

A large, semi-transparent geometric pattern of interlocking triangles in shades of blue and green covers the left side of the image. A white triangle is positioned to the left of the main title text.

**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**

1ST QUARTER 2023
Investment Landscape

Verus business update

Since our last Investment Landscape webinar:

- Verus hired two new employees:
 - **Cholo Villanueva**, Performance Analyst – Seattle office
 - **Demitri Castaneda**, Performance Analyst – Seattle office
- Two employees passed their Level III CFA exams, earning their charters. Verus now has a total of 33 CFA charterholders.
- Verus retained a new client in Alaska, adding a fourth client to the state.
- We celebrated our 37th anniversary. Wurts Johnson & Company (founding name) was established in January 1986.
- We also enhanced our research content management system to improve how we *communicate* our conviction in managers with our new IQ Ratings system. *(details on next page)*

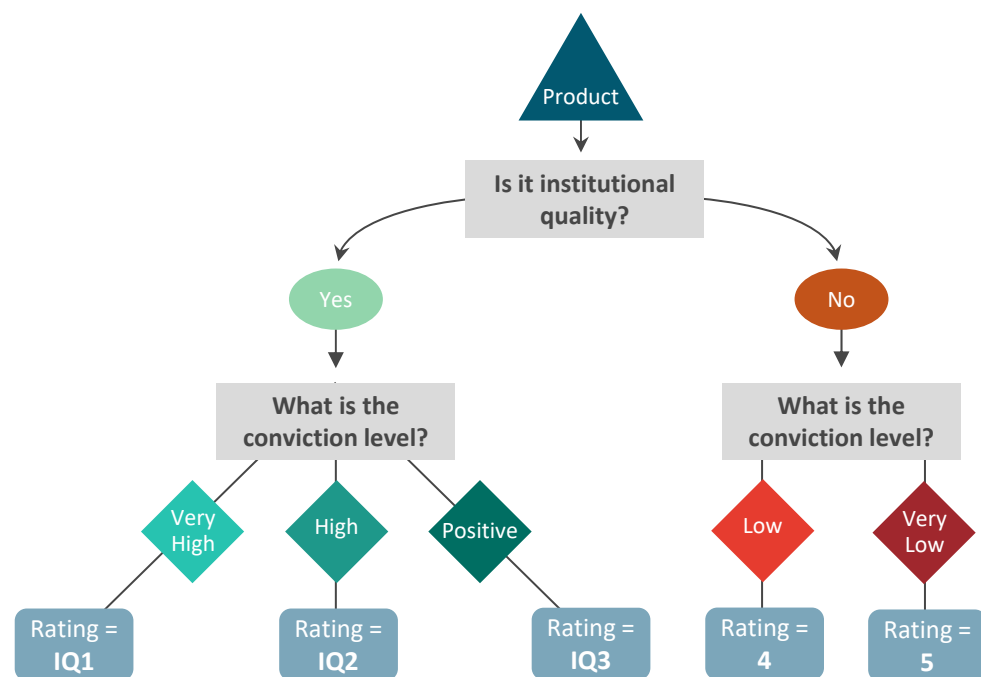
Manager rating system

The IQ Rating System communicates our conviction in investment products

There are two components to the rating:

1. **Institutional quality** – (IQ) The product meets or exceeds the standards of fiduciary care required by institutional investors and is suitable for use in clients' portfolios.
2. **Conviction** – (1 to 5) Represents the conviction of our research teams in the distinguishing qualities of the product relative to its peers, with 1 as the highest rating and 5 the lowest.

PROCESS



Rating process simplified for illustrative purposes only

DEFINITIONS & GUIDELINES

| Rating | Institutional Quality? | Conviction Level | Defining Characteristics | Recommendations |
|--------|------------------------|------------------|--|---|
| IQ1 | Yes | Very High | Earns Verus' highest conviction. Above-average characteristics most likely to achieve the strategy's desired investment results. | Recommended for use in client portfolios. May be used in Verus discretionary portfolios. |
| IQ2 | Yes | High | Maintains Verus' high conviction. Above-average characteristics most likely to achieve strategy's desired investment results. | Recommended for use in client portfolios. May be used in Verus discretionary portfolios. |
| IQ3 | Yes | Positive | Meets institutional quality standards that can achieve desired investment results. Strengths outweigh weaknesses. | While IQ1 or IQ2 rated products are generally preferable, certain client needs may be better addressed by a highly specialized IQ3 product. |
| 4 | No | Low | Concerns with the product's ability to meet institutional-quality standards. | Clients should re-evaluate retention or monitor closely. |
| 5 | No | Very Low | Significant issues inhibit the product's ability to meet institutional-quality standards. | Verus recommends termination, immediately. |

Recent Verus research

Visit: <https://www.verusinvestments.com/insights/>

Topics of interest papers

A BRIEF GUIDE TO THE SFA PROGRAM

In this paper, we plan to approach the Special Financial Assistance (SFA) program from an investment perspective. First, we describe the interest rate rules. Next, we offer some ways in which investors may think about their legacy assets relative to their new SFA funds. This section concludes by outlining a strategy in which SFA funds are used to cash flow match expected future liability payments. Overall, the health of a Plan will determine how much SFA funding is available, and the total amount of SFA funding awarded will likely determine the degree to which this program should reasonably impact an investor's total portfolio strategy.

IS PAINLESS DIVERSIFICATION BACK?

Low interest rates over the last few years have caused investors significant asset allocation problems. The 2022 market reversal has begun to reverse these challenges. The implications of this return to more normal conditions for investors include:

- The renewed role of fixed income in portfolios
- Greater flexibility to meet performance objectives through simple portfolio structures
- The ability of certain investors to meet return objectives while taking less market risk
- The potential for pensions to take advantage of higher interest rates and likely stronger funded status by pursuing more liability-aware investment strategies

Annual research

2023 CAPITAL MARKET ASSUMPTIONS

Some important developments occurred in the last year. Capital Market Assumptions guide our advice and recommendations. They reflect the best judgments of our research and investment teams regarding the expected behavior and associated risks of capital markets in the years ahead. During our 2023 Capital Market Assumptions webinar, we discussed:

- A significant increase in our Capital Market Assumptions, and aspects of the environment which have driven this change
- The “building blocks” of market returns and our philosophy around forecasting future asset-class performance
- Implications for investors as markets escape the *low-return environment* of recent years

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4th quarter summary

THE ECONOMIC CLIMATE

- Real GDP increased at a 2.9% rate in the fourth quarter (1.0% year-over-year growth), slightly exceeding expectations. Consumer spending, private inventory investment, government expenditures, and nonresidential investment were supportive of growth. **p. 10**
- Unemployment remained near historic lows during the quarter, at 3.5% in December. While this figure suggests a strong and resilient job market, the workforce remains much smaller than pre-pandemic times as more than two million workers remain out of the labor force. **p. 13**

PORTFOLIO IMPACTS

- Inflation fears continue to ease as domestic inflation fell further. Headline inflation was 6.5% year-over-year in December—the lowest since October 2021—while core inflation came in at 5.7%. Prices for most goods and services have moderated with the exception of shelter costs, which increased at a worryingly fast pace of 10.0% annualized in December. **p. 11**
- U.S. real personal spending held steady at 2.0% year-over-year in August. Households focused spending on services over goods, which has removed some stress from supply chains and likely helped to normalize global transportation issues. Relatively strong spending seems to suggest it is possible that inflation moderates without a painful slowdown in the economy. **p. 14**

THE INVESTMENT CLIMATE

- China's rapid pivot away from a "Zero Covid" policy towards the end of Q4 added a large tailwind to emerging market equity performance and the global growth outlook. Despite this positive news, an uptick in virus cases poses challenges for China's reopening. **p. 32**
- Credit performed well in the fourth quarter, as resilient U.S. economic growth combined with expectations for the Fed to ease their tightening cycle helped mitigate investor concerns of a near-term cyclical downturn. **p. 23 & 24**

ASSET ALLOCATION ISSUES

- Calendar year 2022 proved to be a year of *reversal* regarding asset class performance. Top performing investments of the past decade, such as U.S. growth and small cap stocks, suffered some of the largest losses. Meanwhile, many of the worst performing investments of the past decade, including commodities and value stocks, significantly outperformed. **p. 40**
- Value stocks outperformed markedly during 2022, outpacing growth stocks by 10.2% in Q4 and 21.6% for the year. Energy, industrials, and materials—sectors heavily tilted toward value—showed strong returns, with energy ending the year up 64.6%. **p. 29**

Markets have partially recovered as inflation fears eased

Recession risks and an earnings slowdown may come into focus in 2023

What drove the market in Q4?

“Has Inflation Peaked?”

HEADLINE CONSUMER PRICE INFLATION (YEAR-OVER-YEAR)

| Jul | Aug | Sep | Oct | Nov | Dec |
|------|------|------|------|------|------|
| 8.5% | 8.3% | 8.2% | 7.7% | 7.1% | 6.5% |

Article Source: Financial Times, December 8th, 2022

“The Labor Market is Still Hot”

CHANGE IN U.S. NONFARM PAYROLLS

| Jul | Aug | Sep | Oct | Nov | Dec |
|-------|-------|-------|-------|-------|-------|
| +537k | +292k | +269k | +284k | +263k | +223k |

Article Source: Axios, November 1st, 2022

“Fed Raises Rate by 0.5 Percentage Point, Signals More Increases Likely”

FOMC MEETING RATE HIKE DECISIONS

| May | Jun | July | Sep | Nov | Dec |
|---------|---------|---------|---------|---------|---------|
| +50 bps | +75 bps | +75 bps | +75 bps | +75 bps | +50 bps |

Article Source: Wall Street Journal, December 14th, 2022

“China’s Covid Pivot Accelerates as Cities Ease Testing Rules”

CHINESE REPORTED NEW CASES (DAILY AVERAGE FOR THE MONTH)

| Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-------|-------|-------|--------|--------|
| 559 | 1,629 | 1,158 | 1,340 | 18,914 | 14,748 |

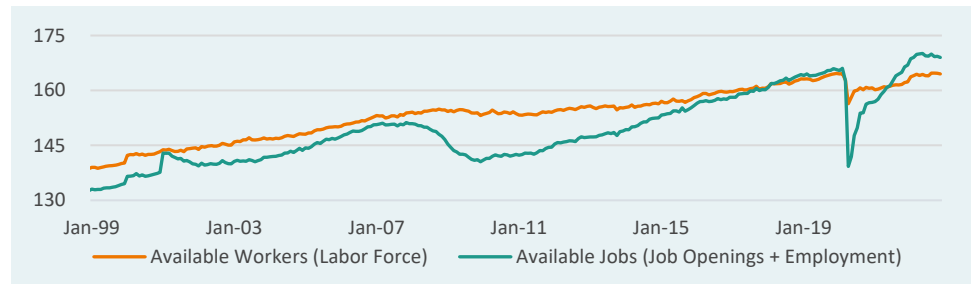
Article Source: Bloomberg, December 5th, 2022. Dataset from Our World in Data

FED FUNDS RATE UPPER BOUND



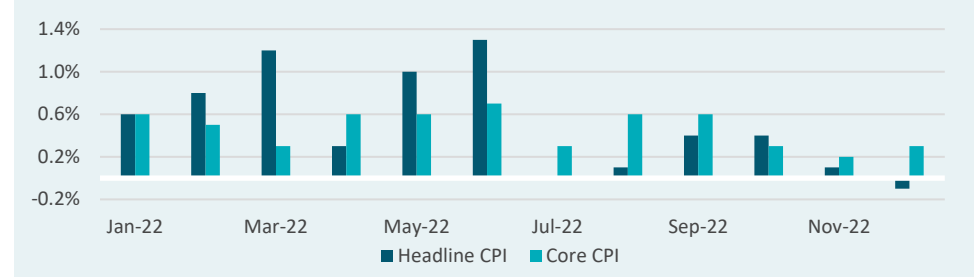
Source: Federal Reserve, as of 12/31/22

U.S. AVAILABLE WORKERS VS. AVAILABLE JOBS (MILLIONS)



Source: Bureau of Labor Statistics, as of 11/30/22

U.S. HEADLINE & CORE CPI (MONTH-OVER-MONTH)



Source: Bureau of Labor Statistics, as of 12/31/22

Economic environment

U.S. economics summary

- Real GDP increased at a 2.9% rate in Q4 (1.0% year-over-year growth). Consumer spending, private inventory investment, government expenditures, and nonresidential investment supported the economy.
- Inflation fears continue to ease as domestic inflation fell further. December headline inflation came in at 6.5% year-over-year while core inflation (excluding food & energy) came in at 5.7%. Most goods and services price rises have slowed, with the exception of shelter costs, which increased at a worryingly fast pace of 10% annualized in December.
- Unemployment remained very low during the quarter, at 3.5% in December. While this official figure suggests a strong and resilient job market, the workforce remains much smaller than pre-pandemic times as more than two million workers are missing from the labor force.
- Consumer spending kept steady though savings rates dropped to 2.3%—a depressed level not seen since the mid-2000s. A low household savings rate is sometimes seen as an indicator of strong consumer confidence and spending, though we suspect household budgets are currently being hit hard by higher costs.
- Consumer sentiment improved during Q4 but is still very downbeat. In the most recent University of Michigan survey, respondents showed less concern around inflation, reported better business conditions and long-term outlook, but were pessimistic over personal finances.
- U.S. home prices peaked in June 2022 and have been falling since then, according to S&P CoreLogic. Significantly higher mortgage interest rates have led to the worst home affordability on record, according to the National Association of Realtors.

| | Most Recent | 12 Months Prior |
|---|---------------------------|---------------------------|
| Real GDP (YoY) | 1.0% 12/31/22 | 5.7% 12/31/21 |
| Inflation (CPI YoY, Core) | 5.7% 12/31/22 | 5.5% 12/31/21 |
| Expected Inflation (5yr-5yr forward) | 2.2% 12/31/22 | 2.3% 12/31/21 |
| Fed Funds Target Range | 4.25% – 4.50% 12/31/22 | 0.00% – 0.25% 12/31/21 |
| 10-Year Rate | 3.87% 12/31/22 | 1.51% 12/31/21 |
| U-3 Unemployment | 3.5% 12/31/22 | 3.9% 12/31/21 |
| U-6 Unemployment | 6.5% 12/31/22 | 7.3% 12/31/21 |

GDP growth

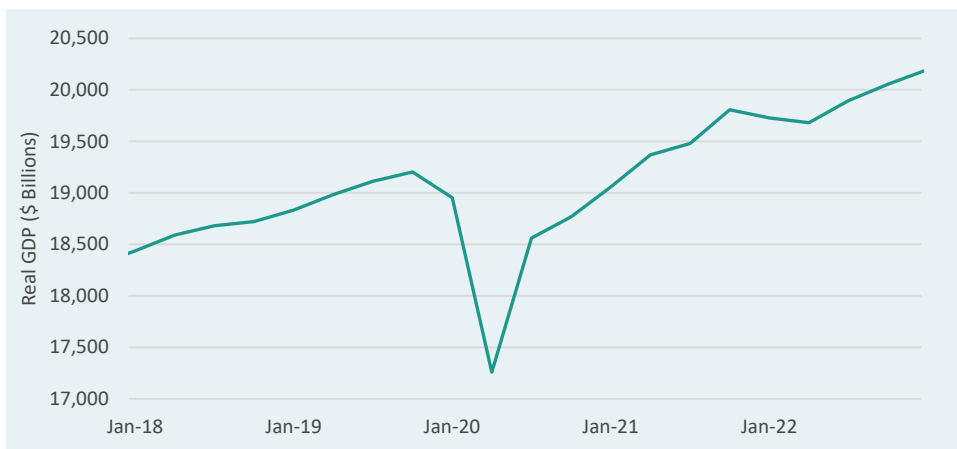
Real GDP increased at a 2.9% rate in the fourth quarter (1.0% growth year-over-year), slightly exceeding expectations of 2.8%. Consumer spending supported growth, along with gains in private inventory investment, government expenditures, and nonresidential investment. Residential fixed investment saw an extreme drop of -26.7% during the quarter as the housing market weakened. Declining exports also acted as a drag on growth.

Investors appear unsure about how to interpret the recent string of strong U.S. economic data. Although consumer sentiment is very poor by most measures, spending remains positive and the job market remains surprisingly resilient. Were the economy to avoid recession, this would be positive for businesses and for corporate

earnings, but might also lead to further aggressive Federal Reserve action and interest rate hikes, which are negative for equity prices.

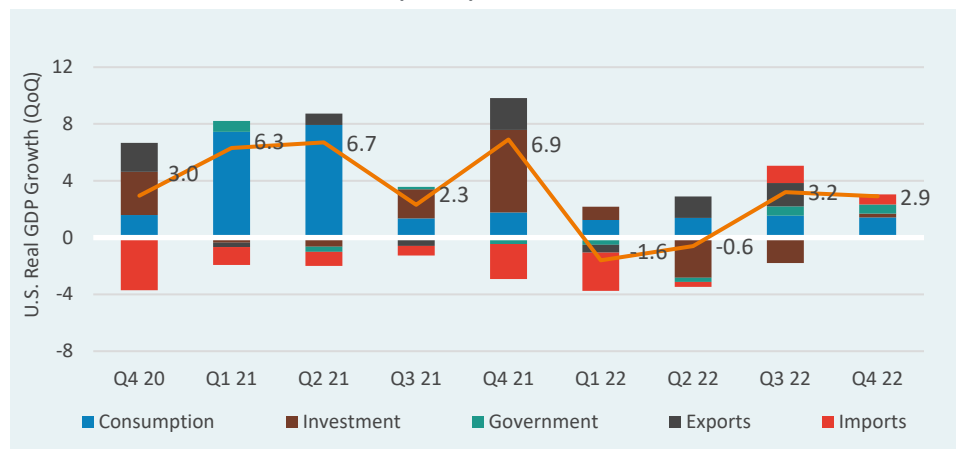
The inflation environment following the COVID-19 pandemic is unlike many past inflation cycles. Much of the price pressure has been fueled by factors *other than* a strong economy, such as an unprecedented shift in consumer spending behavior towards goods and away from services, port and international transportation issues related to lockdowns, and Russia's invasion of Ukraine. Because many of these variables are outside of the Federal Reserve's control, we believe it is possible that inflation continues to fall despite a relatively strong U.S. economy.

