

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

MAY 2023 Capital Markets Update

Market commentary

U.S. ECONOMICS

- The labor market maintained its resilience in May as nonfarm payrolls increased by 339,000, well above expectations and the revised April figure (294,000). Other components of the labor market, however, showed some weakness which might suggest a pause in Fed rate hikes. The unemployment rate jumped to 3.7%, and wage growth slowed slightly to 4.3% year-over-year.
- The ISM Manufacturing PMI dropped to 46.9 from 47.1 in the month prior and marked a seventh consecutive month of contraction. Several sub-indices declined from April levels, including new orders, backlogs, prices, and employment.
- The Univ. of Michigan Index of Consumer Sentiment hit a 6-month low (59.2) as the near-term economic outlook among consumers dropped sharply relative to April.

U.S. EQUITIES

- Major equity indices continued to be impacted by the volatility of large technology stocks. The NASDAQ 100 Index gained +7.7% while the S&P 500 Index and Dow Jones Industrial Average tallied +0.4% and -3.2%, respectively.
- The S&P 500 Index (+0.4%) has outperformed the Equal-Weighted Index (-3.8%) by +10.2% to start the year – the largest year-to-date gap between the two on record – shedding light on the growing concentration of the cap-weighted index.
- Q1 earnings broadly surprised to the upside but reflected a second consecutive quarter of year-over-year decline. Five of eleven sectors reported earnings growth, led by Consumer Discretionary and Industrials, while Materials and Utilities reported the largest declines.

U.S. FIXED INCOME

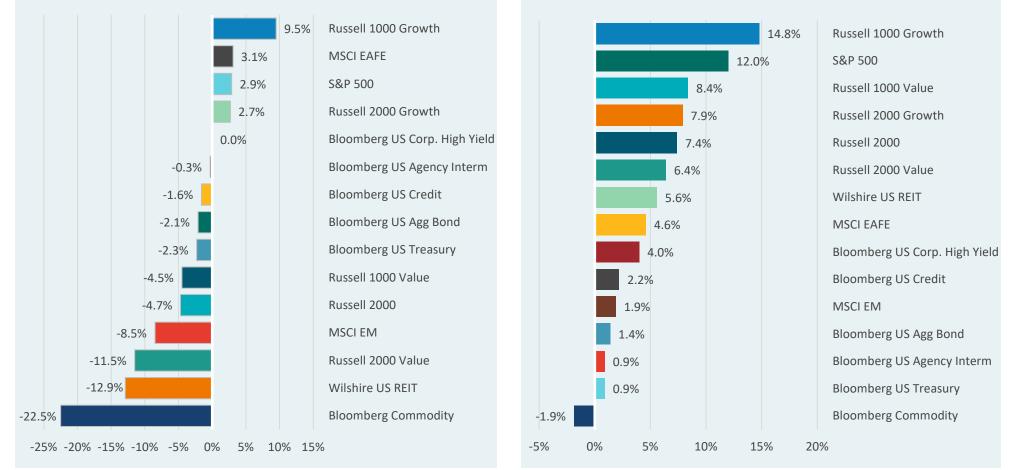
- Early in the month, the Fed approved its 10th rate hike since March 2022. The 25-bps increase raised the fed funds rate to a target of 5%-5.25%. In the press conference following the decision, Chairman Powell gave investors some optimism that the ongoing tightening cycle could be nearing its end but gave little insight on a pivot.
- The rate decision was followed by broad declines in Treasury yields across all maturities, except for the 3-month, which remained mostly flat in the days following. However, debt ceiling negotiations and worries of a U.S. default helped drive yields higher over the remainder of the month.
- The risk of a U.S. default and rising yields made for a difficult environment in the bond market. Besides U.S Treasury bills (+0.4%), major bond indices finished the month in the negative.

