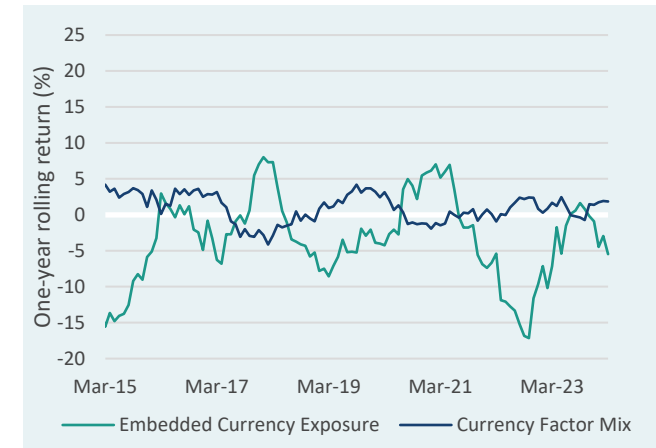
Source: MSCI, as of 3/31/24

**U.S. DOLLAR MAJOR CURRENCY INDEX**



Source: Bloomberg, as of 3/31/24

**EMBEDDED CURRENCY VS CURRENCY FACTORS**



Source: Bloomberg, MSCI, as of 3/31/24

# 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	11.4	18.5	16.0
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	10.3	14.8	12.7
Large Cap Value	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	9.0	10.3	9.0
Small Cap Growth	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	7.6	8.2	7.9
International Equity	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	5.8	8.1	7.6
Small Cap 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	5.2	7.4	6.9
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	4.0	7.3	6.8
Hedge Funds of Funds	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	3.9	6.4	5.3
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	2.9	6.2	4.8
Emerging Markets Equity	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	2.4	5.0	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	2.2	4.3	2.9
Cash	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	1.3	2.2	1.5
Real Estate	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	0.0	1.9	1.3
US Bonds	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	-0.8	0.4	-1.6