U.S. REAL GROSS DOMESTIC PRODUCT



Source: FRED, as of 12/31/22

U.S. REAL GDP COMPONENTS (QOQ)



Source: FRED, as of 12/31/22

Inflation

The inflation picture continued to improve in the United States, as both headline and core inflation figures declined further. December headline inflation came in at 6.5% year-over-year—the lowest since October 2021—while core inflation came in at 5.7%. Most goods and services prices have moderated with the exception of shelter, which increased at a worryingly fast pace of 10% annualized in December. Food inflation has been a large contributor to high inflation, but food price rises reassuringly slowed in December, increasing at a 3.7% annualized rate.

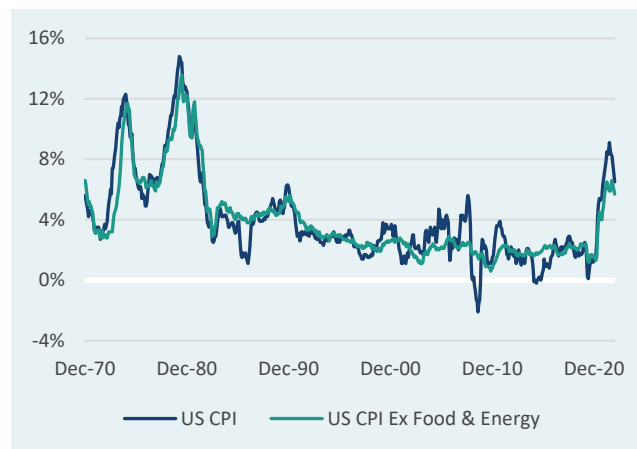
Strong increases in U.S. hourly wages over recent years have

been a welcome development for workers who are feeling the squeeze of higher prices on household budgets. But wage rises can also act as a key risk to the inflation environment. Accelerating wages might sustain higher spending and therefore persistently elevated rates of inflation. However, government data now indicates that wage growth is slowing, which mitigates the risk of a *wage-price spiral*.

Overall, we believe inflation is falling and will likely be much less of a perceived market risk in 2023. Certain persistent price pressures suggest that an inflation level of 3-4% is more likely than the 1-2% experienced throughout much of the 2010s.

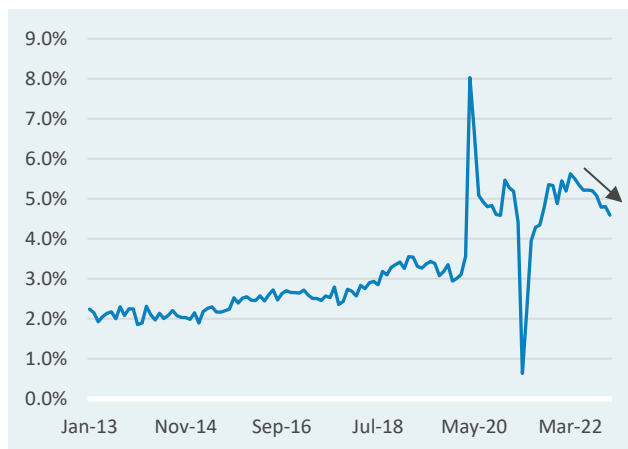
Price pressures continue to ease, adding to optimism that inflation will fall to more normal levels

U.S. CPI (YOY)



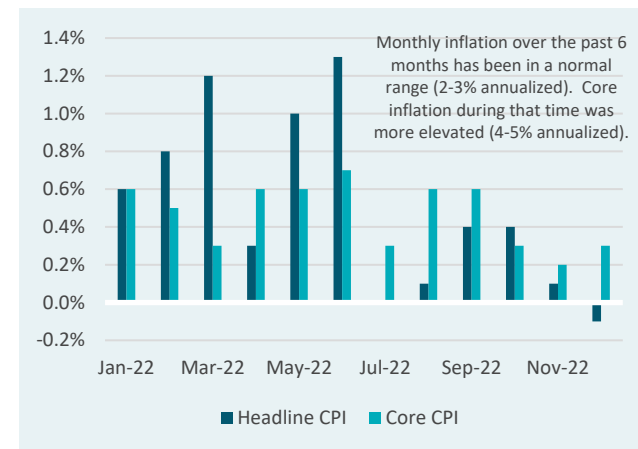
Source: BLS, as of 12/31/22

AVERAGE HOURLY EARNINGS



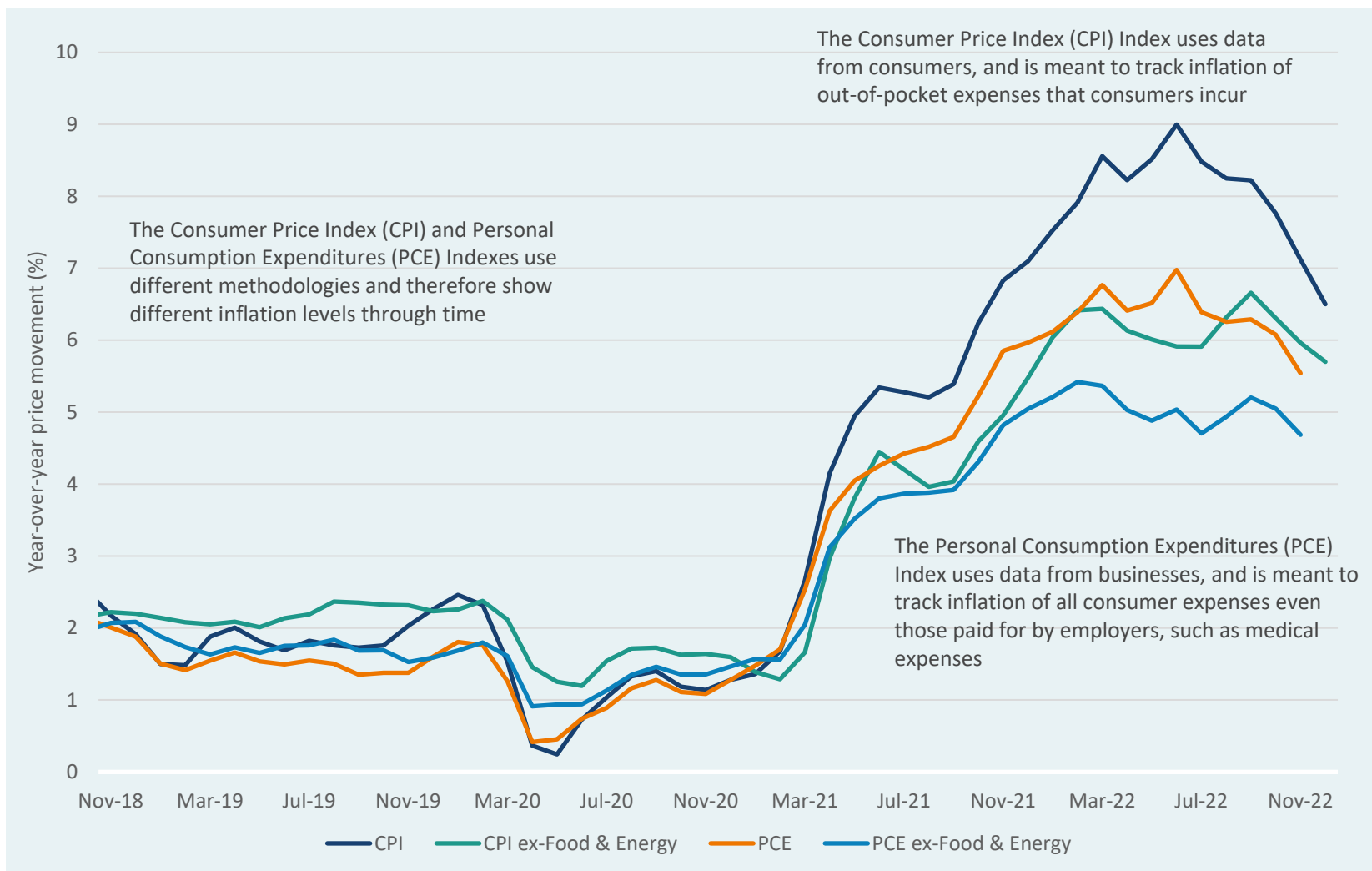
Source: BLS, as of 12/31/22

MONTHLY PRICE MOVEMENT



Source: BLS, as of 12/31/22

How are inflation conditions evolving?



Price rises have slowed considerably in recent months, which is bringing down official year-over-year inflation figures

Source: FRED, Verus, PCE data as of 11/30/22, CPI data as of 12/31/22

Labor market

Unemployment remained very low during the quarter, at 3.5% in December. This official figure suggests a strong and resilient job market for those workers who seek employment, although this data contrasts with media reports of fairly widespread layoff activity.

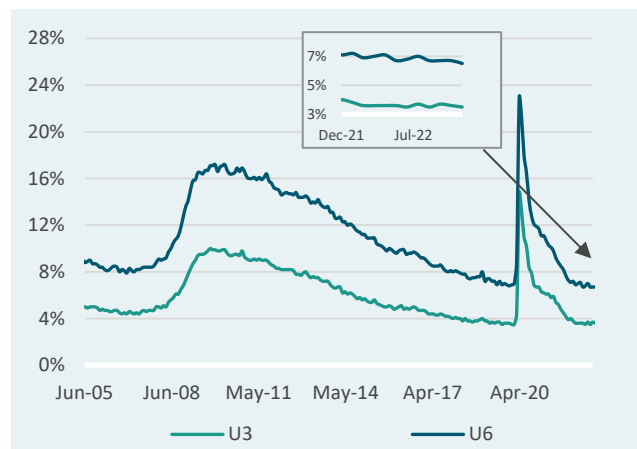
The labor participation rate also remained unchanged during the quarter. Low labor participation paints a different and much weaker picture of the job market, because this figure takes into account the workers *who are not seeking employment*. More than two million workers remain out of the labor force, relative to the pre-pandemic job market. Survey

and government-reported data suggests that much of this effect is due to “Long Covid” health troubles. Other variables such as early retirements, and parents taking time off to care for children, have also likely had a material impact on the size of the workforce.

The result of millions of Americans dropping out of the workforce has been a historically large mismatch regarding the number of jobs available and the number of workers available to fill those jobs. This gap remains wide, but has been closing recently as job openings have fallen.

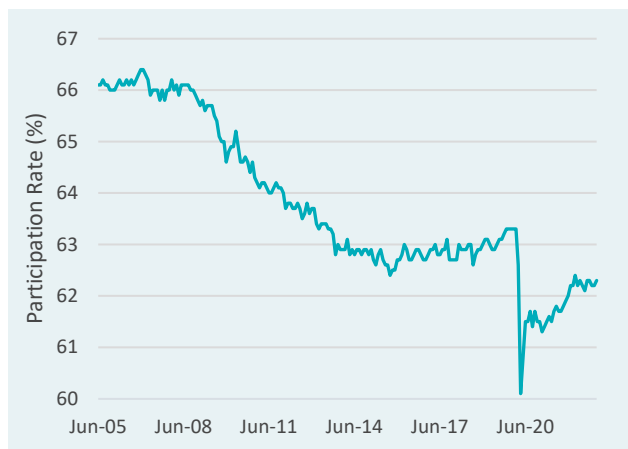
The labor market remains tight, though the size of workforce is much smaller relative to pre-pandemic times

U.S. UNEMPLOYMENT



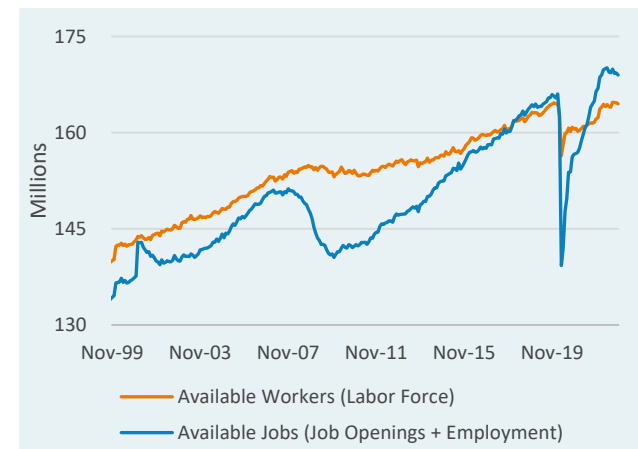
Source: FRED, as of 12/31/22

LABOR FORCE PARTICIPATION RATE



Source: FRED, as of 12/31/22

WORKERS AVAILABLE VS. AVAILABLE JOBS



Source: BLS, as of 11/30/22

The consumer

U.S. real (inflation-adjusted) personal consumption expenditures held steady in August, at 2.0% year-over-year. Households have focused spending on services rather than goods, which removed some stress from supply chains and likely helped to normalize transportation issues. Relatively strong spending seems to suggest it is possible that inflation moderates without a painful slowdown in the economy.

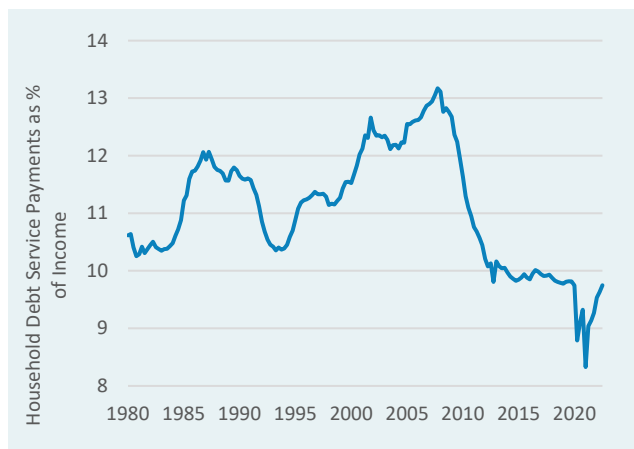
Spending has slowed but savings rates have also dropped to 2.3%—a depressed level not seen since the mid-2000s. A low household savings rate is sometimes seen as an indicator of

strong consumer confidence and spending, though in the current environment we suspect that household budgets are being hit hard by inflation and higher living costs.

Big ticket items such as automobiles have seen falling sales as higher interest rates make purchases less affordable and household budgets come under strain. The pressure of higher interest rates is reflected in *average debt payments relative to average income*—a metric which has risen towards pre-pandemic levels.

Household spending remains strong, though a very low savings rate may suggest budgets are being squeezed

DEBT SERVICE AS % HOUSEHOLD INCOME



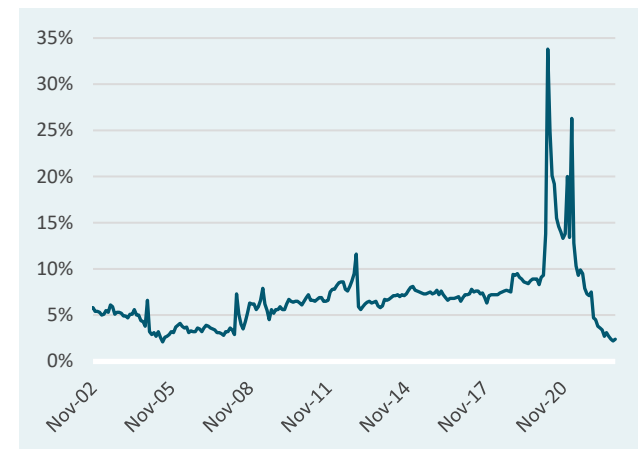
Source: FRED, as of 9/30/22

REAL PERSONAL CONSUMPTION



Source: FRED, as of 11/30/22

PERSONAL SAVINGS RATE



Source: FRED, as of 11/30/22

Sentiment

Consumer sentiment improved again during the fourth quarter, but remains very downbeat, according to the University of Michigan. In the most recent survey, respondents expressed less concerns over inflation, reported better business conditions and long-term outlook, though pessimism around current and future personal finances remained.

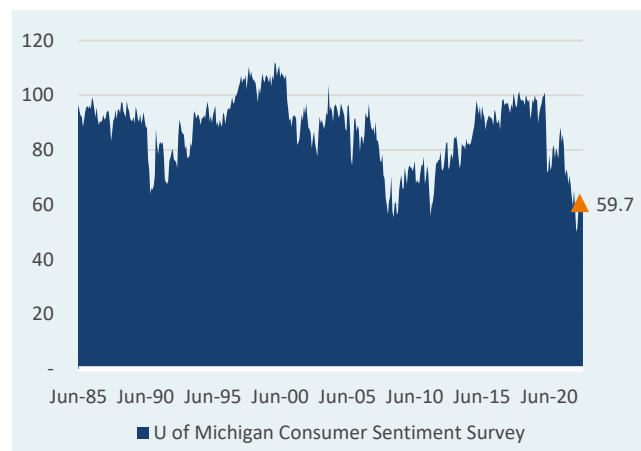
Consumer confidence measured by the Conference Board improved slightly in the fourth quarter—at the highest level since April. According to the Conference Board, views around

current conditions and future conditions improved as households were more upbeat regarding the economy and jobs. Inflation expectations continued to fall (improve), driven by lower gas prices in particular.

The NFIB Small Business Optimism index deteriorated slightly during the quarter, reflecting a very poor business outlook. Thirty-two percent of business owners expressed inflation as their greatest concern for business operations. Other concerns included difficulties in filling open job positions and an inability to raise prices to keep up with inflation.