INTERNATIONAL MARKETS

- The reopening momentum that boosted Chinese equities in 2022 has slowed in recent months. The MSCI China Index was -8.4% lower, driven in part by shrinking factory activity and exports. Data for May showed exports were down -7.5% year-over-year.
- Stubborn inflation data contributed to the BOE decision to hike rates by another 25 bps in early May. Although the Bank has reiterated its commitment to taming inflation, the print released late in the month showed core inflation rising to a 30-year high of 6.8% from 6.2% in March.
- Foreign currencies saw weakness due to a May rally in dollar value which created a headwind for international equities. Notably, the Yen dropped -2.5% while the Euro fell -3.5%.

Major asset class returns

ONE YEAR ENDING MAY



*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 5/31/23

Source: Morningstar, as of 5/31/23

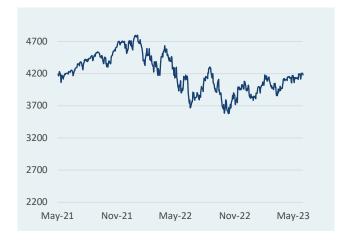
TEN YEARS ENDING MAY



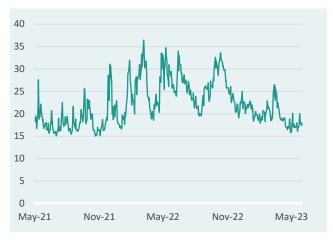
U.S. large cap equities

- The S&P 500 Index (+0.4%) ended slightly higher with help from the continued rally in mega-cap Information Technology stocks. Fears of a potential U.S. default were mitigated as President Biden signed a bill to suspend the debt ceiling, which also led equities higher.
- Positive performance was limited to 3 of the 11 S&P 500 GICS Sectors. The Information Technology sector rallied +9.5% and is now up +34.0% year-to-date. Communication Services (+6.2%) was the next best performer, followed by Consumer Discretionary (+3.2%). Energy (-10.0%), Materials (-6.8%), and Consumer Staples (-6.1%) were the worst performers.
- Earnings strength from mega-cap tech giants and growing anticipation surrounding AI-oriented products fueled growth sectors. Nvidia (NVDA) was the largest contributor to S&P 500 gains in May as the chipmaker surged more than +26.0% after its Q1 earnings trounced top- and bottom-line estimates.
- U.S. equity market volatility rebounded in May as investors monitored debt ceiling negotiations and a continued inflow of strong job market data. The VIX index of implied volatility hit an intra-month high of 20.8 on May 24th and ended +2.2 points higher at 17.9.

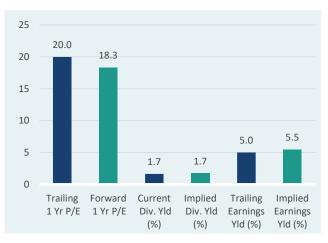
S&P 500 PRICE INDEX



IMPLIED VOLATILITY (VIX INDEX)



S&P 500 VALUATION SNAPSHOT



Source: Bloomberg, as of 5/31/23

Source: Cboe, as of 5/31/23

Source: Bloomberg, as of 5/31/23



Domestic equity size and style

- Large-cap growth equities (Russell 1000 Growth +4.6%) widely outperformed large-cap value (Russell 1000 Value -3.9%) after Information Technology and Communications names saw a continued rally. Growth names are up +20.8% year-to-date, outperforming value by +22.2%.
- The recent surge in growth equities has been dominated by a small group of companies. Apple, Microsoft, Nvidia, and Amazon alone accounted for 63.5% of the year-to-date return for the Russell 1000 Growth Index at month end.



- Large-cap names (Russell 1000 +0.4%) beat small-caps (Russell 2000 -0.9%) for a third consecutive month.
 While small-cap Technology names have experienced similar tailwinds to their large-cap peers, weakness in the Energy and Financials sectors has dampened broader index performance.
- On a forward-looking basis, small-cap stocks continue to trade at a growing discount relative to historical averages. At month end, the Russell 2000 Index traded at 19.9x forward earnings, materially lower than its ten-year average of 23.6x.