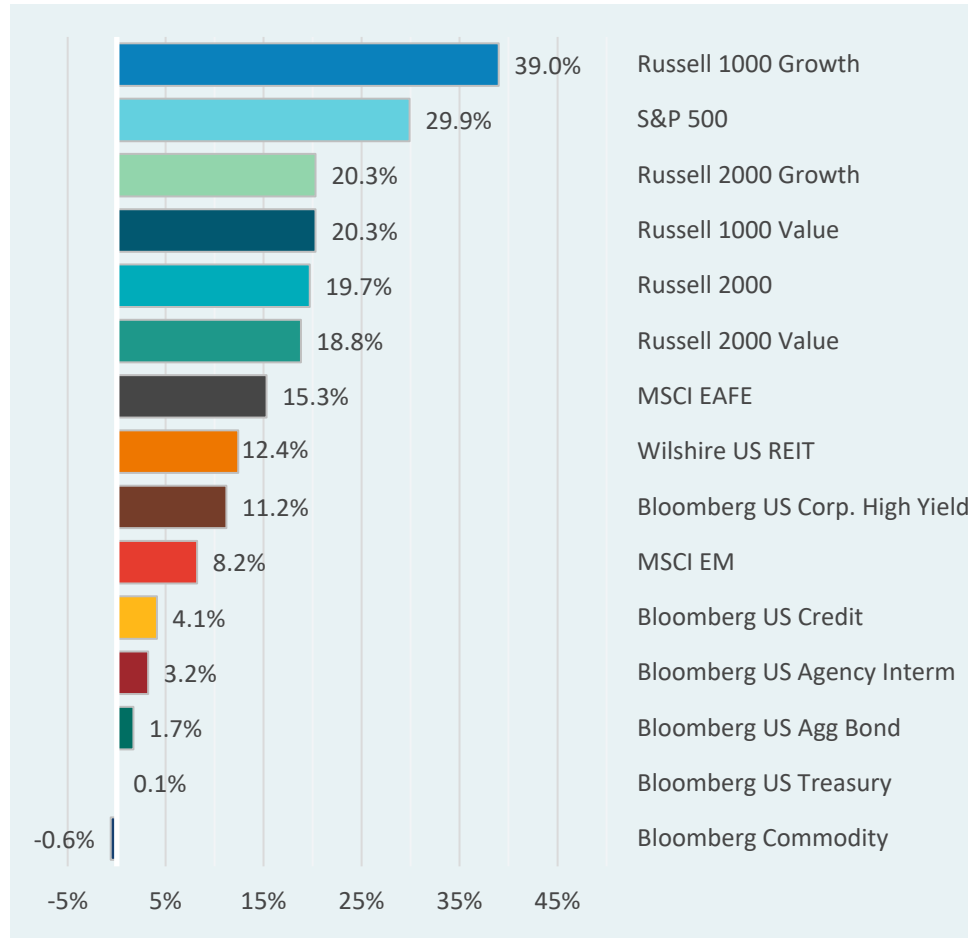
BEST  
↑  
↓  
WORST

 Large Cap Equity	 Small Cap Growth	 Commodities
 Large Cap Value	 International Equity	 Real Estate
 Large Cap Growth	 Emerging Markets Equity	 Hedge Funds of Funds
 Small Cap Equity	 US Bonds	 60% MSCI ACWI/40% Bloomberg Global Bond
 Small Cap Value	 Cash	

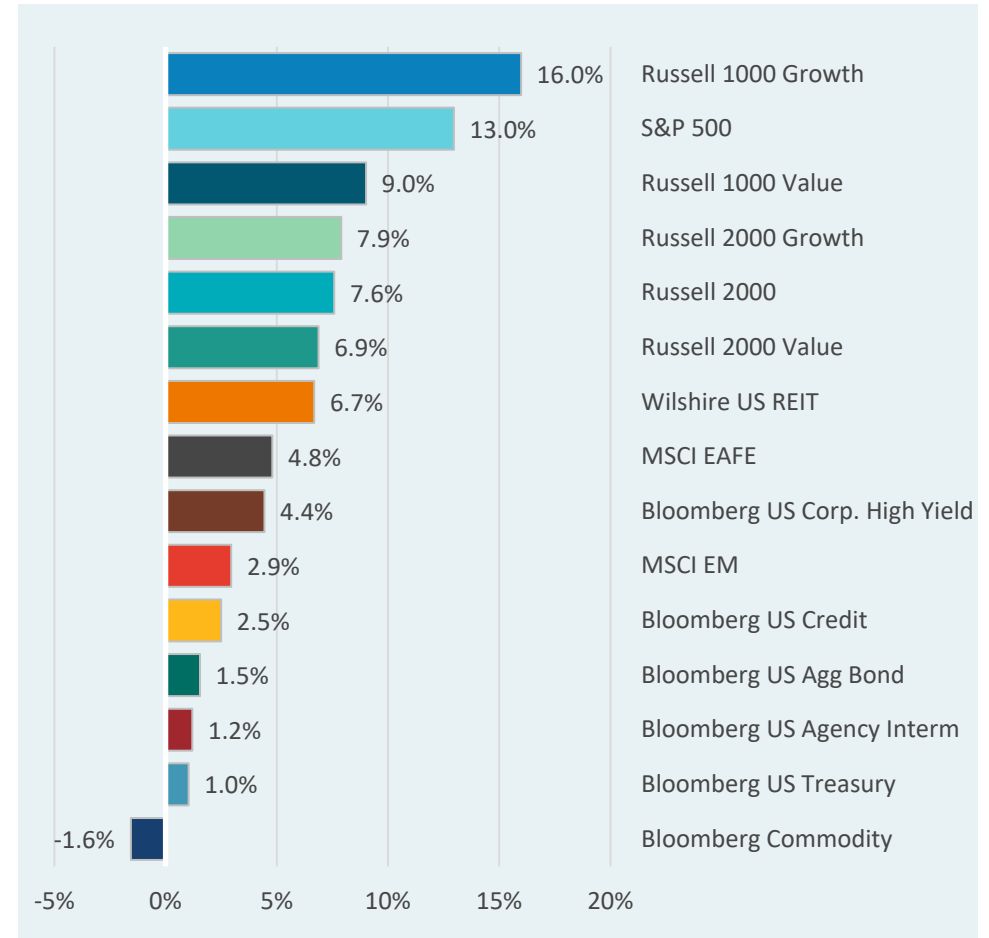
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, Bloomberg US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, Bloomberg Global Bond. NCREIF Property Index performance data as of 12/31/23.