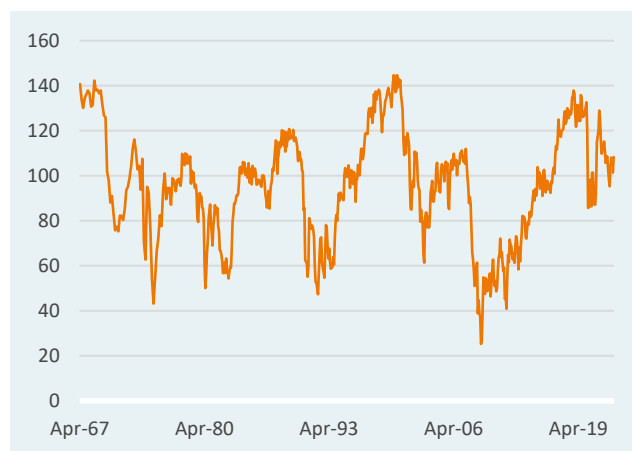
Sentiment, by most measures, remains very poor

CONSUMER SENTIMENT



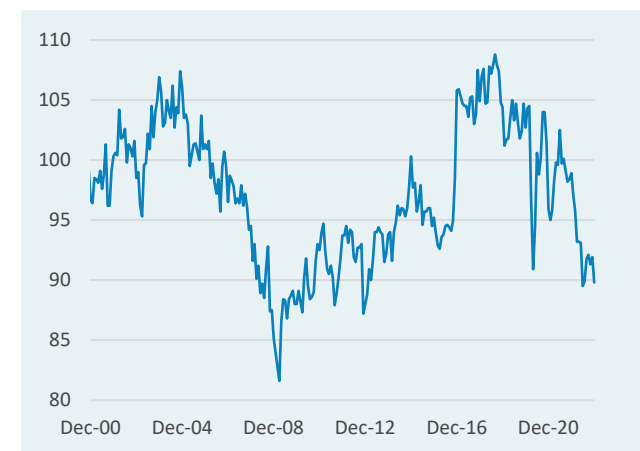
Source: University of Michigan, as of 12/31/22

CONFERENCE BOARD CONSUMER CONFIDENCE



Source: Conference Board, as of 12/31/22

NFIB SMALL BUSINESS SENTIMENT



Source: NFIB, as of 12/31/22

Housing

U.S. home prices peaked in June 2022 and have been falling since that time, according to the S&P CoreLogic Case-Shiller U.S. National Index. Significantly higher mortgage interest rates have led to the worst home affordability on record, as indicated by the National Association of Realtors.

Higher home prices and interest rates have also resulted in a sharp slowdown in sales activity—a notable change from the frothy environment that had occurred post-pandemic. Existing home sales activity has now fallen to a rate not seen since the real estate market was recovering from the housing

crisis during the early 2010s.

Conditions in housing today appear to be helping to *rebalance* the housing market, as suggested by the monthly supply of homes. Weaker sales volumes and worse affordability has meant that potential buyers have much more inventory to select from. The monthly supply of homes is now at 8.6 months, up from an all-time-low of 3.3 months in August 2020. As homes sit on the market unsold for longer, prices may need to fall further to attract buyers.

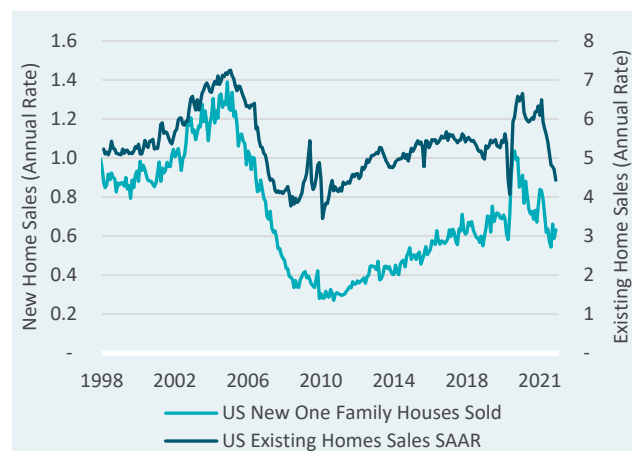
HOUSING AFFORDABILITY INDEX



Source: NAR, as of 11/30/22

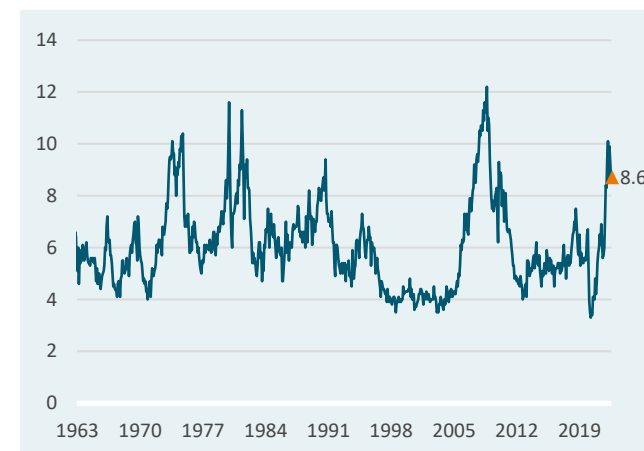
The Monthly Housing Affordability Index measures whether or not a typical family earns enough income to qualify for a mortgage loan on a typical home at the national and regional levels based on the most recent monthly price and income data

HOME SALES: NEW & EXISTING (MILLIONS)



Source: FRED, as of 10/31/22

MONTHLY SUPPLY OF HOMES



Source: FRED, as of 11/30/22

International economics summary

- Economic growth expectations continued to weaken, although the GDP outlook for emerging economies is starting to paint a more optimistic picture. Developed economies, specifically across the Eurozone and United Kingdom, are still facing the negative growth impacts of tighter financial conditions as inflation remains elevated.
 - Inflation in both the Eurozone and U.K. has reinforced tighter policies from the ECB and BOE. While U.K. inflation fell to 10.7% from the 11.1% peak in October, interest rates are expected to be raised further (but in smaller increments). Eurozone inflation has shown signs of moving past its peak, although core inflation hit a new high of 5.2%, stoking fears that inflation may be spreading to core goods and services.
 - Unemployment rates have remained stable over the quarter.
- India stood out as an exception, where unemployment jumped from 6.4% to 8.3%.
- The war in Ukraine carried on despite temporary “ceasefires” declared by Russia. The fighting has intensified in Eastern Ukraine around Kharkiv, with a supporting effort in Southern Ukraine, as Russian forces attempt to secure frontline positioning in the Kherson Oblast.
 - China’s rapid pivot away from a “Zero Covid” policy towards the end of the quarter added a large tailwind to the global growth outlook. Despite this positive news, a rapid uptick in COVID-19 cases challenges the timeline of the reopening story. Additionally, many wonder how a large uptick in global demand might impact inflation pressures at a time when advanced economies struggle specifically to reign in spending.

| Area | GDP (Real, YoY) | Inflation (CPI, YoY) | Unemployment |
|---------------|--------------------|-------------------------|------------------|
| United States | 1.0% 12/31/22 | 6.5% 12/31/22 | 3.5% 12/31/22 |
| Eurozone | 2.3% 9/30/22 | 9.2% 12/31/22 | 6.5% 11/30/22 |
| Japan | 1.5% 9/30/22 | 4.0% 12/31/22 | 2.4% 11/30/22 |
| BRICS Nations | 3.6% 9/30/22 | 3.5% 12/31/22 | 5.2% 12/31/21 |
| Brazil | 3.6% 9/30/22 | 5.8% 12/31/22 | 8.3% 10/31/22 |
| Russia | (3.7%) 9/30/22 | 11.9% 12/31/22 | 3.7% 11/30/22 |
| India | 6.3% 9/30/22 | 5.7% 12/31/22 | 8.3% 12/31/22 |
| China | 3.9% 9/30/22 | 1.8% 12/31/22 | 5.7% 11/30/22 |

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

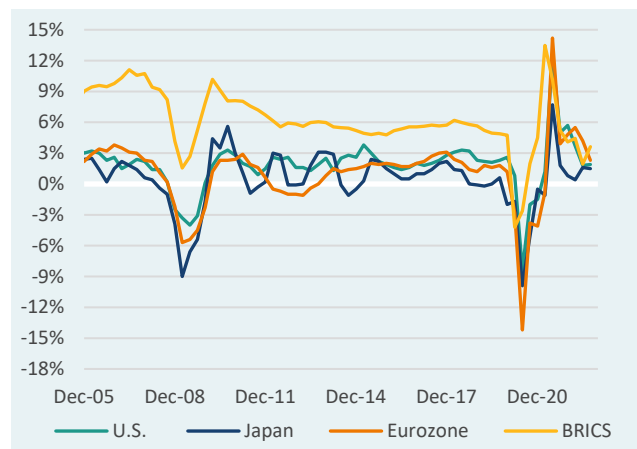
Growth expectations outside of the U.S. contracted over the quarter, with the largest moves coming from developed economies. The IMF cut its GDP forecast by 0.7% and 0.2% for the Eurozone and U.K. in their October outlook (now expecting 2023 GDP of 0.5% and 0.3%, respectively) as the European Central Bank and Bank of England struggle to rein in record high inflation. Japan saw a smaller downward revision of 0.1%, with 2023 growth expectations now at 1.6%.

The outlook for emerging markets is much more optimistic. Most countries have avoided the high inflation seen in developed markets. A rapid reopening of the Chinese economy

is likely providing a tailwind to growth, although the timing remains unclear due to another wave of COVID-19 infections. The 2023 GDP forecast for emerging economies per Bloomberg ticked down from 4.3% to 3.9% over the quarter, but emerging economy growth is still expected to far exceed that of developed economies (developed economy 2023 GDP expectations sit at 0.4%, according to the IMF).

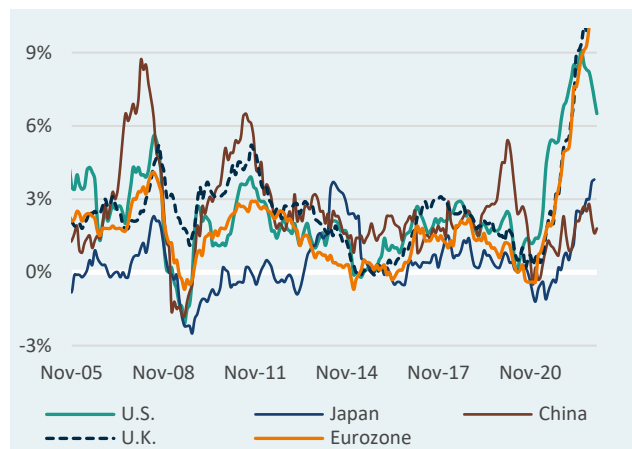
Despite the slowdown in economic growth, employment remains stable amongst the regions we track. India stood out as an exception, where unemployment jumped from 6.4% to 8.3% during Q4.

REAL GDP GROWTH (YOY)



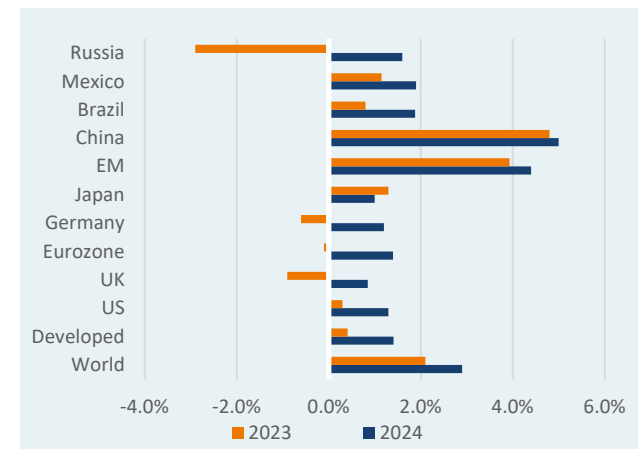
Source: Bloomberg, as of 9/30/22

INFLATION (CPI YOY)



Source: Bloomberg, as of 12/31/22 – or most recent release

ECONOMIC GROWTH FORECASTS



Source: Bloomberg, as of 12/31/22 – or most recent release

Fixed income rates & credit

Fixed income environment

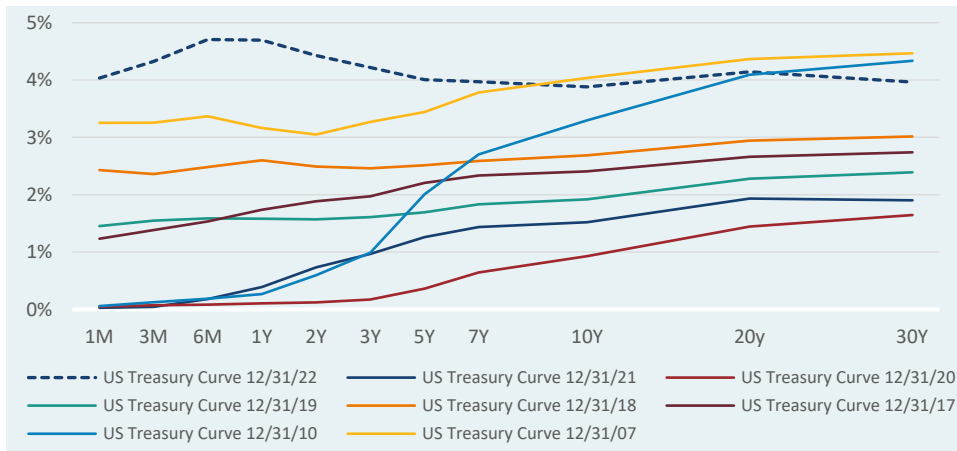
- The 10-year U.S. Treasury yield ended the quarter unchanged at 3.8%. It is possible that long-term interest rates have already reached a cyclical peak, assuming inflation continues to fall and the Federal Reserve becomes less aggressive.
- Credit performance was positive during the fourth quarter, with riskier exposures such as U.S. high yield and emerging market debt (both local and hard currency) leading the pack. Expectations for a slowdown in Federal Reserve rate hikes, and a rosier U.S. economic environment, have provided a tailwind to the credit space.
- Default activity in high yield bonds and bank loans remained subdued during Q4. Throughout the year, 17 companies defaulted totaling \$26.3 billion, with large defaults concentrated in the Healthcare sector which accounted for over 36% of total dollar volume. Default rates for par-weighted U.S. high yield and bank loans remained very low at 0.8% and 1.0%, respectively.
- The U.S. yield curve inversion reached historically negative levels, with the 10-year 2-year yield spread seeing its widest inversion since 1981 (short-term interest rates being higher than long-term interest rates). The negative spread bottomed out at ~81 bps on December 5th before gradually easing during the latter half of the month.
- Derivative markets are beginning to clash with Federal Reserve projections, as investors are pricing in a shorter tightening cycle relative to that indicated by comments from Federal Reserve officials. Federal Funds futures reflect a target interest rate of approximately 4.6% by the end of 2023, which compares to 5.1% indicated by the Federal Reserve's December Summary of Economic Projections.

| | QTD Total Return | 1 Year Total Return |
|---|---------------------|------------------------|
| Core Fixed Income (Bloomberg U.S. Aggregate) | 1.9% | (13.0%) |
| Core Plus Fixed Income (Bloomberg U.S. Universal) | 2.2% | (13.0%) |
| U.S. Treasuries (Bloomberg U.S. Treasury) | 0.7% | (12.5%) |
| U.S. High Yield (Bloomberg U.S. Corporate HY) | 4.2% | (11.2%) |
| Bank Loans (S&P/LSTA Leveraged Loan) | 2.7% | (0.6%) |
| Emerging Market Debt Local (JPM GBI-EM Global Diversified) | 8.5% | (11.7%) |
| Emerging Market Debt Hard (JPM EMBI Global Diversified) | 8.1% | (17.8%) |
| Mortgage-Backed Securities (Bloomberg MBS) | 2.1% | (11.8%) |

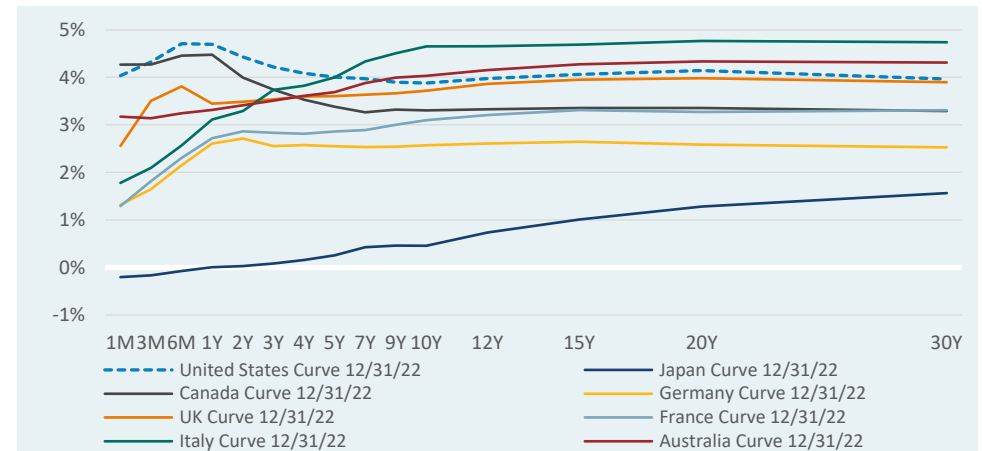
Source: Bloomberg, as of 12/31/22

Yield environment

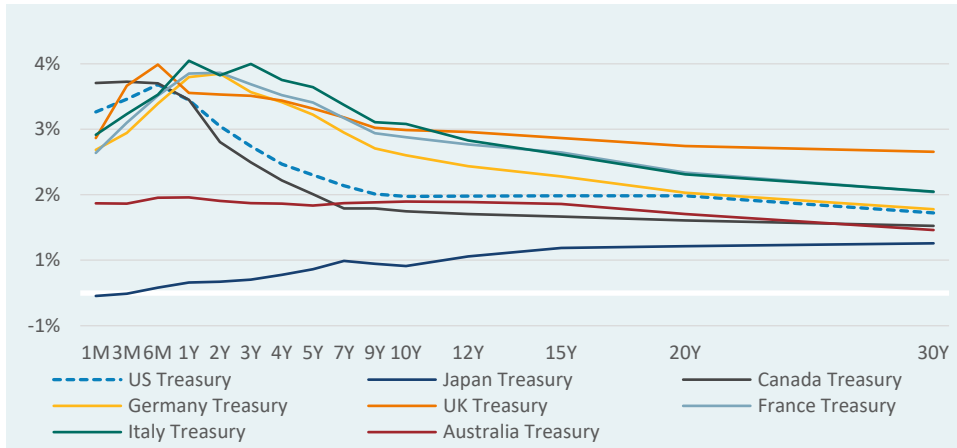
U.S. YIELD CURVE



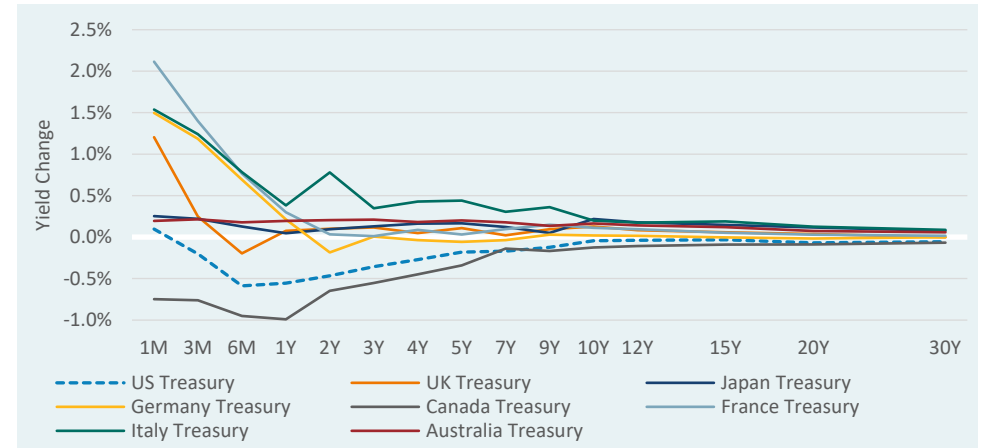
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