VALUE VS. GROWTH 1-YR ROLLING RELATIVE PERFORMANCE



SMALL VS. LARGE 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, Bloomberg, as of 5/31/23

Source: FTSE, Bloomberg, as of 5/31/23

Source: FTSE, Bloomberg, as of 5/31/23





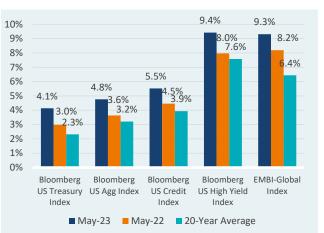
Fixed income

- The yield curve moved broadly higher though moves were most prominent on the short-end of the curve. Yields on 3-month Treasury bills rose +42bps and 2-year yields followed closely behind ending the month +36bps higher.
- Credit spreads in the U.S. saw little movement despite strong jobs data which signaled potential for additional rate hikes and debt ceiling uncertainty that persisted for most of May. U.S. high yield spreads moved +12bps higher to 469bps while investment grade spreads increased +5bps to 146bps.
- Agencies (-0.3%), mortgage-backed securities (-0.7%), and corporate high yield (-0.9%) – though negative – outperformed the Bloomberg U.S. Agg (-1.1%).
 Outperformance was partly driven by a shift away from Treasuries as the debt ceiling negotiations played out.
- Breakeven inflation rates across the curve continued their downward trajectory. While the movement is indicative of lower inflation expectations, it is also more sensitive to the current high inflation environment. To some, this paints a more positive outlook when compared to the most recent Fed commentary.

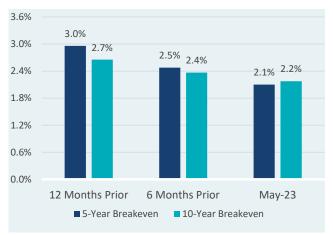
U.S. TREASURY YIELD CURVE



NOMINAL YIELDS



BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 5/31/23

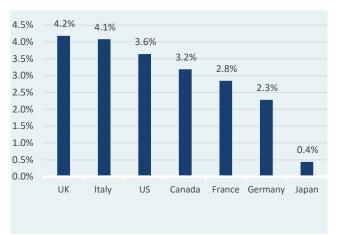
Source: Morningstar, as of 5/31/23

Source: Bloomberg, as of 5/31/23

Verus⁷⁷

Global markets

- International equities (MSCI ACWI ex US -3.6%) were pulled lower by sharp declines in developed markets (MSCI EAFE -4.2%), specifically by European indexes. Emerging equities (-1.7%) also declined, but less so due to outperformance of emerging Asian (-1.1%) and Latin American (-0.9%) equities.
- U.K. markets (MSCI UK Index -6.6%) were notably lower despite revised expectations that the country will likely dodge a recession in 2023. Debt ceiling woes in the U.S. likely contributed to declining sentiment. Falling oil and metals prices also weighed on the performance of English heavyweights including Shell, BP, and Rio Tinto.
- The MSCI Japan Index performed best among developed markets, climbing +1.9%. Higher-thanexpected year-over-year Q1 GDP growth along with large inflows from foreign investors likely drove positive sentiment.
- The spreads of emerging market debt remained mostly rangebound. Yields of locally-denominated EM debt fell slightly in May; however, renewed U.S. dollar strength reversed the recent rally (JPM GBI-EM Global Div.
 - -1.6%). EM currencies were weaker across all regions.

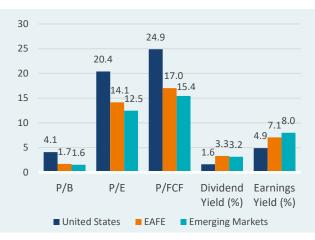


GLOBAL SOVEREIGN 10-YEAR YIELDS

U.S. DOLLAR MAJOR CURRENCY INDEX



MSCI VALUATION METRICS (3-MONTH AVG)



Source: Bloomberg, as of 5/31/23

Source: Federal Reserve, as of 5/31/23

Source: Bloomberg, as of 5/31/23



Commodities

- The Bloomberg Commodity Index fell -5.6% and all subindices ended the month lower. Energy and metals prices were the biggest laggards in the commodity basket, pulled lower by broad U.S. dollar strength and weakening expectations for global economic growth.
- Industrial metals prices weakened for a fourth consecutive month on further signals of weaker-than-expected demand in China and growing global inventories. Copper prices were a noteworthy loser, hitting their lowest level in nearly 6 months toward month end. Members of the Bloomberg Industrial Metals Sub-Index have experienced an average decline of -16.4% year-to-date.