# Major asset class returns

ONE YEAR ENDING MARCH



TEN YEARS ENDING MARCH



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

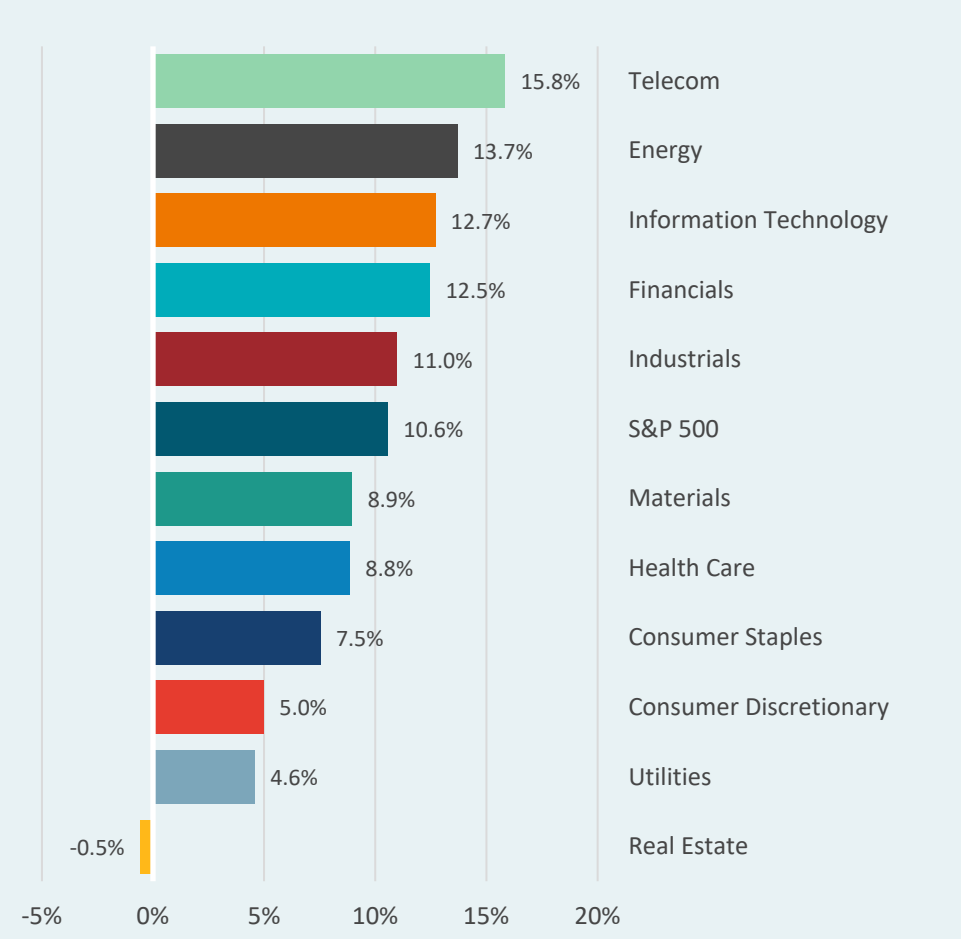
Source: Morningstar, as of 3/31/24

Source: Morningstar, as of 3/31/24



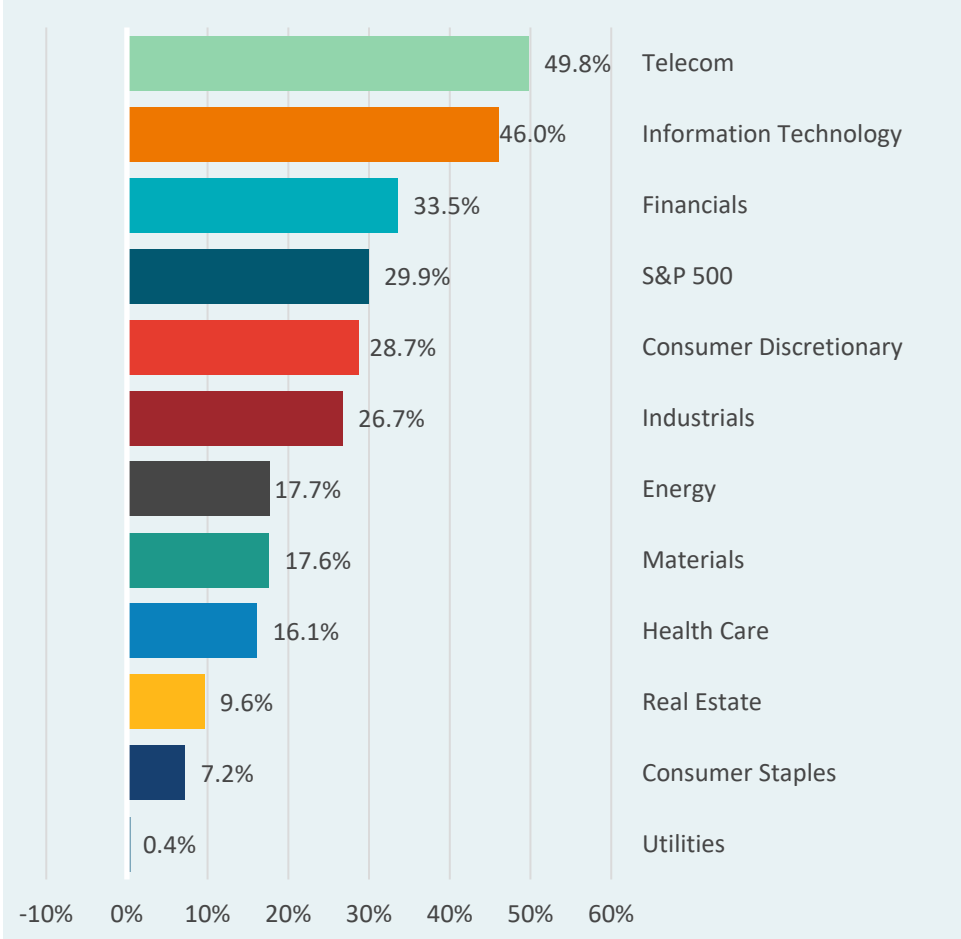