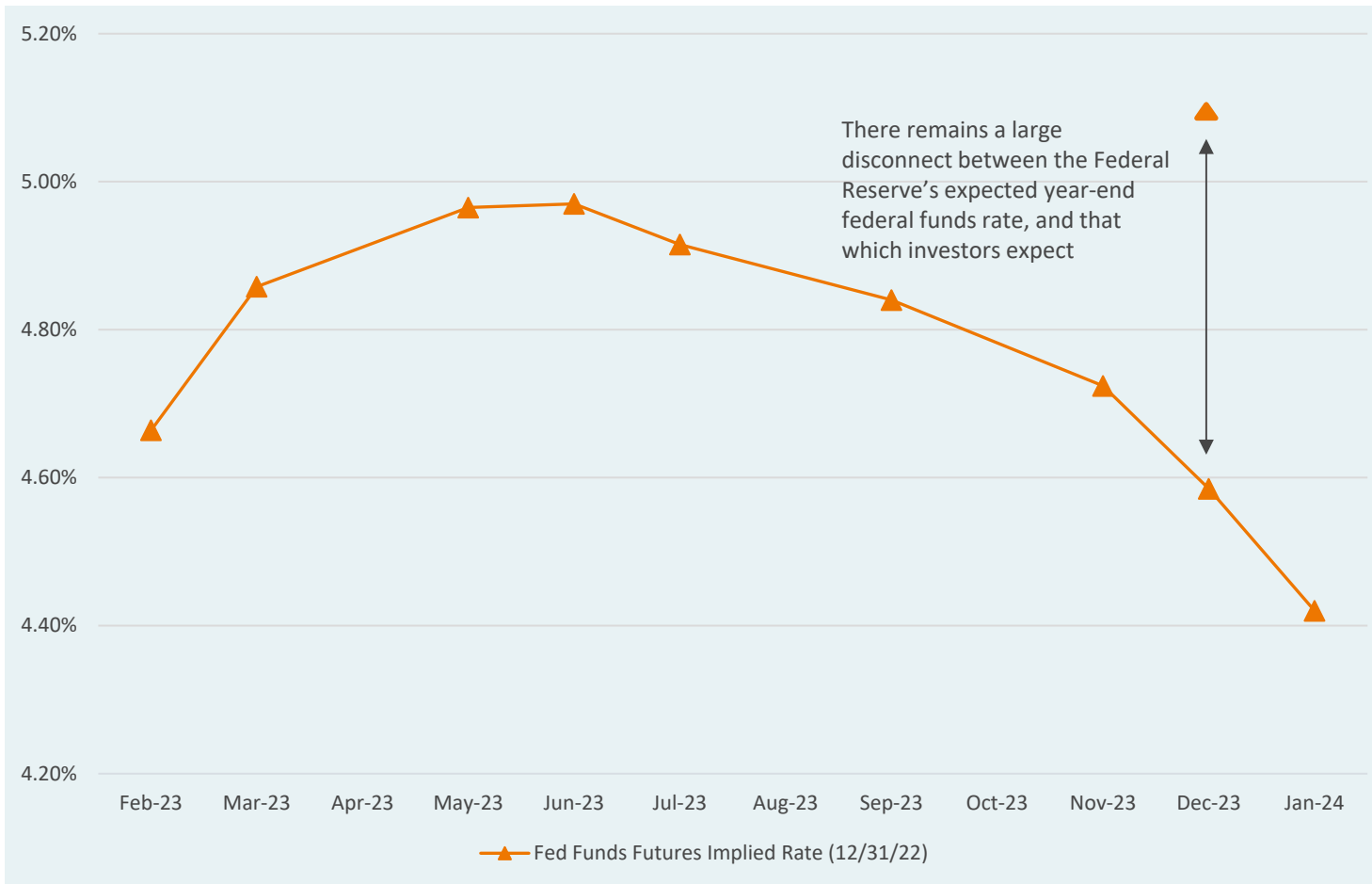
IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 12/31/22

Markets more optimistic than the Fed

FED FUNDS FUTURES IMPLIED FED RATE



Markets expected the federal funds rate to rise to a peak of near 5.0% in Spring of 2023, followed by rate cuts throughout the remainder of the year

This contrasts sharply with forecasts from the Federal Reserve, which indicates a federal funds rate projection for the end of 2023 of **5.1%**

Source: Bloomberg, as of 12/31/22

Credit environment

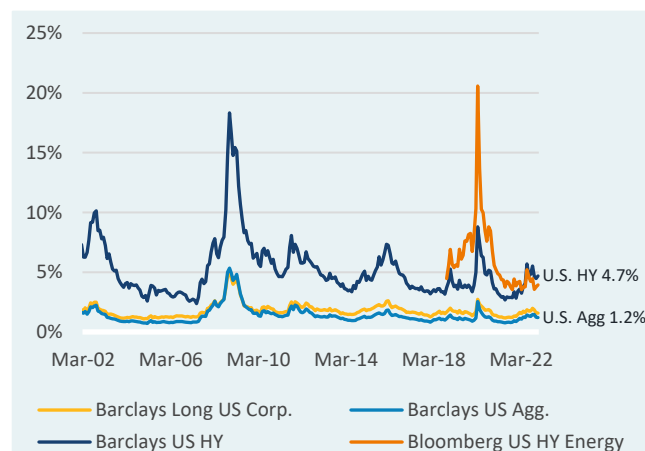
During the fourth quarter, markets began pricing in an eventual end to the Federal Reserve rate hiking cycle. This supported the performance of credit assets, as well as stronger-than-expected U.S. economic data which helped alleviate recession fears. High yield credit returns led the way with 4.2%, followed by 3.6% from investment grade credit and 2.3% from bank loans.

Credit spreads broadly tightened, with investment grade spreads falling to 130 bps from their high of 165 bps in Q3. High yield spreads compressed further, moving from 552 bps to 469 bps over the quarter. Despite calendar year returns of investment grade credit being the worst on record at -15.8%, and two consecutive years of negative returns, spreads have

widened less than anticipated. This suggests spreads could expand from these levels if conditions deteriorate.

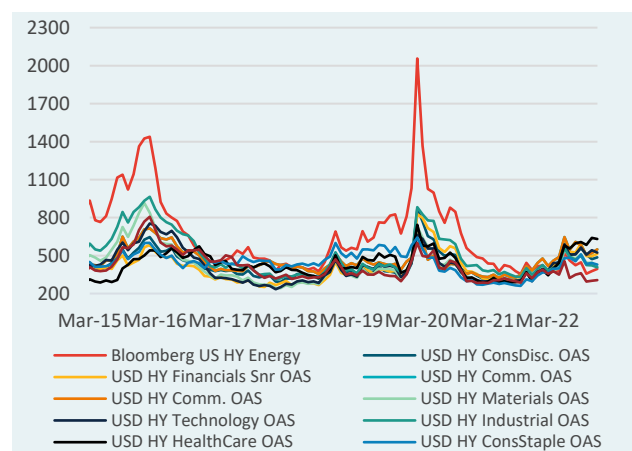
The total yield of high yield credit declined modestly throughout Q4, ending the quarter at 9.0%, which was 71 bps below Q3 yields but still elevated far above yields to start 2022. The Bloomberg US Corporate Investment Grade Index saw similar movement, with yields declining to 5.4% from 5.7% during the quarter, though still significantly higher than 2.4% to start the year. More attractive yield levels have the potential to drive demand for fixed income broadly, though concerns around growth and recession may act as headwinds to the spread-sensitive performance of higher risk credit.

SPREADS



Source: Barclays, Bloomberg, as of 12/31/22

HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 12/31/22

| Market | Credit Spread (OAS) | |
|---------------------|---------------------|----------|
| | 12/31/22 | 12/31/21 |
| Long U.S. Corp | 1.6% | 1.3% |
| U.S. Inv Grade Corp | 1.3% | 0.9% |
| U.S. High Yield | 4.7% | 2.8% |
| U.S. Bank Loans* | 5.9% | 4.3% |

Source: Barclays, Credit Suisse, Bloomberg, as of 12/31/22

*Discount margin (4-year life)

Default & issuance

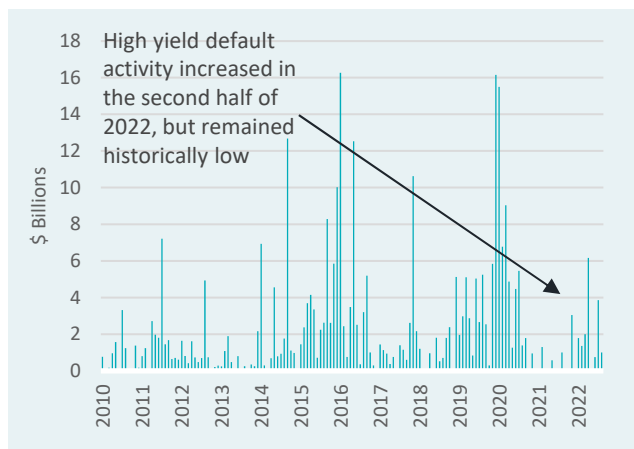
Default activity in high yield bonds and bank loans remained subdued during Q4. Throughout the year, 17 companies defaulted totaling \$26.3 billion, with large defaults concentrated in the Healthcare sector which accounted for over 36% of total dollar volume. Default rates for par-weighted U.S. high yield and bank loans remained very low at 0.8% and 1.0%, respectively. While these levels are well below long-term historical averages, defaults are widely expected to increase amid sustained higher interest rates, tighter financial conditions, and weaker economic growth.

Default recovery rates of high yield and bank loans remained strong for a second consecutive year. High yield recovery rates ended the year at 55% (above the long-term average of 40%) while the recovery rate of bank loans

ended the year at 58% (below the long-term average of 64%).

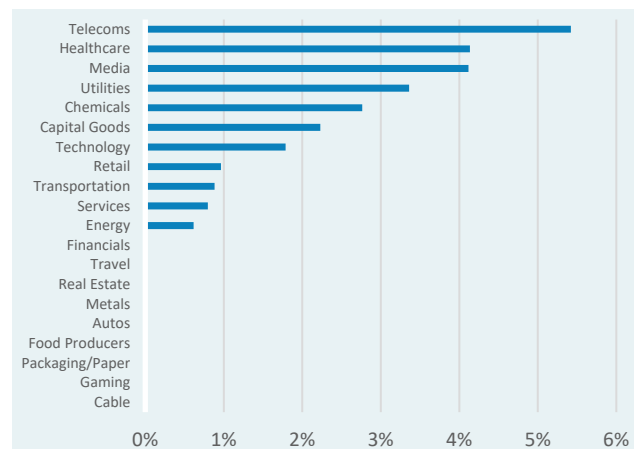
Investment grade credit issuance remained light, with \$195 billion of issuance in Q4 being the lowest quarter of the year. During 2022, \$1.2 trillion of investment grade bond issuance was 12% lower than 2021 but still in line with the past five-year average. Levered credit also saw quarterly lows of issuance, with \$16.5 billion and \$47.6 billion in the high yield and levered loan spaces, respectively. The year-over-year declines in issuance within high yield and bank loans have been dramatic, down around 70% since 2021.

U.S. HY MONTHLY DEFAULTS (PAR WEIGHTED)



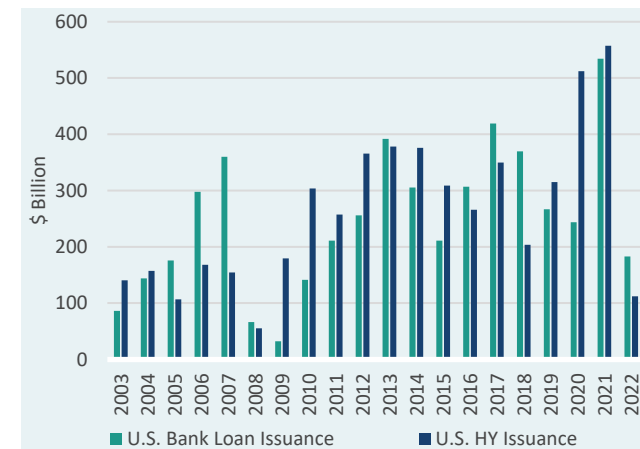
Source: BofA Merrill Lynch, as of 12/31/22

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



Source: BofA Merrill Lynch, as of 12/31/22 – par weighted

U.S. ISSUANCE (\$ BILLIONS)



Source: BofA Merrill Lynch, as of 12/31/22

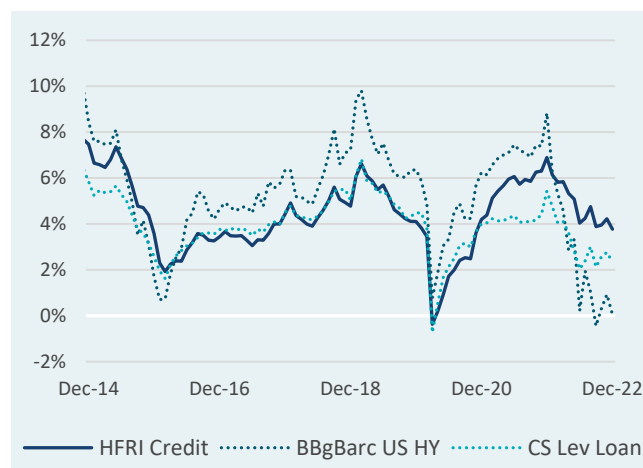
Alternative credit

Credit hedge fund strategies held up well in 2022 despite continued pressure on high yield and duration-sensitive assets. The HFRI Credit Index, which typically delivers performance between that of high yield and bank loans, only lost -2.6% for the year despite widening credit spreads and exposure to duration (which has been very painful for traditional credit).

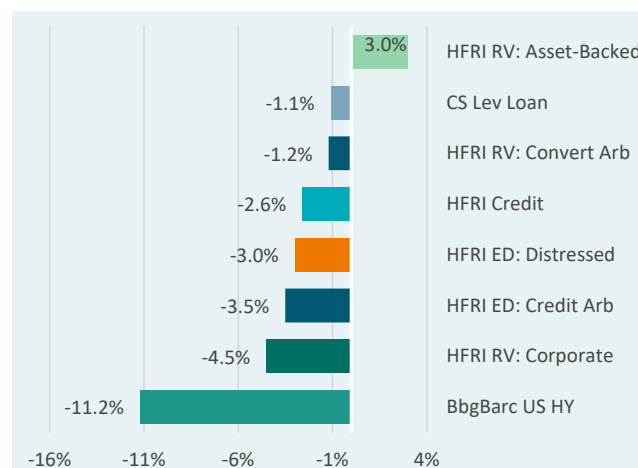
Looking more closely at hedge fund credit, asset-backed strategies were the strongest performers throughout the year. These strategies gained 3% while most other alternative credit funds were modestly negative, in line with bank loans.

We believe asset-backed and distressed strategies remain the most interesting in the space. Asset-backed funds have found attractive yields in off-the-run securitized credit markets, while distressed funds benefited from value investing coming back into favor, and increasing corporate stress which provides new trading opportunities.