INDEX AND SECTOR PERFORMANCE

- The Bloomberg Energy Sub-Index dropped -8.8% on steep declines in oil prices. WTI crude prices fell -11.3% while prices for Brent crude ended the month -9.6% lower. Heightened concerns over a slowdown in global economic growth put downward pressure on prices.
- Gold prices (-0.9%) declined narrowly in May but are up +8.5% year-to-date. Prices for the precious metal have been mostly flat since mid March despite growing dollar strength and new bets for more Fed rate hikes – two factors which tend to impede on gold performance.

| | Month | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year |
|-----------------------------|-------|--------|--------|--------|--------|--------|---------|
| Bloomberg Commodity | (5.6) | (6.5) | (11.4) | (22.5) | 17.2 | 3.2 | (1.9) |
| Bloomberg Agriculture | (4.2) | (4.8) | (5.8) | (12.4) | 24.0 | 6.7 | (1.0) |
| Bloomberg Energy | (8.8) | (15.5) | (26.2) | (45.7) | 18.6 | (4.9) | (9.5) |
| Bloomberg Grains | (3.0) | (6.4) | (11.5) | (20.6) | 20.2 | 5.2 | (3.2) |
| Bloomberg Industrial Metals | (8.4) | (11.8) | (13.4) | (21.4) | 14.4 | 2.1 | 1.3 |
| Bloomberg Livestock | (1.8) | (2.5) | (4.4) | 6.0 | 6.0 | (3.1) | (2.9) |
| Bloomberg Petroleum | (8.0) | (10.6) | (13.8) | (26.3) | 38.7 | 3.0 | (4.3) |
| Bloomberg Precious Metals | (2.4) | 8.4 | 5.5 | 7.0 | 3.8 | 7.2 | 1.9 |
| Bloomberg Softs | (2.6) | 9.9 | 19.8 | 5.3 | 29.5 | 7.8 | 0.2 |

600 500 400 300 200 0 May-20 Aug-20 Feb-21 May-21 Aug-21 Nov-21 Feb-22 May-22 Aug-22 Nov-22 Feb-23 Mav-2 Gold Natural Ga Δgriculture

Source: Morningstar, as of 5/31/23

Source: Bloomberg, as of 5/31/23

COMMODITY PERFORMANCE







Periodic table of returns

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | YTD | 5- | -Year 1 | 10-Year |
|-------------------------|------|---------|---------|------|------|-------|-------|-------------------------|--------|----------|------|----------------------|-------|------|---------|-------|------|--------|---------|--------|-------|----|---------|---------|
| Large Cap Growth | 56.3 | 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 | 20.8 | 1 | 13.8 | 14.8 |
| International Equity | 48.5 | 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 | 9.3 | 1 | 10.6 | 11.8 |
| Large Cap Equity | 47.3 | 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 | 6.8 | | 6.8 | 8.4 |
| 60/40 Global Portfolio | 46.0 | 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 | 5.2 | | 6.7 | 8.3 |
| Small Cap Growth | 39.2 | 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 | 4.9 | | 3.8 | 7.9 |
| US Bonds | 30.0 | 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 | 2.5 | | 3.2 | 7.4 |
| Cash | 29.9 | 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 | 1.8 | | 3.2 | 6.4 |
| Hedge Funds of Funds | 29.7 | 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 | 1.3 | | 3.0 | 4.9 |
| Emerging Markets Equity | 25.2 | 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 | 1.1 | | 2.7 | 4.6 |
| Small Cap Equity | 23.9 | 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 | 0.0 | | 2.7 | 3.1 |
| Large Cap Value | 11.6 | 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 | -1.4 | | 2.1 | 1.9 |
| Real Estate | 9.0 | 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 | -1.8 | | 1.4 | 1.4 |
| Small Cap Value | 4.1 | 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 | -5.0 | | 0.8 | 0.9 |
| Commodities | 1.0 | 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 | -11.4 | | -0.7 | -1.9 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | La | rge Ca | p Equit | у | | | | Small | Cap Gi | rowth | | | | Co | mmod | ities | | | | | | | | |
| | La | rge Ca | o Value | 2 | | | | Intern | ationa | al Equit | ty | | | Re | al Esta | te | | | | | | | | |
| | La | rge Ca | p Grow | th | | | | Emerging Markets Equity | | | | Hedge Funds of Funds | | | | | | | | | | | | |
| | Sm | all Car | p Equit | y | | | | US Bo | nds | | | | | 60 | % MSC | ACWI | /40% | Bloomb | erg Glo | bal Bo | nd | | | |
| | Sm | all Ca | p Value | e | | | | 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 3/31/23.