# S&P 500 sector returns

QTD



Source: Morningstar, as of 3/31/24

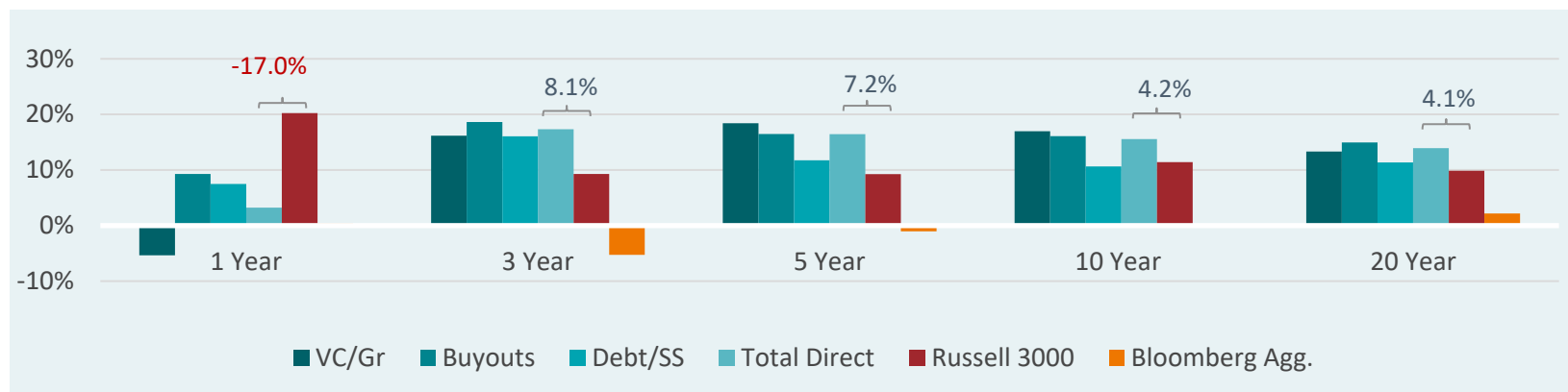
ONE YEAR ENDING MARCH



Source: Morningstar, as of 3/31/24

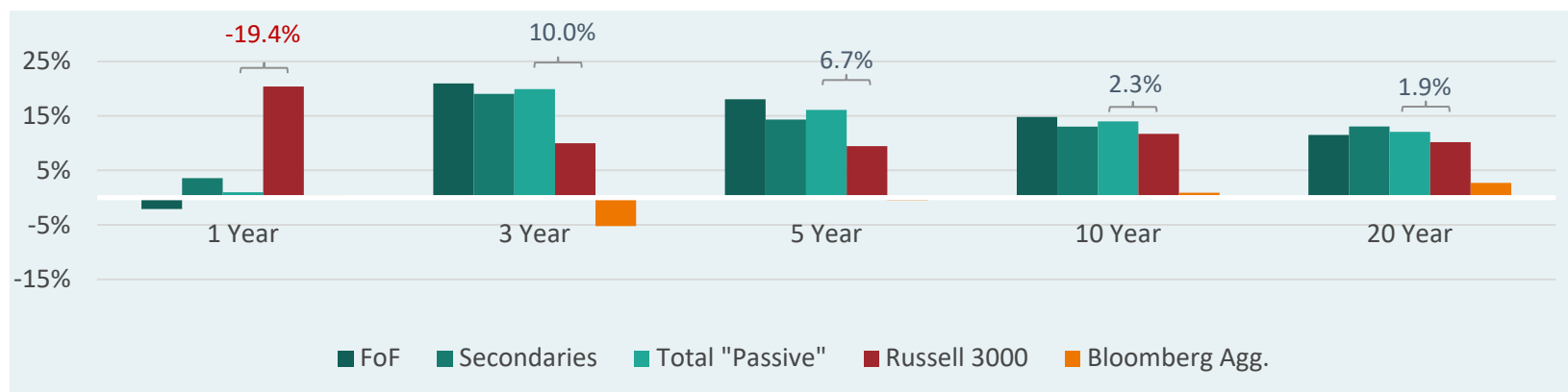
# Private equity vs. traditional assets performance

## DIRECT PRIVATE EQUITY FUND INVESTMENTS