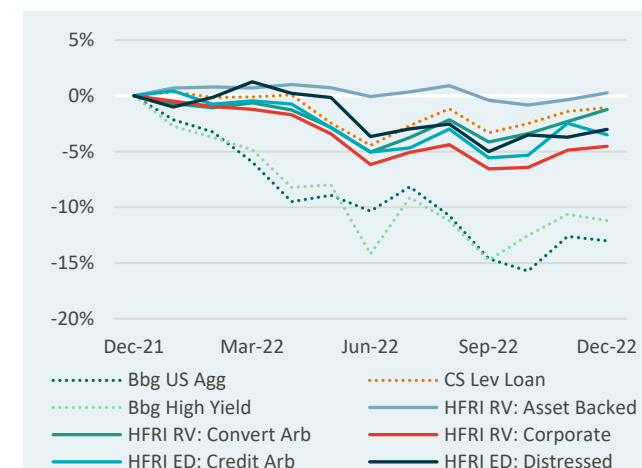
3-YEAR ROLLING RETURN



2022 RETURN



2022 CUMULATIVE RETURN



Source: MPI, Morningstar, HFR, Bloomberg, as of 12/31/22

Equity

Equity environment

- U.S. equities delivered their only positive quarterly return of 2022 during Q4 (S&P 500 +7.6%), helping to dampen the index's worst calendar year performance since 2008 (-18.1% loss in 2022). Higher interest rates and recession fears contributed to poor returns.
- U.S. corporate earnings in Q3 grew 2.4% from the year prior, marking the slowest rate of growth since Q3 2020. Per FactSet, earnings are projected to decline by -4.1% in Q4, which would mark the first decline in U.S. earnings since 2020.
- Many equity markets now trade at valuation levels near historical averages as rising rates and growth concerns have contributed to more attractive pricing. The S&P 500 forward P/E ratio of 18.3 (as of November 30th) is under the five-year average of 18.6 and the ten-year average of 20.2.
- Currency movements continued to create portfolio volatility for investors with unhedged exposure to foreign currencies. The U.S. dollar depreciated sharply during Q4 which resulted in a large gain of 7.6% for investors with unhedged foreign currency exposure (+17.3% MSCI EAFE unhedged, +9.7% MSCI EAFE hedged).
- Value stocks outpaced growth stocks by 10.2% in Q4 and by 21.6% for the year. Energy, industrials, and materials—sectors which are heavily tilted toward value—showed strong returns, with energy ending the year up 64.6%.
- Implied volatility fell significantly over the quarter, as the Cboe VIX Index moved from 31.6 to 21.7. Equity markets advanced on cooling inflation, potential for less aggressive central bank action, and perhaps optimism around China's reopening.

| | QTD TOTAL RETURN | | 1 YEAR TOTAL RETURN | |
|--|------------------|----------|---------------------|----------|
| | (unhedged) | (hedged) | (unhedged) | (hedged) |
| U.S. Large Cap (S&P 500) | 7.6% | | (18.1%) | |
| U.S. Small Cap (Russell 2000) | 6.2% | | (20.4%) | |
| U.S. Equity (Russell 3000) | 7.2% | | (19.2%) | |
| U.S. Large Value (Russell 1000 Value) | 12.4% | | (7.5%) | |
| US Large Growth (Russell 1000 Growth) | 2.2% | | (29.1%) | |
| Global Equity (MSCI ACWI) | 9.8% | 7.6% | (18.4%) | (15.5%) |
| International Large (MSCI EAFE) | 17.3% | 9.7% | (14.5%) | (4.6%) |
| Eurozone (EURO STOXX 50) | 24.8% | 15.7% | (15.1%) | (7.0%) |
| U.K. (FTSE 100) | 17.1% | 9.3% | (7.0%) | 5.9% |
| Japan (NIKKEI 225) | 11.3% | 1.4% | (18.9%) | (5.2%) |
| Emerging Markets (MSCI Emerging Markets) | 9.7% | 6.7% | (20.1%) | (16.3%) |

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 12/31/22

Domestic equity

U.S. equities notched their only positive quarterly return for the year during Q4 (S&P 500 +7.6%), helping to dampen the index's worst annual performance since 2008 (-18.1% loss in 2022). Domestic shares were negatively impacted by higher interest rates and growing recession fears due to tightening from the Federal Reserve. While performance over the quarter was positive, U.S. equities trailed emerging market and international developed equities.

Earnings in the third quarter grew 2.4% from the year prior, marking the slowest rate of growth since Q3 2020. Energy dominated the narrative,

as earnings grew an incredible 137% from the previous year. U.S. energy companies experienced margin expansion due to materially higher commodity prices, specifically within oil and natural gas. Per FactSet, earnings are projected to decline by -4.1% in Q4, which would mark the first decline in U.S. earnings since 2020. A potential recession could pose challenges for the earnings outlook.

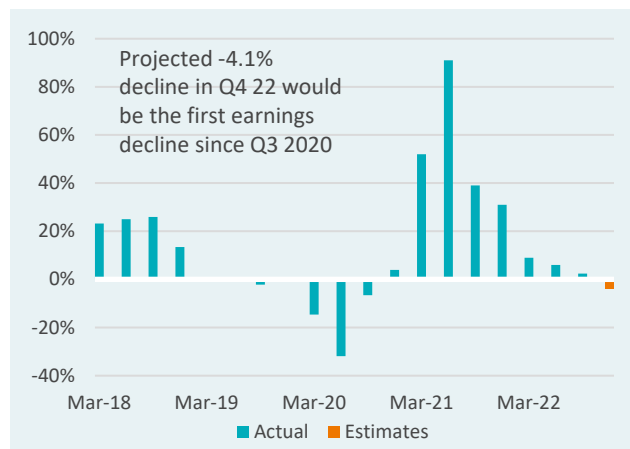
Energy dominated sector performance in the quarter (+22.8), leading the positive performance seen in most sectors, while telecommunications (-1.4%) and consumer discretionary (-10.2%) saw negative returns.

S&P 500 PRICE INDEX



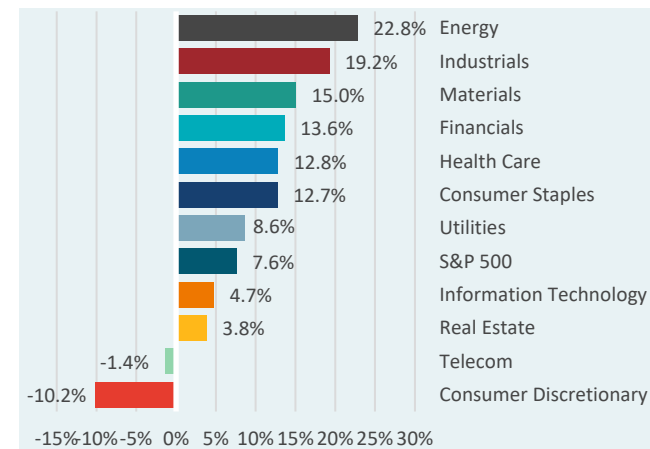
Source: Standard & Poor's, as of 12/31/22

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



Source: FactSet, as of 12/31/22

Q4 SECTOR PERFORMANCE



Source: Morningstar, as of 12/31/22

Domestic equity size & style

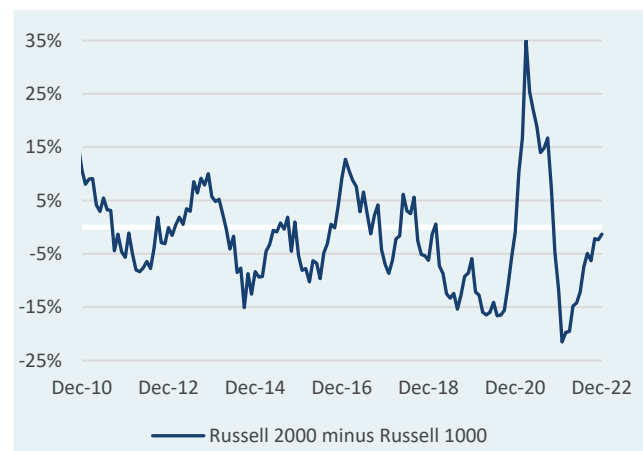
Value stocks outpaced growth stocks by 10.2% in Q4 and by 21.6% for the year. Energy, industrials, and materials—sectors which are heavily tilted toward value—showed strong returns, with the energy sector ending the year up 64.6%.

Markets adjusted to Federal Reserve rate hikes in the fourth quarter and throughout the year. Profitless and high-growth companies suffered the most as investors favored higher yielding fixed income and preferred stocks with strong fundamentals.

Small capitalization stocks underperformed large capitalization stocks (Russell 2000 +6.2%, Russell 1000 +7.2%), and remain relatively rich in valuations despite recent performance pain.

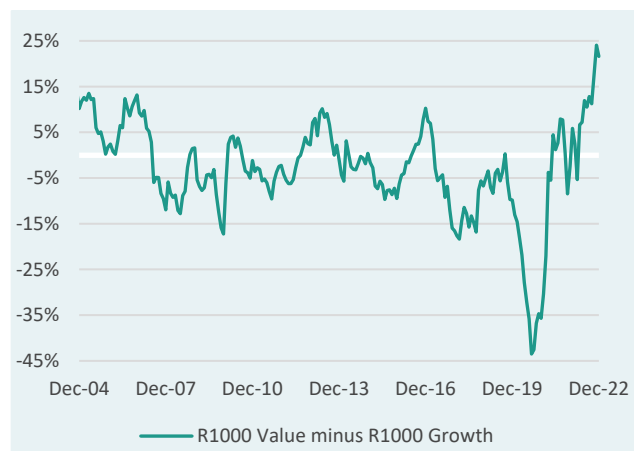
Domestic equities made a modest recovery in Q4 as inflation appears to have peaked and the end of the Fed's hiking cycle is in sight. These dynamics will likely help determine the relative performance of style factors in the near-term.

SMALL CAP VS LARGE CAP (YOY)



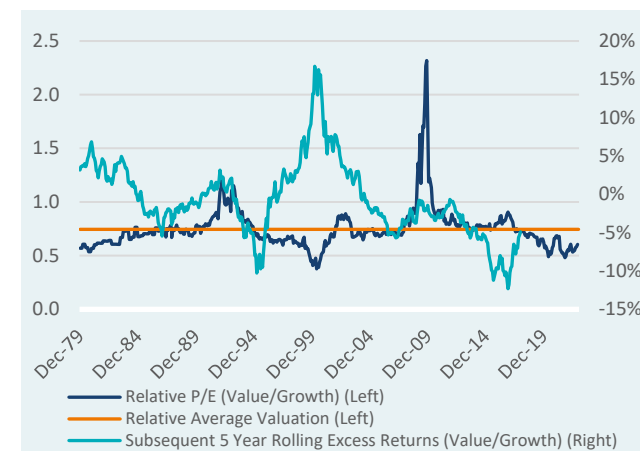
Source: FTSE, as of 12/31/22

VALUE VS GROWTH (YOY)



Source: FTSE, as of 12/31/22

VALUE VS. GROWTH RELATIVE VALUATIONS



Source: FTSE, Bloomberg, as of 12/31/22

International developed equity

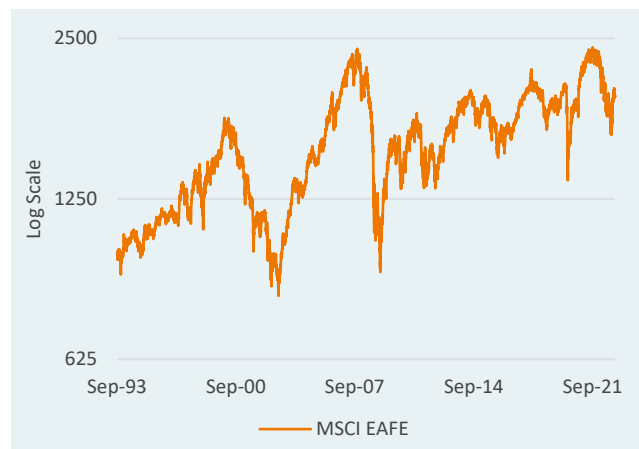
International developed equities rallied significantly in the fourth quarter, driven by strong gains from Eurozone equities and favorable currency movements. The MSCI EAFE Index finished the quarter up 17.3% on an unhedged currency basis, handily outperforming emerging market and U.S. equities.

A bounce back from European shares helped drive the double-digit returns seen from the MSCI EAFE Index. Investors showed preference towards larger names, as the EURO STOXX 50—a gauge of the largest companies in the

Eurozone—rose 24.8%, outpacing the 19.7% gain from the broader EURO STOXX 600 Index. Both indices were trading at 2022 lows at the start of the fourth quarter.

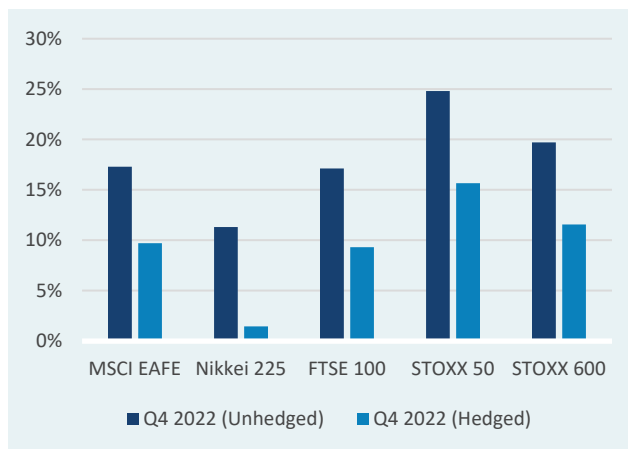
Currency movements played a large role in unhedged Eurozone performance and also boosted the unhedged returns of Japan and the United Kingdom. The U.S. dollar sharply pivoted on market views that the Federal Reserve may follow a shorter tightening cycle. As a result, exchange rates for the Euro, Pound, and Yen appreciated relative to the greenback.

INTERNATIONAL DEVELOPED EQUITY



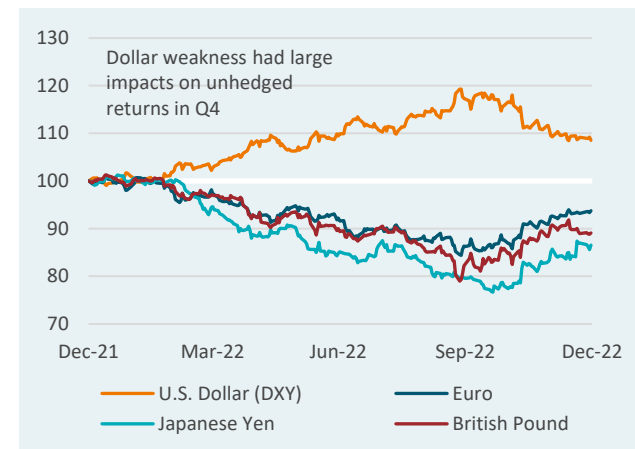
Source: MSCI, as of 12/31/22

Q4 2022 REGIONAL INDEX RETURNS



Source: MSCI, STOXX, FTSE, Nikkei, as of 12/31/22

2022 CURRENCY MOVEMENTS (BASE OF 100)



Source: Bloomberg, as of 12/31/22

Emerging market equity

Emerging market equities advanced alongside global equities as the MSCI EM Index finished the quarter up 9.7%. Performance was volatile over the quarter, as losses in October were parred by a 13.2% rally over November and December. Despite the rally to close out the year, the index still ended down -20.1%, underperforming both international developed and U.S. equity benchmarks.

Returns in the fourth quarter were driven by gains in Chinese equities, which jumped following a rapid pivot away from the Chinese Communist Party's "Zero Covid" policy. While

Chinese shares still dominate the index (around 30%), strong performance from countries with smaller weights also played a large role.

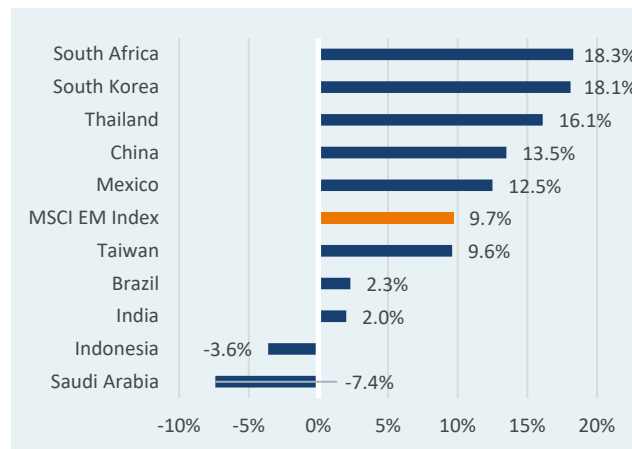
Indian shares, which hold the second largest weight in the index, acted as a drag on returns during the quarter but still ended in positive territory. Despite a modest 2.0% quarterly gain, the Indian market was one of the best performers of 2022, finishing the year down -8.0%. This compared to double-digit losses from other regional indices.

EMERGING MARKET EQUITY



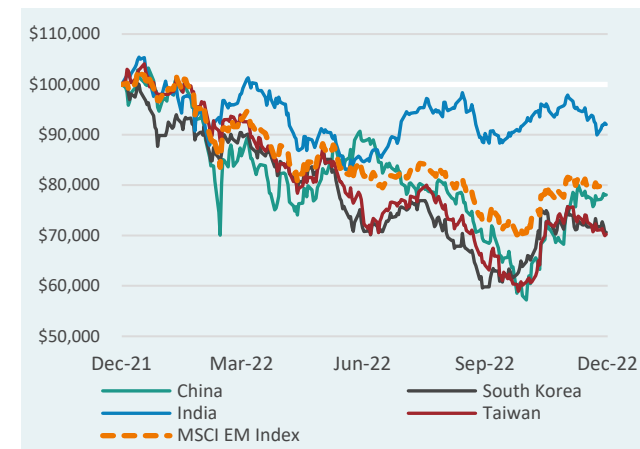
Source: MSCI, as of 12/31/22

Q4 2022 MSCI COUNTRY RETURNS (USD)



Source: Bloomberg, MSCI, as of 12/31/22

GROWTH OF \$100K IN 2022 (EM WEIGHTS >10%)



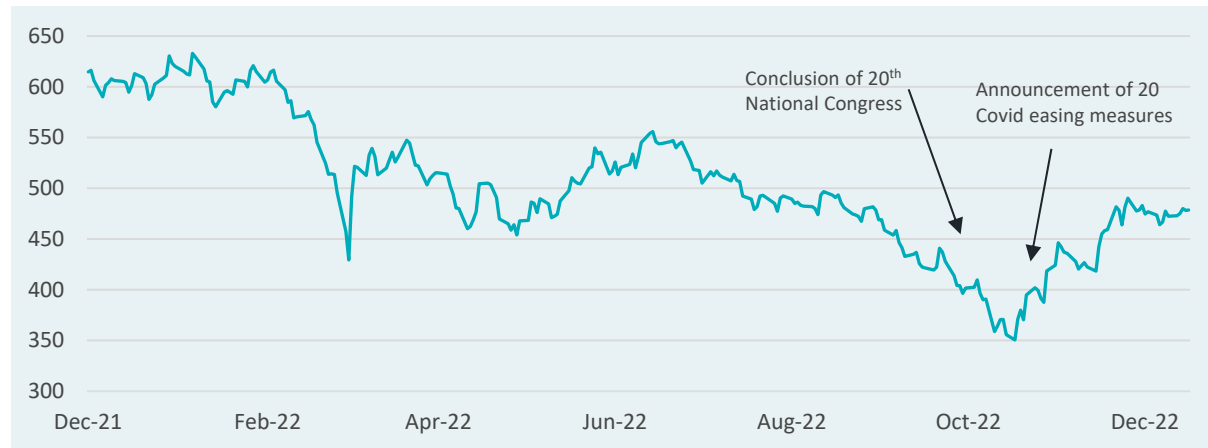
Source: Bloomberg, MSCI, as of 12/31/22 - performance in USD

Recent developments in China

China has continued to make global headlines, though two stories seemed to dominate the narrative. First, the 20th National Congress of the Chinese Communist Party (CCP) resulted in greater concentration of power and an unprecedented third-term for CCP General Secretary Xi Jinping. Second, China communicated a sharp reversal of its “Zero Covid” policy, as the government swiftly reopened major cities from stringent lockdowns, which has contributed to a new wave of COVID-19 cases.