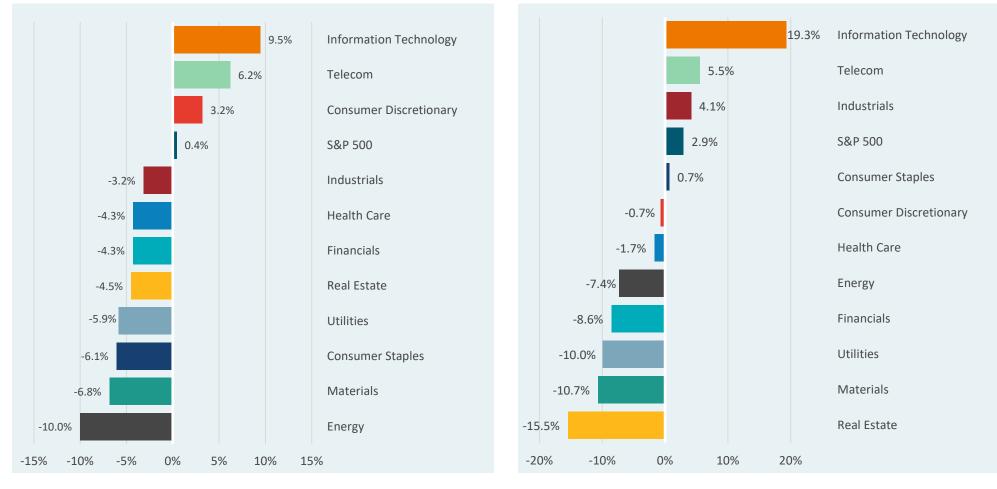


BEST

WORST

S&P 500 sector returns

QTD



ONE YEAR ENDING MAY

Source: Morningstar, as of 5/31/23

Source: Morningstar, as of 5/31/23



Detailed index returns

| DOMESTIC EQUITY | | | | | | | | FIXED INCOME |
|------------------------|-------|-------|-------|--------|--------|--------|---------|------------------|
| | Month | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year | |
| Core Index | | | | | | | | Broad Index |
| S&P 500 | 0.4 | 2.0 | 9.6 | 2.9 | 12.9 | 11.0 | 12.0 | Bloomberg US TIF |
| S&P 500 Equal Weighted | (3.8) | (3.5) | (0.6) | (4.3) | 13.6 | 8.8 | 10.5 | Bloomberg US Tre |
| DJ Industrial Average | (3.2) | (0.7) | 0.2 | 2.0 | 11.3 | 8.5 | 10.6 | Bloomberg US Ag |
| Russell Top 200 | 1.6 | 3.4 | 12.4 | 4.9 | 13.2 | 12.0 | 12.7 | Bloomberg US Un |
| Russell 1000 | 0.5 | 1.7 | 9.3 | 2.4 | 12.5 | 10.6 | 11.8 | Duration |
| Russell 2000 | (0.9) | (2.7) | (0.0) | (4.7) | 9.2 | 2.7 | 7.4 | Bloomberg US Tre |
| Russell 3000 | 0.4 | 1.5 | 8.7 | 2.0 | 12.2 | 10.1 | 11.5 | Bloomberg US Tre |
| Russell Mid Cap | (2.8) | (3.3) | 0.6 | (4.5) | 10.2 | 6.9 | 9.3 | Bloomberg US Tre |
| Style Index | | | | | | | | Issuer |
| Russell 1000 Growth | 4.6 | 5.6 | 20.8 | 9.5 | 12.8 | 13.8 | 14.8 | Bloomberg US ME |
| Russell 1000 Value | (3.9) | (2.4) | (1.4) | (4.5) | 11.6 | 6.8 | 8.4 | Bloomberg US Co |
| Russell 2000 Growth | 0.0 | (1.1) | 4.9 | 2.7 | 4.6 | 2.7 | 7.9 | Bloomberg US Age |
| Russell 2000 Value | (2.0) | (4.4) | (5.0) | (11.5) | 13.6 | 2.1 | 6.4 | Bloomberg US Cre |
| | | | | | | | | |
| INTERNATIONAL EQUITY | | | | | | | | OTHER |
| Broad Index | | | | | | | | Index |
| MSCI ACWI | (1.1) | 0.4 | 7.7 | 0.9 | 10.1 | 6.8 | 7.8 | Bloomberg Comm |
| MSCI ACWI ex US | (3.6) | (2.0) | 4.8 | (1.4) | 7.2 | 2.2 | 3.8 | Wilshire US REIT |
| MSCI EAFE | (4.2) | (1.5) | 6.8 | 3.1 | 8.5 | 3.2 | 4.6 | CS Leveraged Loa |