Direct P.E Fund investments outperformed comparable public equities across all time periods, aside from the 1-year

## "PASSIVE" STRATEGIES

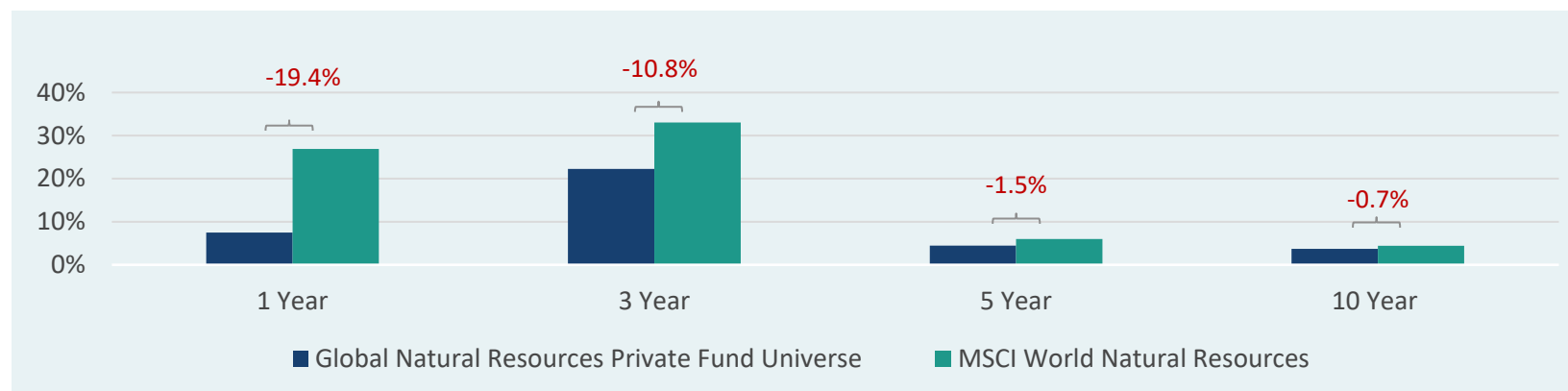


"Passive" strategies outperformed comparable public equities across all time periods, aside from the 1-year