Chinese equity markets dropped sharply following the 20th National Congress, but quickly reversed course following a string of economic reopening announcements. Markets moved even higher during the latter half of the quarter, fueled by the reopening story and prospects for easier monetary and fiscal policy relative to the rest of the world. While the reopening of the world’s largest economy presents a tailwind to economic growth, concerns remain around the timeline of recovery, the net impact of eased supply chains and increased global demand, as well as the new concentration of power within the government.

MSCI CHINA INDEX (USD)



Source: Bloomberg, as of 12/31/22

CHINESE LEADERSHIP SINCE MAO ZEDONG

| Leader | Electing Central Committee |
|-------------|----------------------------|
| Mao Zedong | 6th (1928 - 1945) |
| | 7th |
| | 8th |
| | 9th |
| | 10th (1973 - 1977) |
| Hua Guofeng | 11th (1977 - 1982) |
| Hu Yaobang | 11th (1977 - 1982) |
| | 12th (1982 - 1987) |
| Zhao Ziyang | 12th (1982 - 1987) |
| | 13th (1987 - 1992) |
| Jiang Zemin | 13th (1987 - 1992)* |
| | 14th (1992 - 1997) |
| | 15th (1997 - 2002) |
| Hu Jintao | 16th (2002 - 2007) |
| | 17th (2007 - 2012) |
| Xi Jinping | 18th (2012 - 2017) |
| | 19th (2017 - 2022) |
| | 20th (2022 - 2027) |

*Replaced Zhao Ziyang mid-term in 1989

First third-term election since Mao Zedong

Equity valuations

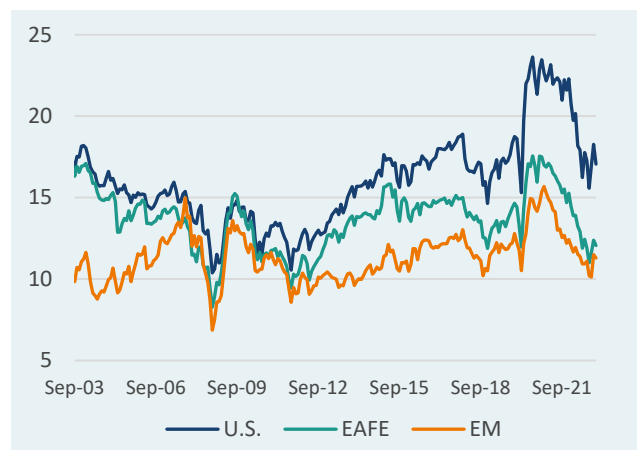
Many markets now trade at valuation levels near their historical average as inflation and rising interest rates have brought prices down. The S&P 500 forward P/E ratio of 17.1 is below the five- and ten-year averages of 18.6 and 20.2, respectively. The Federal Reserve remains in focus for U.S. investors as valuations over the past decade have been lifted by low interest rates. International equity valuations are depressed but may be further challenged by inflation and recession. Emerging market equities appear to be poised for a strong recovery, given a more positive growth outlook, and

as China's reopening could improve fundamentals and bring the asset class back into favor.

International developed equities remain inexpensive relative to U.S. equities, but developed markets face significant long-term headwinds. In Q4, gains in the Euro and Yen and an easing energy crisis boosted international developed equity returns, but high inflation, high debt and low growth in Japan, poor demographics, and a hawkish ECB make for a challenged long-term outlook.

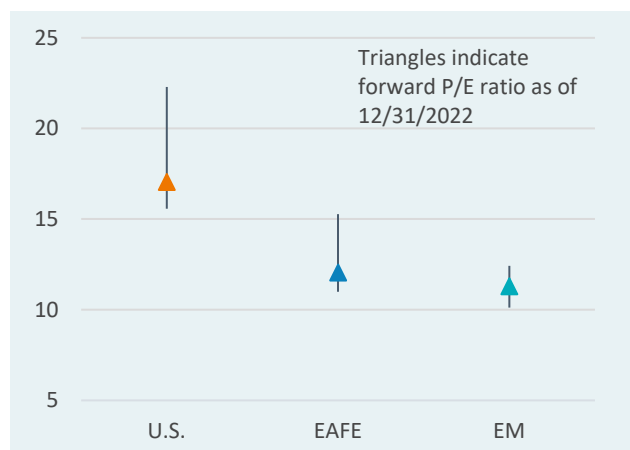
International developed equities remain extremely cheap relative to U.S. markets

FORWARD P/E RATIOS



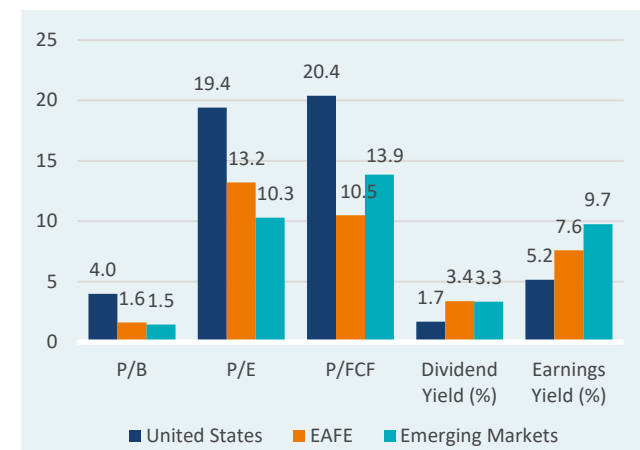
Source: MSCI, 12m forward P/E, as of 12/31/22

FORWARD P/E RATIO RANGES (DURING 2022)



Source: MSCI, 12m forward P/E, as of 12/31/22

VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, MSCI, as of 12/31/22 - trailing P/E

Equity volatility

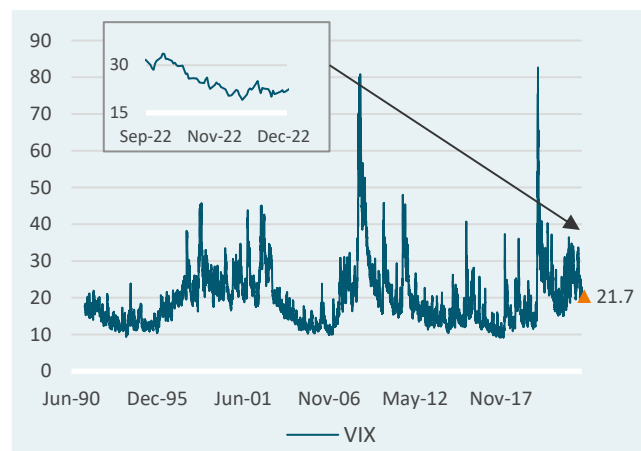
Implied volatility fell significantly over the quarter. The Cboe VIX Index moved from 31.6 to 21.7. Equity markets advanced on cooling inflation, potential for less aggressive central bank action, and perhaps optimism around China's reopening.

In contrast, realized volatility increased from the prior quarter. Volatility rose across S&P 500, MSCI EAFE, and MSCI EM Indices. Realized volatility in the domestic market remained the highest—a trend consistent with last quarter—as markets swung around inflation prints, two Federal

Reserve interest rate decisions, and growing concerns over a potential 2023 recession.

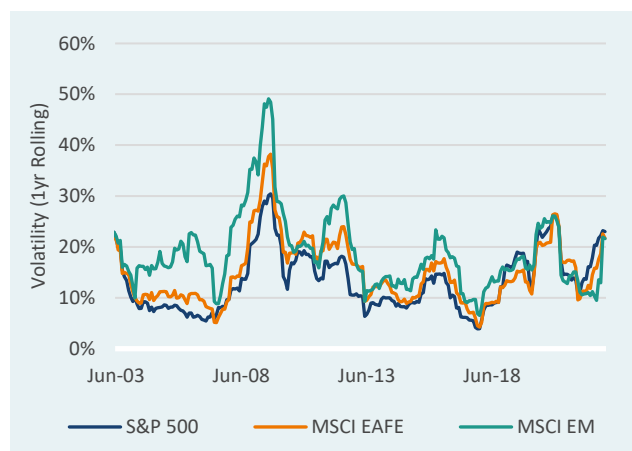
Historically speaking, the S&P 500 delivered exceptionally poor performance in line with some of the worst of the index's history. Looking all the way back to 1929, this year was the seventh worst in the index's history and the worst calendar year performance since 2008.

U.S. IMPLIED VOLATILITY (VIX)



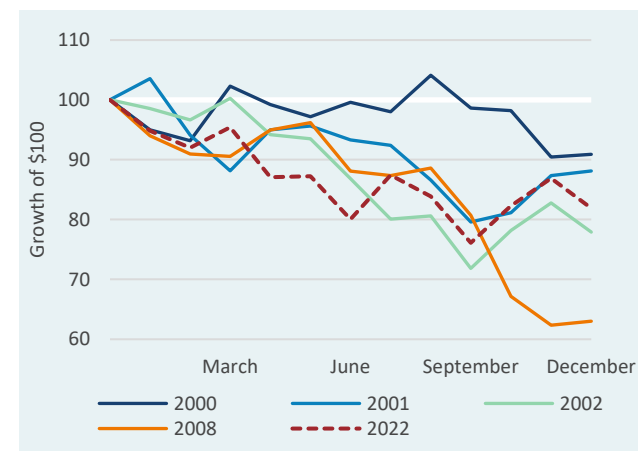
Source: Cboe, as of 12/31/22

REALIZED VOLATILITY



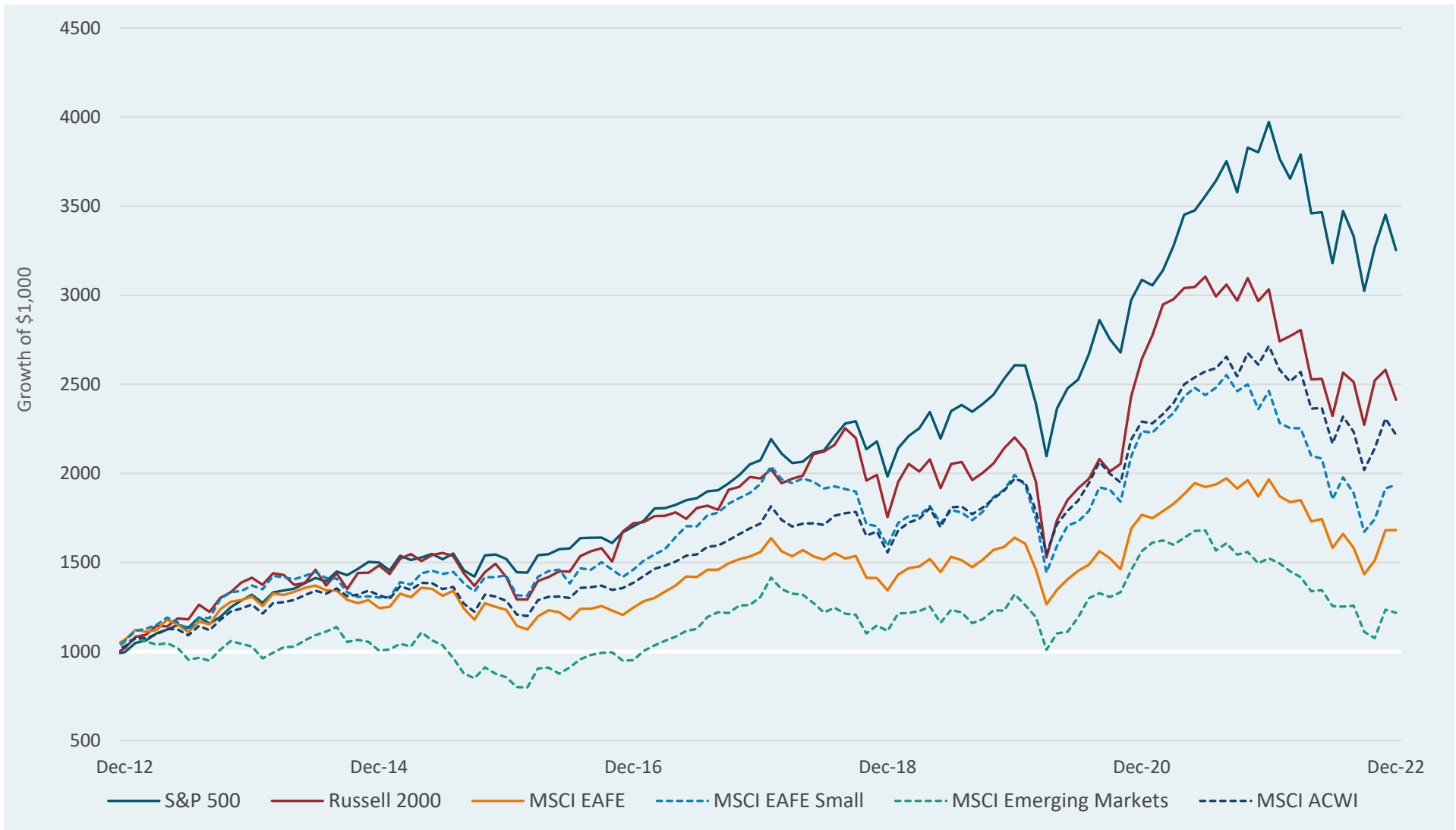
Source: S&P, MSCI, as of 12/31/22

S&P 500 FIVE WORST YEARS SINCE 1988



Source: S&P, Bloomberg, as of 12/31/22 – since 1988

Long-term equity performance



Source: MPI, as of 12/31/22

Other assets

Currency

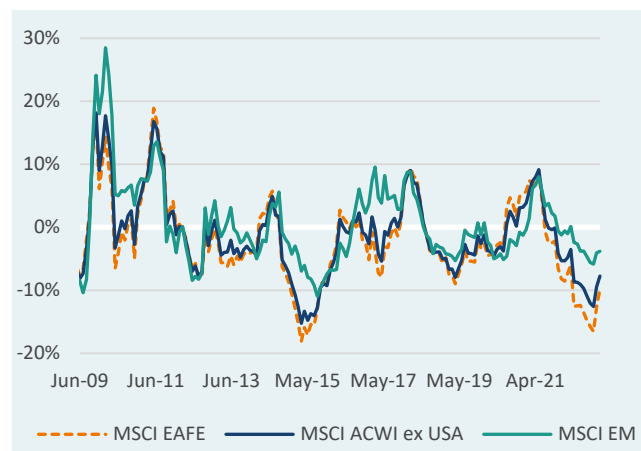
Currency volatility has translated to much higher portfolio volatility for investors with unhedged exposure to foreign currencies. The U.S. dollar depreciated relative to major currencies during the fourth quarter which resulted in large gains for investors with unhedged foreign currency exposure. These currency gains amounted to 7.6% for investors with unhedged exposure to the MSCI EAFE Index (+17.3% MSCI EAFE unhedged, +9.7% MSCI EAFE hedged).

U.S. dollar strength of 2022 was reversed in Q4 as markets began pricing in a shorter Federal Reserve tightening cycle. Expectations for lower rates in the U.S., combined with an ongoing struggle to control high inflation (and therefore tighter financial policies from respective central banks)

within developed economies, likely played a major role in the U.S. dollar sell-off.

Despite currency gains seen this quarter, we believe that a thoughtful currency program may allow an investor to reduce their total portfolio risk while also increasing long-term expected returns. The MSCI Currency Factor Mix Index—a representation of a passive investment in the currency market—has shown a positive one-year rolling return over most periods with very low volatility. This contrasts to the unhedged currency exposure (what we refer to as “embedded currency”) that most investors own, which has shown high volatility and frequent losses.