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| FIXED INCOME | | | | | | | |
|-------------------------------|-------|-------|--------|--------|--------|--------|---------|
| | Month | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year |
| Broad Index | | | | | | | |
| Bloomberg US TIPS | (1.2) | (1.1) | 2.2 | (4.2) | 0.4 | 2.6 | 1.7 |
| Bloomberg US Treasury Bills | 0.4 | 0.7 | 1.9 | 3.1 | 1.1 | 1.5 | 0.9 |
| Bloomberg US Agg Bond | (1.1) | (0.5) | 2.5 | (2.1) | (3.6) | 0.8 | 1.4 |
| Bloomberg US Universal | (1.0) | (0.4) | 2.5 | (1.9) | (3.1) | 1.0 | 1.6 |
| Duration | | | | | | | |
| Bloomberg US Treasury 1-3 Yr | (0.4) | (0.1) | 1.5 | 0.0 | (0.9) | 1.0 | 0.8 |
| Bloomberg US Treasury Long | (2.8) | (2.3) | 3.7 | (8.2) | (12.0) | (0.8) | 1.5 |
| Bloomberg US Treasury | (1.2) | (0.6) | 2.4 | (2.3) | (4.5) | 0.6 | 0.9 |
| Issuer | | | | | | | |
| Bloomberg US MBS | (0.7) | (0.2) | 2.3 | (2.7) | (3.6) | 0.1 | 1.1 |
| Bloomberg US Corp. High Yield | (0.9) | 0.1 | 3.6 | 0.0 | 2.9 | 3.1 | 4.0 |
| Bloomberg US Agency Interm | (0.3) | 0.1 | 1.9 | (0.3) | (1.8) | 0.8 | 0.9 |
| Bloomberg US Credit | (1.4) | (0.6) | 2.8 | (1.6) | (2.9) | 1.5 | 2.2 |
| | | | | | | | |
| OTHER | | | | | | | |
| Index | | | | | | | |
| Bloomberg Commodity | (5.6) | (6.3) | (11.4) | (22.5) | 17.2 | 3.2 | (1.9) |
| Wilshire US REIT | (2.8) | (2.0) | 1.2 | (12.9) | 7.5 | 4.2 | 5.6 |
| CS Leveraged Loans | (0.1) | 0.9 | 4.0 | 5.5 | 5.9 | 3.6 | 3.8 |
| S&P Global Infrastructure | (5.5) | (3.1) | 0.8 | (6.7) | 9.1 | 5.1 | 6.1 |
| Alerian MLP | (0.0) | 1.7 | 5.2 | 7.9 | 25.7 | 4.7 | 0.8 |
| Regional Index | | | | | | | |
| JPM EMBI Global Div | (0.6) | (0.0) | 1.8 | (1.5) | (2.7) | (0.1) | 2.1 |
| JPM GBI-EM Global Div | (1.6) | (0.7) | 4.4 | 3.1 | (2.3) | (0.9) | (1.3) |
| Hedge Funds | | | | | | | |
| HFRI Composite | (0.2) | 0.0 | 1.2 | (0.1) | 8.1 | 4.4 | 4.3 |
| HFRI FOF Composite | 0.2 | 0.5 | 1.3 | 1.3 | 5.4 | 3.0 | 3.1 |
| Currency (Spot) | | | | | | | |
| Euro | (3.4) | (1.9) | (0.1) | (0.5) | (1.4) | (1.8) | (1.9) |
| Pound Sterling | (1.4) | 0.2 | 3.0 | (1.7) | 0.1 | (1.4) | (2.0) |
| Yen | (2.5) | (4.7) | (5.6) | (7.9) | (8.3) | (4.9) | (3.2) |