Sources: Refinitiv PME: U.S. Private Equity Funds sub asset classes as of September 30, 2023. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.

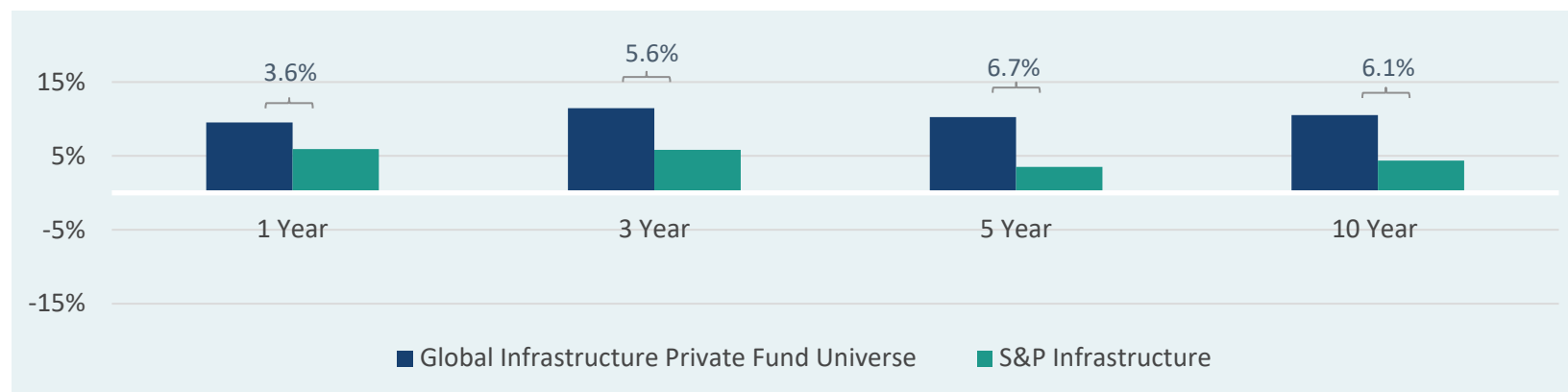
# Private vs. liquid real assets performance