EFFECT OF CURRENCY (1-YEAR ROLLING)



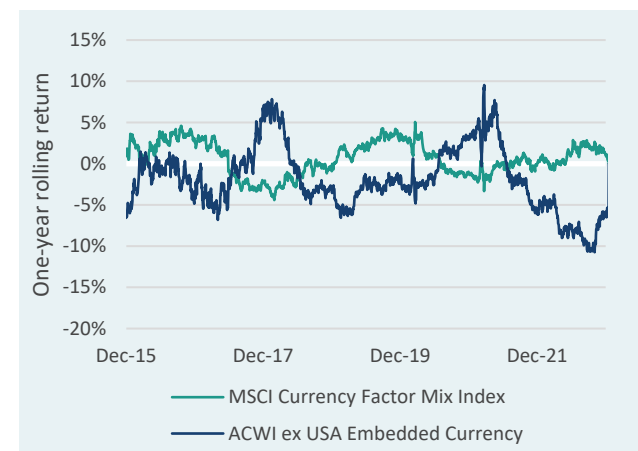
Source: MSCI, as of 12/31/22

BLOOMBERG DOLLAR SPOT INDEX



Source: Bloomberg, as of 12/31/22

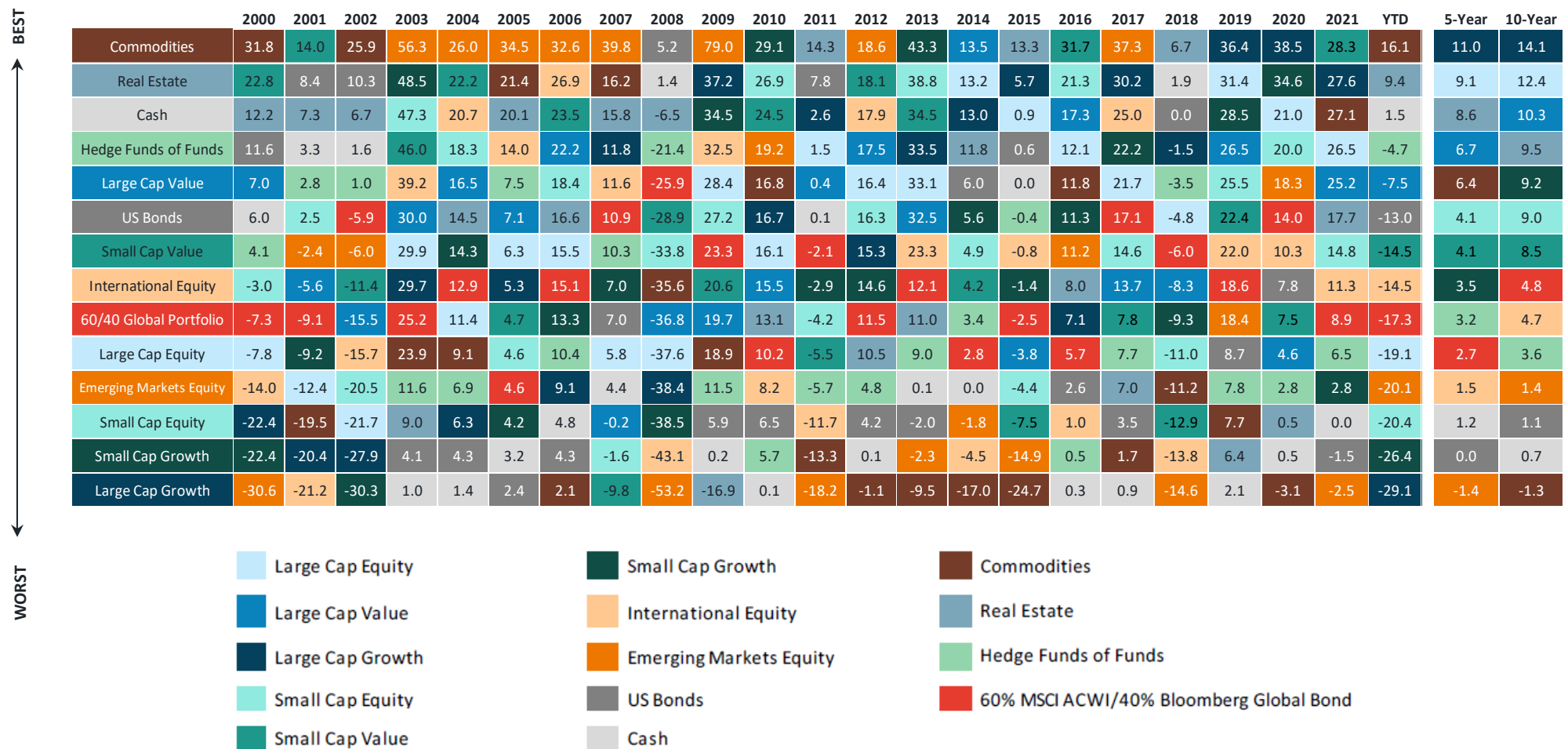
EMBEDDED CURRENCY VS CURRENCY FACTORS



Source: Bloomberg, as of 12/31/22

Appendix

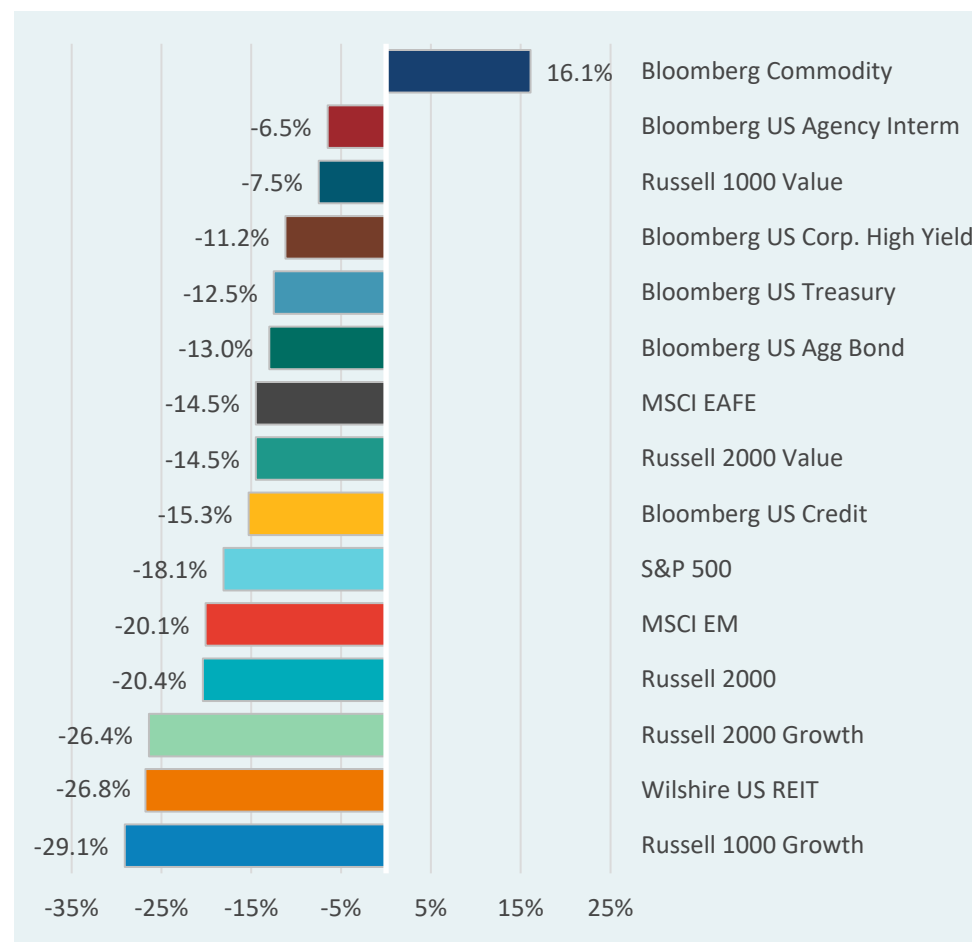
Periodic table of returns



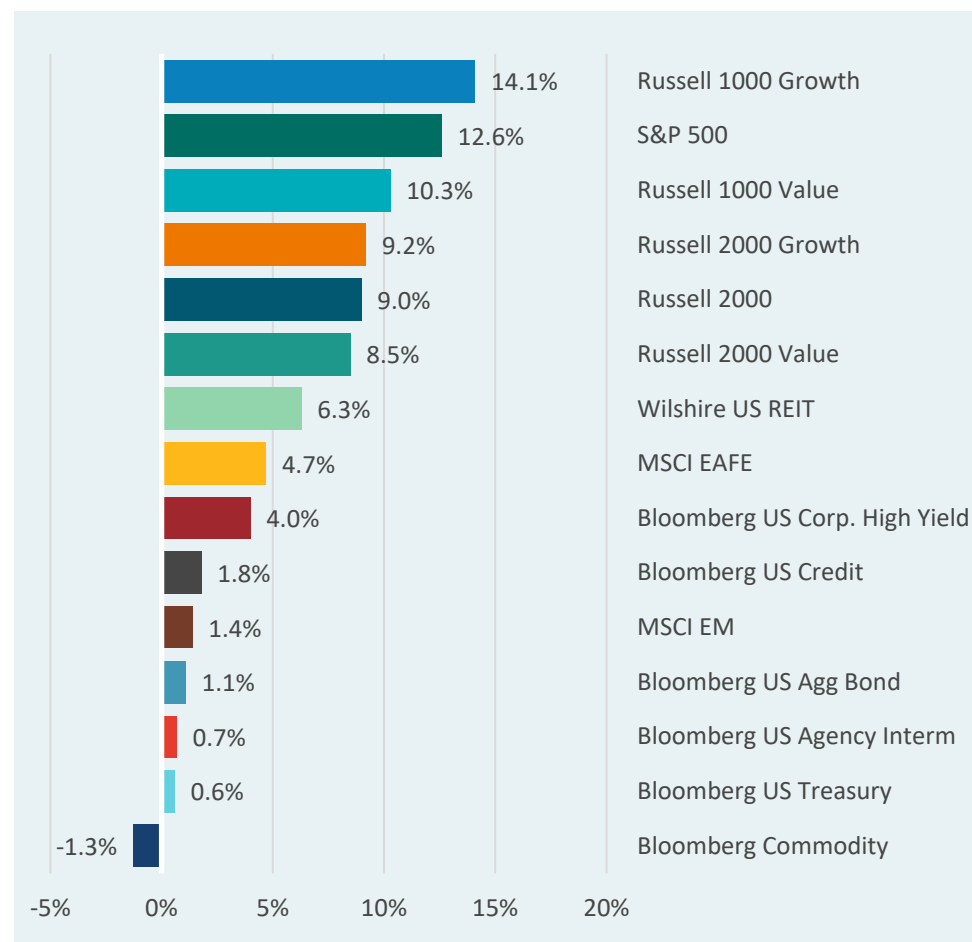
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, Bloomberg US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, Bloomberg Global Bond as of 12/31/22. NCREIF Property Index performance data as of 9/30/22.

Major asset class returns

ONE YEAR ENDING DECEMBER



TEN YEARS ENDING DECEMBER



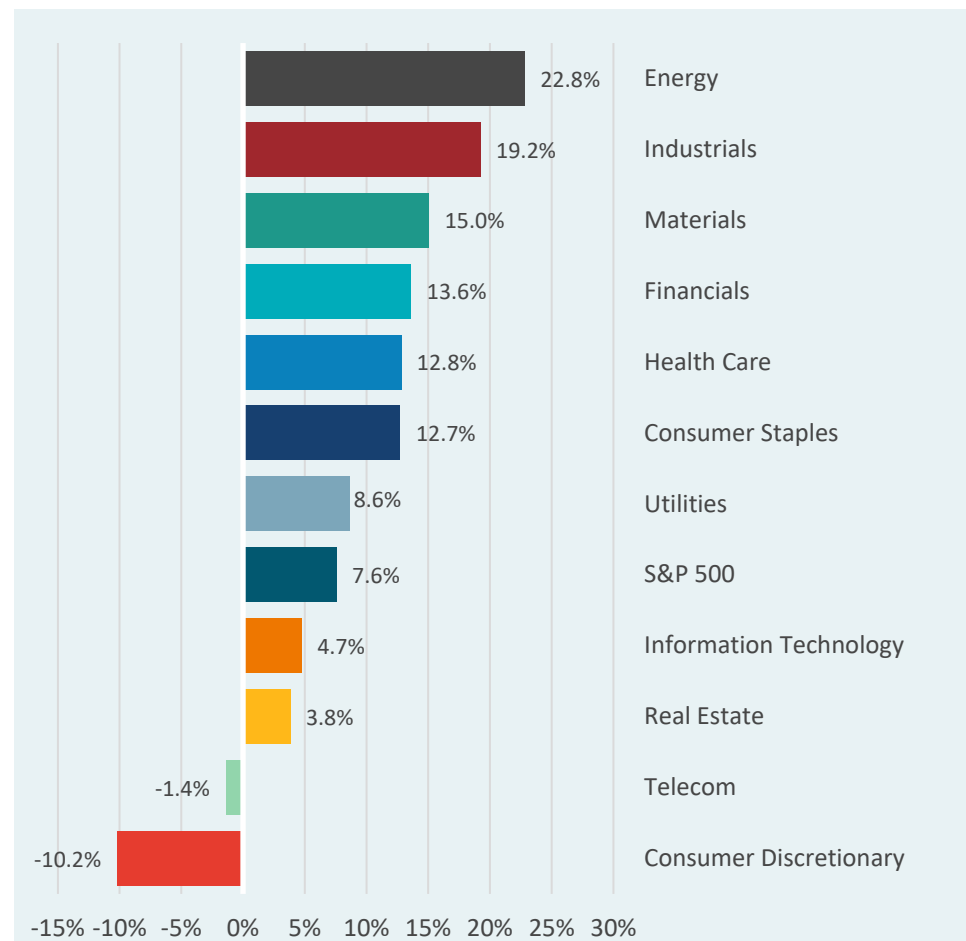
*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

Source: Morningstar, as of 12/31/22

Source: Morningstar, as of 12/31/22

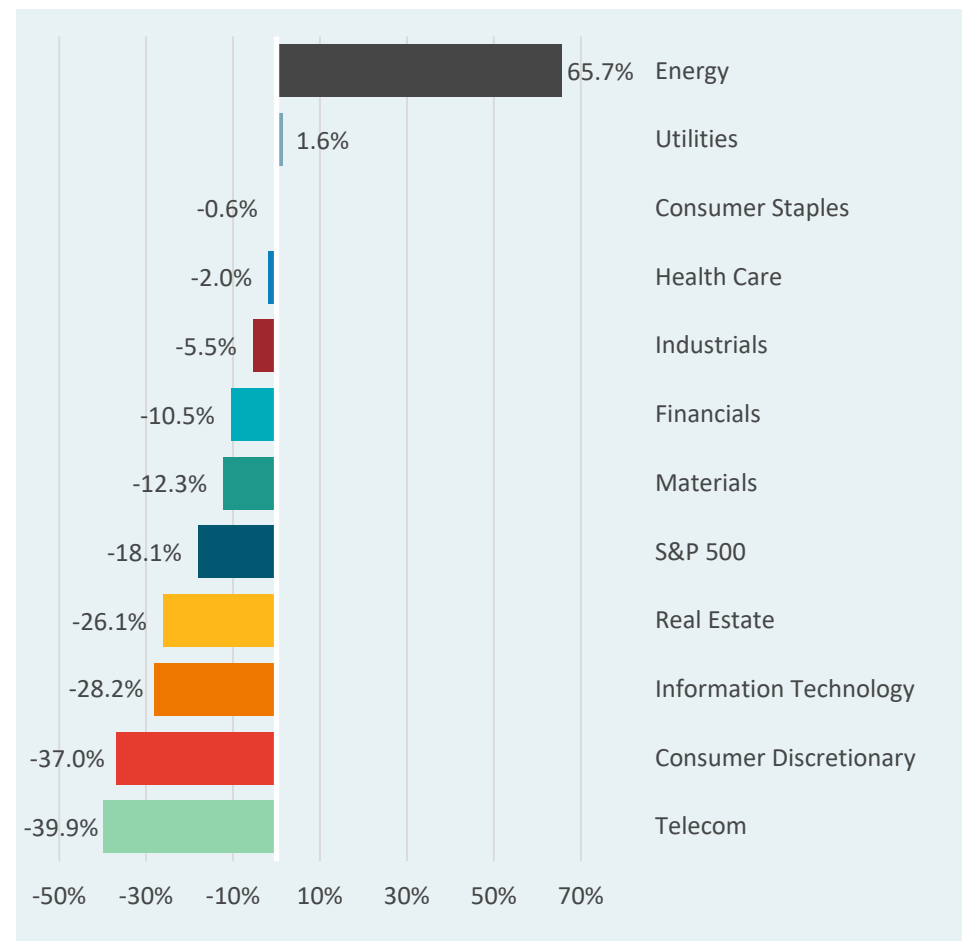
S&P 500 sector returns

QTD



Source: Morningstar, as of 12/31/22

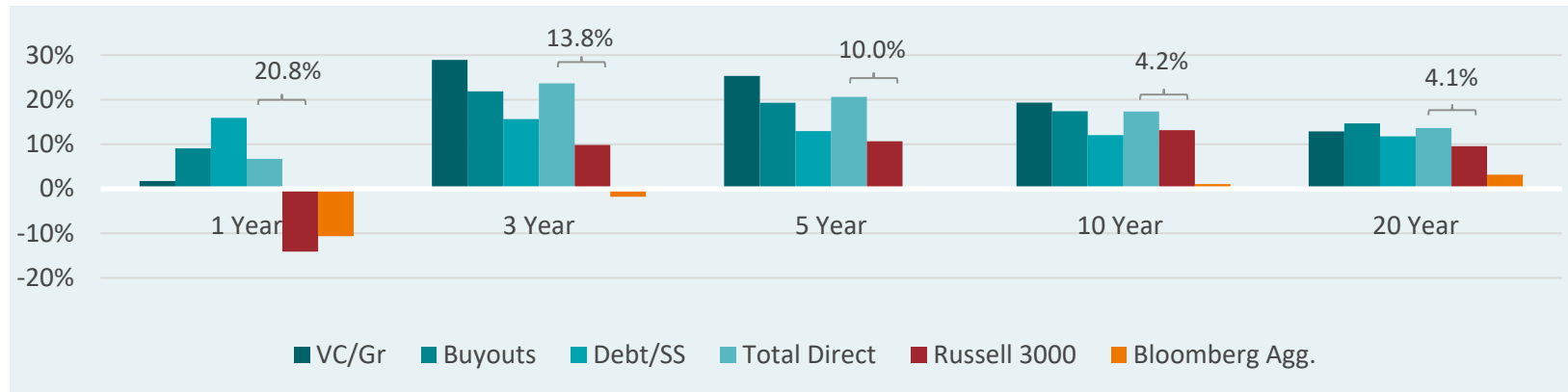
ONE YEAR ENDING DECEMBER



Source: Morningstar, as of 12/31/22

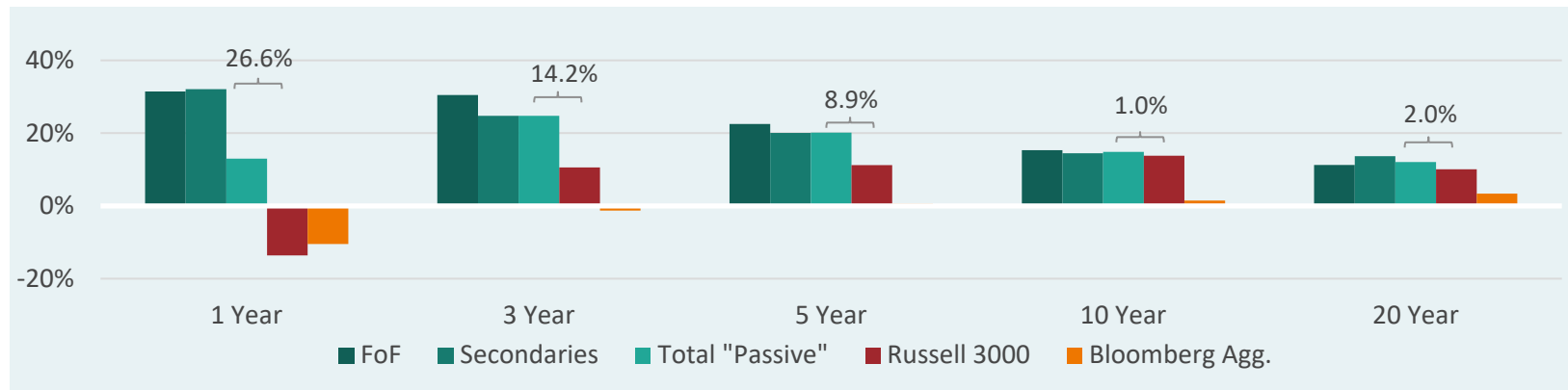
Private equity vs. traditional assets performance