Source: Morningstar, HFRI, as of 5/31/23.

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MSCI EM Latin American

MSCI EM

Style Index

MSCI EAFE Small Cap

MSCI EAFE Growth

MSCI EAFE Value

Regional Index MSCI UK

MSCI Japan

MSCI Euro

MSCI EM Asia

Detailed private market returns

Comparison to public market index returns

| Private Equity Pooled IRRs | 1 Year | 3 Year | 5 Year | 10 Year |
|--|--------|--------|--------|---------|
| Global Private Equity FoFs & Secondary Funds | (1.6) | 21.3 | 17.3 | 14.0 |
| Global Private Equity Direct Funds * | (5.0) | 21.1 | 18.3 | 16.2 |
| U.S. Private Equity Direct Funds * | (2.3) | 24.2 | 20.9 | 17.9 |
| Europe Private Equity Direct Funds * | (11.4) | 17.3 | 15.2 | 14.1 |
| Asia Private Equity Direct Funds * | (9.5) | 11.9 | 11.2 | 12.9 |
| Public Index Time-weighted Returns | | | | |
| MSCI World | (19.6) | 4.6 | 5.3 | 8.1 |
| S&P 500 | (15.5) | 8.2 | 9.2 | 11.7 |
| MSCI Europe | (24.8) | (1.7) | (1.2) | 3.4 |
| MSCI AC Asia Pacific | (27.7) | (1.7) | (0.6) | 3.7 |
| | | | | |
| Private Real Estate Pooled IRRs | 1 Year | 3 Year | 5 Year | 10 Year |
| U.S. All Private Real Estate | 15.7 | 13.5 | 11.9 | 13.3 |
| Public Index Time-weighted Returns | | | | |

| Private Credit Pooled IRRs | 1 Year | 3 Year | 5 Year | 10 Year | | | |
|--|--------|--------|--------|---------|--|--|--|
| U.S. All Private Debt ** | 9.9 | 15.3 | 12.4 | 11.6 | | | |
| Public Index Time-weighted Returns | | | | | | | |
| S&P / LSTA U.S. Leveraged Loan 100 Index | (3.9) | 1.4 | 2.5 | 3.0 | | | |

| Private Real Assets Pooled IRRs | 1 Year | 3 Year | 5 Year | 10 Year |
|------------------------------------|--------|--------|--------|---------|
| Global Nature Resources *** | 25.2 | 8.7 | 5.1 | 3.6 |
| Global Infrastructure | 9.4 | 10.8 | 10.3 | 10.7 |
| Public Index Time-weighted Returns | | | | |
| S&P Global Natural Resources | 1.0 | 9.1 | 5.7 | 3.4 |
| S&P Global Infrastructure | (6.0) | (0.1) | 2.1 | 5.7 |

Source: Pooled IRRs are from Thompson Reuters C/A and Time-weighted Returns are from Investment Metrics, as of September 30th, 2022. All returns in U.S. dollars.

(2.0)

2.9

(16.4)

6.3

* Includes Buyout, Growth Equity and Venture Capital.

** Includes Control-Oriented Distressed, Credit Opportunities, Senior Debt and Subordinated Capital.

*** Includes Private Equity Energy, Timber and Upstream Energy & Royalties.



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