## GLOBAL NATURAL RESOURCES FUNDS



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

## GLOBAL INFRASTRUCTURE FUNDS

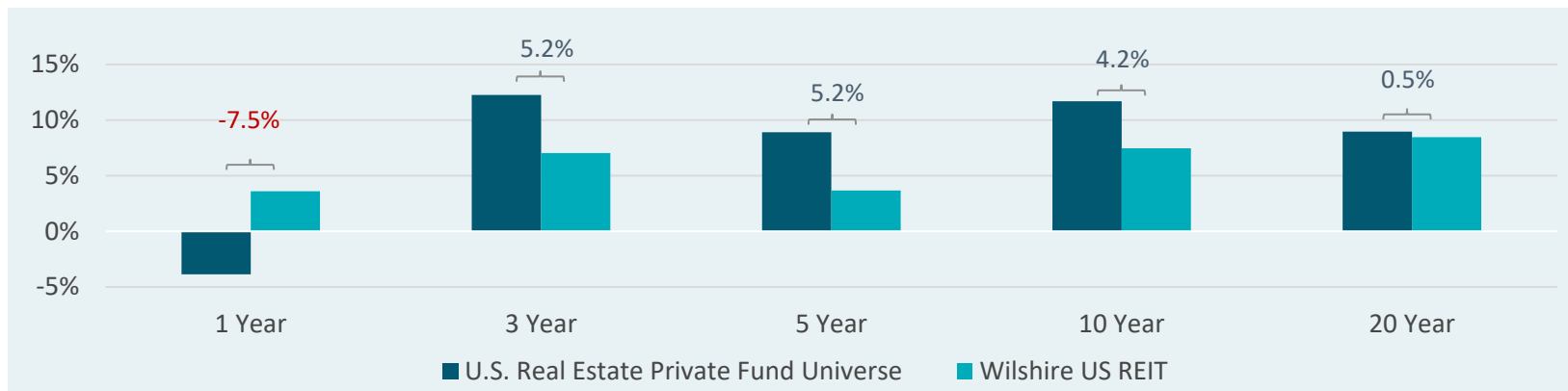


Infra. funds outperformed the S&P Infra. across all periods

Sources: Refinitiv 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 September 30, 2023. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

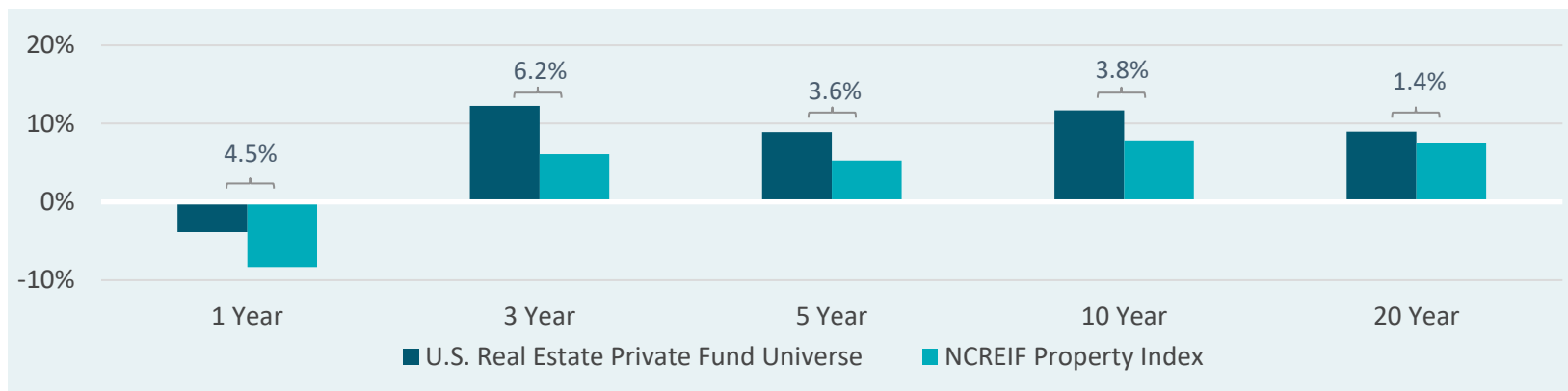
# Private vs. liquid and core real estate performance

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



U.S. Private R.E. funds outperformed the Wilshire U.S. REIT Index across most time periods, aside from the 1-year

## 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: Refinitiv PME: U.S. Real Estate universes as of September 30, 2023. 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	3.2	10.6	10.6	29.9	11.5	15.1	13.0
S&P 500 Equal Weighted	4.5	7.9	7.9	19.4	8.2	12.4	10.9
DJ Industrial Average	2.2	6.1	6.1	22.2	8.7	11.3	11.8
Russell Top 200	2.9	10.8	10.8	32.4	12.0	16.1	13.7
Russell 1000	3.2	10.3	10.3	29.9	10.5	14.8	12.7
Russell 2000	3.6	5.2	5.2	19.7	(0.1)	8.1	7.6
Russell 3000	3.2	10.0	10.0	29.3	9.8	14.3	12.3
Russell Mid Cap	4.3	8.6	8.6	22.3	6.1	11.1	9.9
<b>Style Index</b>							
Russell 1000 Growth	1.8	11.4	11.4	39.0	12.5	18.5	16.0
Russell 1000 Value	5.0	9.0	9.0	20.3	8.1	10.3	9.0
Russell 2000 Growth	2.8	7.6	7.6	20.3	(2.7)	7.4	7.9
Russell 2000 Value	4.4	2.9	2.9	18.8	2.2	8.2	6.9

## INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
MSCI ACWI	3.1	8.2	8.2	23.2	7.0	10.9	8.7
MSCI ACWI ex US	3.1	4.7	4.7	13.3	1.9	6.0	4.3
MSCI EAFE	3.3	5.8	5.8	15.3	4.8	7.3	4.8
MSCI EM	2.5	2.4	2.4	8.2	(5.1)	2.2	2.9
MSCI EAFE Small Cap	3.7	2.4	2.4	10.4	(1.4)	4.9	4.7
<b>Style Index</b>							
MSCI EAFE Growth	2.3	7.0	7.0	13.3	2.8	7.8	5.9
MSCI EAFE Value	4.4	4.5	4.5	17.3	6.6	6.4	3.5
<b>Regional Index</b>							
MSCI UK	4.5	3.1	3.1	10.9	7.7	5.1	2.9
MSCI Japan	3.0	11.0	11.0	25.8	3.7	7.8	6.7
MSCI Euro	4.1	8.4	8.4	17.4	6.9	9.0	4.7
MSCI EM Asia	3.0	3.4	3.4	6.3	(6.5)	2.8	4.5
MSCI EM Latin American	1.0	(4.0)	(4.0)	22.6	10.5	3.7	1.7

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
Bloomberg US TIPS	0.8	(0.1)	(0.1)	0.5	(0.5)	2.5	2.2
Bloomberg US Treasury Bills	0.5	1.3	1.3	5.3	2.6	2.0	1.4
Bloomberg US Agg Bond	0.9	(0.8)	(0.8)	1.7	(2.5)	0.4	1.5
Bloomberg US Universal	1.0	(0.5)	(0.5)	2.7	(2.1)	0.7	1.8
<b>Duration</b>							
Bloomberg US Treasury 1-3 Yr	0.4	0.3	0.3	2.9	0.0	1.1	1.1
Bloomberg US Treasury Long	1.2	(3.3)	(3.3)	(6.1)	(8.0)	(2.8)	1.2
Bloomberg US Treasury	0.6	(1.0)	(1.0)	0.1	(2.7)	(0.1)	1.0
<b>Issuer</b>							
Bloomberg US MBS	1.1	(1.0)	(1.0)	1.4	(2.8)	(0.4)	1.1
Bloomberg US Corp. High Yield	1.2	1.5	1.5	11.2	2.2	4.2	4.4
Bloomberg US Agency Interm	0.4	0.2	0.2	3.2	(0.6)	0.8	1.2
Bloomberg US Credit	1.2	(0.4)	(0.4)	4.1	(1.9)	1.4	2.5

## OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Index</b>							
Bloomberg Commodity	3.3	2.2	2.2	(0.6)	9.1	6.4	(1.6)
Wilshire US REIT	1.5	(0.0)	(0.0)	12.4	4.5	4.4	6.7
CS Leveraged Loans	0.8	2.5	2.5	12.4	5.8	5.3	4.6
S&P Global Infrastructure	4.6	1.3	1.3	4.1	5.5	4.9	5.2
Alerian MLP	4.9	14.7	14.7	37.3	29.2	10.4	2.9
<b>Regional Index</b>							
JPM EMBI Global Div	2.1	2.0	2.0	11.3	(1.4)	0.7	3.0
JPM GBI-EM Global Div	(0.0)	(2.1)	(2.1)	4.9	(1.6)	0.1	(0.3)
<b>Hedge Funds</b>							
HFRI Composite	2.5	4.9	4.9	12.1	4.3	7.0	5.0
HFRI FOF Composite	1.3	3.9	3.9	9.4	2.8	5.0	3.6
<b>Currency (Spot)</b>							
Euro	(0.2)	(2.2)	(2.2)	(0.6)	(2.8)	(0.8)	(2.4)
Pound Sterling	(0.1)	(0.9)	(0.9)	2.2	(2.9)	(0.6)	(2.7)
Yen	(1.1)	(6.9)	(6.9)	(12.1)	(10.0)	(6.1)	(3.8)

Source: Morningstar, HFRI, as of 3/31/24

# 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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