DIRECT PRIVATE EQUITY FUND INVESTMENTS



Direct P.E Fund Investments outperformed over all time periods, though elevated short-term outperformance may be transitory due to appraisal lags

"PASSIVE" STRATEGIES

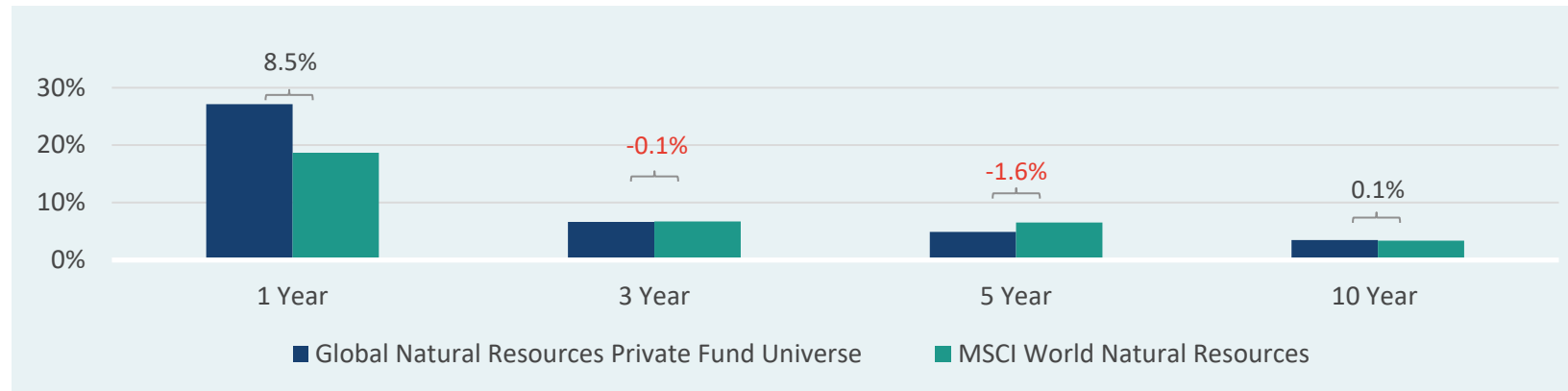


"Passive" strategies outperformed over all periods

Sources: Refinitiv PME: U.S. Private Equity Funds sub asset classes as of June 30, 2022. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.

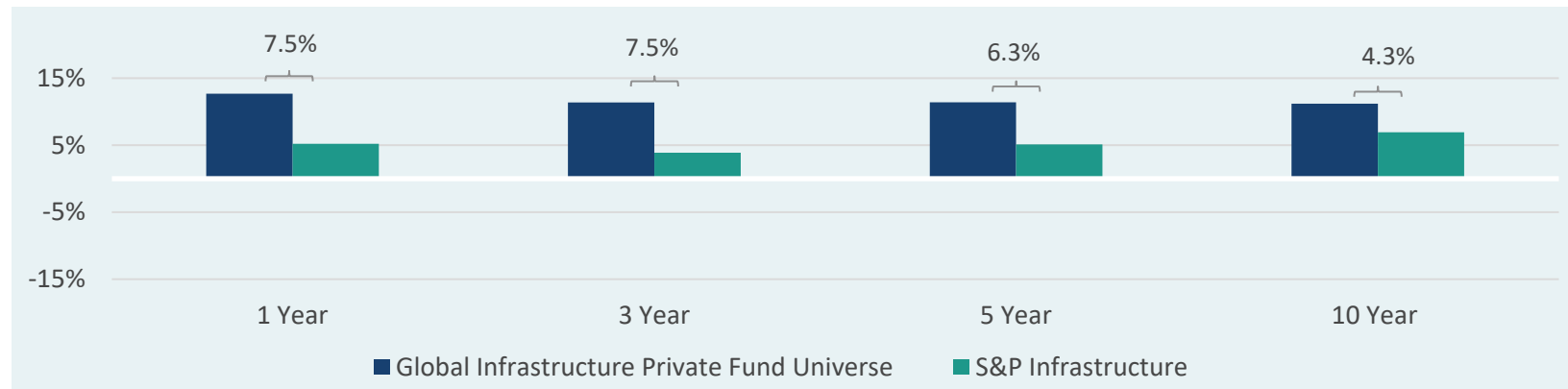
Private vs. liquid real assets performance

GLOBAL NATURAL RESOURCES FUNDS



N.R. funds outperformed the MSCI World Natural Resources benchmark across 1- and 10-year periods

GLOBAL INFRASTRUCTURE FUNDS

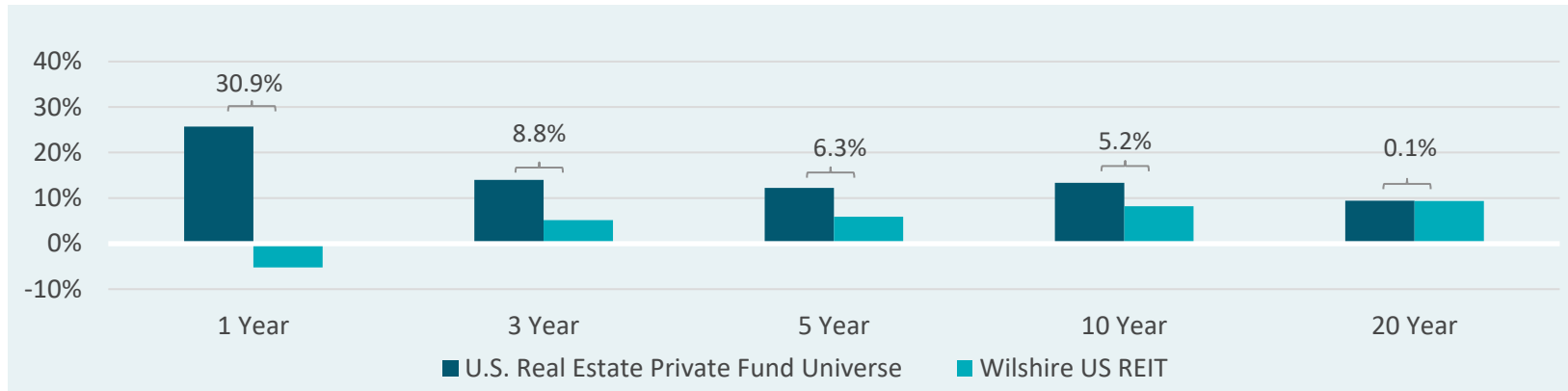


Infra. funds outperformed the S&P Infra. across all periods

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 June 30, 2022. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

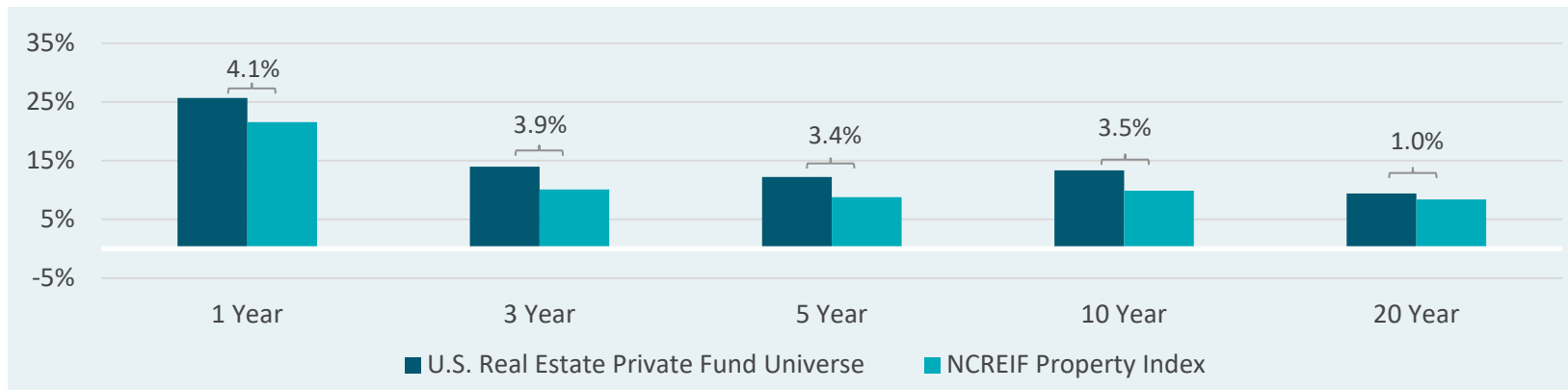
Private vs. liquid and core real estate performance

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



U.S. Private R.E. funds outperformed the Wilshire U.S. REIT Index across all time periods, though short-term outperformance may be transitory due to appraisal lags

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



U.S. Private R.E. Funds outperformed across all periods

Sources: Refinitiv PME: U.S. Real Estate universes as of June 30, 2022. 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 |
|------------------------|-------|------|--------|--------|--------|--------|---------|
| Core Index | | | | | | | |
| S&P 500 | (5.8) | 7.6 | (18.1) | (18.1) | 7.7 | 9.4 | 12.6 |
| S&P 500 Equal Weighted | (4.7) | 11.6 | (11.4) | (11.4) | 9.0 | 9.1 | 12.4 |
| DJ Industrial Average | (4.1) | 16.0 | (6.9) | (6.9) | 7.3 | 8.4 | 12.3 |
| Russell Top 200 | (6.0) | 6.6 | (19.8) | (19.8) | 7.9 | 9.9 | 12.9 |
| Russell 1000 | (5.8) | 7.2 | (19.1) | (19.1) | 7.3 | 9.1 | 12.4 |
| Russell 2000 | (6.5) | 6.2 | (20.4) | (20.4) | 3.1 | 4.1 | 9.0 |
| Russell 3000 | (5.9) | 7.2 | (19.2) | (19.2) | 7.1 | 8.8 | 12.1 |
| Russell Mid Cap | (5.4) | 9.2 | (17.3) | (17.3) | 5.9 | 7.1 | 11.0 |
| Style Index | | | | | | | |
| Russell 1000 Growth | (7.7) | 2.2 | (29.1) | (29.1) | 7.8 | 11.0 | 14.1 |
| Russell 1000 Value | (4.0) | 12.4 | (7.5) | (7.5) | 6.0 | 6.7 | 10.3 |
| Russell 2000 Growth | (6.4) | 4.1 | (26.4) | (26.4) | 0.6 | 3.5 | 9.2 |
| Russell 2000 Value | (6.6) | 8.4 | (14.5) | (14.5) | 4.7 | 4.1 | 8.5 |

INTERNATIONAL EQUITY

| | | | | | | | |
|------------------------|-------|------|--------|--------|-------|-------|-------|
| Broad Index | | | | | | | |
| MSCI ACWI | (3.9) | 9.8 | (18.4) | (18.4) | 4.0 | 5.2 | 8.0 |
| MSCI ACWI ex US | (0.7) | 14.3 | (16.0) | (16.0) | 0.1 | 0.9 | 3.8 |
| MSCI EAFE | 0.1 | 17.3 | (14.5) | (14.5) | 0.9 | 1.5 | 4.7 |
| MSCI EM | (1.4) | 9.7 | (20.1) | (20.1) | (2.7) | (1.4) | 1.4 |
| MSCI EAFE Small Cap | 1.1 | 15.8 | (21.4) | (21.4) | (0.9) | (0.0) | 6.2 |
| Style Index | | | | | | | |
| MSCI EAFE Growth | (1.1) | 15.0 | (22.9) | (22.9) | 0.5 | 2.5 | 5.6 |
| MSCI EAFE Value | 1.3 | 19.6 | (5.6) | (5.6) | 0.6 | 0.2 | 3.5 |
| Regional Index | | | | | | | |
| MSCI UK | (0.4) | 17.0 | (4.8) | (4.8) | 0.3 | 1.0 | 3.1 |
| MSCI Japan | 0.3 | 13.2 | (16.6) | (16.6) | (1.0) | 0.2 | 5.6 |
| MSCI Euro | (0.5) | 23.0 | (17.2) | (17.2) | 0.5 | 0.8 | 4.3 |
| MSCI EM Asia | (0.8) | 10.8 | (21.1) | (21.1) | (1.3) | (0.6) | 3.6 |
| MSCI EM Latin American | (4.0) | 5.7 | 8.9 | 8.9 | (4.8) | (1.1) | (2.1) |

FIXED INCOME

| | Month | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year |
|-------------------------------|-------|-------|--------|--------|--------|--------|---------|
| Broad Index | | | | | | | |
| Bloomberg US TIPS | (1.0) | 2.0 | (11.8) | (11.8) | 1.2 | 2.1 | 1.1 |
| Bloomberg US Treasury Bills | 0.4 | 0.9 | 1.3 | 1.3 | 0.7 | 1.2 | 0.8 |
| Bloomberg US Agg Bond | (0.5) | 1.9 | (13.0) | (13.0) | (2.7) | 0.0 | 1.1 |
| Bloomberg US Universal | (0.3) | 2.2 | (13.0) | (13.0) | (2.5) | 0.2 | 1.3 |
| Duration | | | | | | | |
| Bloomberg US Treasury 1-3 Yr | 0.2 | 0.7 | (3.8) | (3.8) | (0.5) | 0.7 | 0.7 |
| Bloomberg US Treasury Long | (1.7) | (0.6) | (29.3) | (29.3) | (7.4) | (2.2) | 0.6 |
| Bloomberg US Treasury | (0.5) | 0.7 | (12.5) | (12.5) | (2.6) | (0.1) | 0.6 |
| Issuer | | | | | | | |
| Bloomberg US MBS | (0.4) | 2.1 | (11.8) | (11.8) | (3.2) | (0.5) | 0.7 |
| Bloomberg US Corp. High Yield | (0.6) | 4.2 | (11.2) | (11.2) | 0.0 | 2.3 | 4.0 |
| Bloomberg US Agency Interm | 0.0 | 0.8 | (6.5) | (6.5) | (1.3) | 0.4 | 0.7 |
| Bloomberg US Credit | (0.4) | 3.4 | (15.3) | (15.3) | (2.9) | 0.4 | 1.8 |

OTHER

| | | | | | | | |
|---------------------------|-------|------|--------|--------|-------|-------|-------|
| Index | | | | | | | |
| Bloomberg Commodity | (2.4) | 2.2 | 16.1 | 16.1 | 12.7 | 6.4 | (1.3) |
| Wilshire US REIT | (5.6) | 4.0 | (26.8) | (26.8) | (0.5) | 3.4 | 6.3 |
| CS Leveraged Loans | 0.4 | 2.3 | (1.1) | (1.1) | 2.3 | 3.2 | 3.8 |
| S&P Global Infrastructure | (2.2) | 11.0 | (0.2) | (0.2) | 1.7 | 3.9 | 6.5 |
| Alerian MLP | (4.7) | 10.5 | 31.4 | 31.4 | 8.3 | 3.6 | 2.1 |
| Regional Index | | | | | | | |
| JPM EMBI Global Div | 0.3 | 8.1 | (17.8) | (17.8) | (5.3) | (1.3) | 1.6 |
| JPM GBI-EM Global Div | 2.2 | 8.5 | (11.7) | (11.7) | (6.1) | (2.5) | (2.0) |
| Hedge Funds | | | | | | | |
| HFRI Composite | (0.4) | 2.2 | (4.3) | (4.3) | 5.7 | 4.4 | 4.7 |
| HFRI FOF Composite | 0.9 | 2.4 | (4.7) | (4.7) | 3.9 | 3.2 | 3.6 |
| Currency (Spot) | | | | | | | |
| Euro | 3.7 | 8.9 | (6.2) | (6.2) | (1.7) | (2.3) | (2.1) |
| Pound Sterling | 1.0 | 7.8 | (11.2) | (11.2) | (3.2) | (2.3) | (3.0) |
| Yen | 5.8 | 9.7 | (12.7) | (12.7) | (6.3) | (3.1) | (4.1) |

Source: Morningstar, HFRI, as of 12/31/22.

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.langerresearch.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)

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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