

Market commentary

U.S. ECONOMICS

- Year-over-year headline inflation (+4.9%) decelerated for a tenth consecutive month in April, as food and energy prices have eased, and large price moves of 2022 begin falling out of the inflation window. Core CPI came in at +5.5%, down -0.1% from March. Perhaps most notable in the April inflation report was a slowdown in shelter inflation. Shelter costs make up one-third of the overall inflation number and, until April, had been the largest support to high inflation.
- Nonfarm payrolls grew by 253,000, a surprise beat above an expected 180,000. This comes after March figures were revised down to 165,000 from an initial 236,000. Unemployment ticked lower to 3.4%, tied for the lowest level since 1969, and average hourly earnings kept pace with March growth at +0.5% month-over-month.
- The April ISM Manufacturing PMI moved up to 47.1 from 46.3 yet remained in contractionary territory for the fifth consecutive month. The Prices (53.2) and Employment Index (50.2) were the only subindices to move into expansionary territory. A reading above 50 is indicative of expansion, while below 50 signals contraction.

U.S. EQUITIES

- The S&P 500 advanced +1.6%, bringing the year-to-date return to +9.2%. Performance was buoyed by a strong rally from defensive sectors including Consumer Staples and Financials, while Industrials (-1.2%) and Consumer Discretionary (-1.2%) lagged.
- Per FactSet, as of May 5th, 85% of S&P 500 companies had reported Q1 earnings results. Of those, 79% reported positive EPS surprise and 75% reported positive revenue surprise. Blended earnings are estimated to decline by -2.2% for Q1, much better than the March 31st estimate of -6.7%.

U.S. FIXED INCOME

- A slew of strong economic data prints led market participants to extend expectations for the first rate cut to a later date. As of March 31st, investors expected a cut at the September 2023 FOMC meeting; however, fed futures at month end showed this expectation had shifted back to November.
- During the month, U.S. Treasury yields were mostly flat in the middle and long end of the curve but yields of short tenors saw large movement. The 3-month climbed +25bps while the 10-year fell -4bps. As a result, the 3-month-10-year yield curve inversion widened -29bps to -166bps, the widest in its history.
- Bond returns were positive across the credit spectrum, though only modestly. Long duration outperformed short duration while credit outperformed Treasuries.

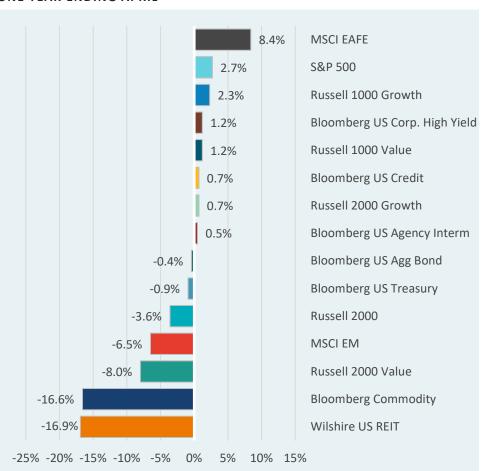
INTERNATIONAL MARKETS

- The MSCI U.K. Index (+5.3%) was one of the top performing regional indices in April. The banking sector partially recovered as fears surrounding the health of U.S. banks subsided, which contributed to relative outperformance.
- The first BOJ policy meeting under Governor Ueda's new leadership was interpreted as dovish, which factored into the yen's (-2.3%) poor performance. However, Japanese securities rallied on expectations that Ueda would take time review the policies of his predecessor Haruhiko Kuroda before making changes.
- Cooling energy prices helped headline Eurozone CPI fall sharply to +6.9% in April, down from +8.5% in the month prior. Despite the decline, investors still expect further tightening activity from the ECB but at a slower pace than previously anticipated.



Major asset class returns

ONE YEAR ENDING APRIL



TEN YEARS ENDING APRIL



*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 4/30/23

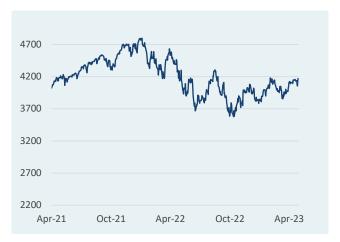
Source: Morningstar, as of 4/30/23



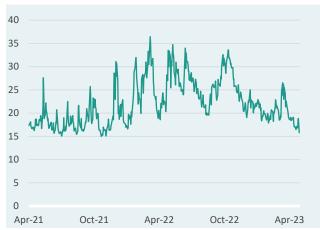
U.S. large cap equities

- The S&P 500 Index +1.6% delivered a second straight month of gains alongside strong economic data and signs of cooling inflation. The index lagged the Dow Jones Industrial Average (+2.6%) as value sectors were among the top performers.
- Eight of 11 S&P 500 GICS sectors ended higher, led by continued strength in Communications (+3.8%) and Staples (+3.6%), and modest recoveries from Energy (+3.3%) and Financials (+3.2%). Consumer Discretionary (-0.9%) and Industrials (-1.2%) were among the worst performers.
- Per FactSet, Amazon is expected to be the largest contributor to the year-over-year Q1 earnings growth rate for the S&P 500, due to a much smaller valuation loss relative to Q1 2022. If the company were excluded, the blended earnings growth rate for the index would be -1.4% lower.
- The Cboe VIX Index of implied volatility fell -2.9 points to 15.8, its lowest level since November 2021. Outsized single-day moves were few in April – the index moved +/- 1% on just 3 occasions, the smallest monthly total in more than a year.

S&P 500 PRICE INDEX

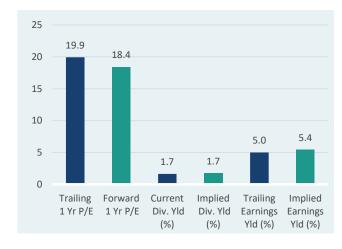


IMPLIED VOLATILITY (VIX INDEX)



Source: Choe, as of 4/30/23

S&P 500 VALUATION SNAPSHOT



Source: Bloomberg, as of 4/30/23

Domestic equity size and style

- Value stocks (+1.5%) modestly outperformed growth stocks (+1.0%) in a reversal of the prior quarter trend after large-cap financial stocks stabilized following a tumultuous March. Other value-oriented sectors, including Energy and Consumer Staples gained as well.
- The S&P 500 Equal Weighted Index (+0.3%) lagged the cap-weighted index for a third consecutive month. Recent underperformance is attributable to strength in mega-cap names including AAPL, MSFT, and META which accounted for more than half of the capweighted index's April return.
- Smaller-cap stocks underperformed again during the month (Russell 2000 Index -1.8%). Continued sell-offs among regional banks along with steep declines in small-cap telecom (-14.2%) and technology (-10.1%) pulled the index lower.
- Small-caps have gained just +0.9% year-to-date, underperforming large-cap stocks by -7.9%. Persistent weakness likely reflects investor fears that small company earnings may respond more negatively to an economic slowdown. Small stocks tend to be more heavily sold than large-caps leading into recession.

VALUE VS. GROWTH RELATIVE VALUATIONS



Source: FTSE, Bloomberg, as of 4/30/23

VALUE VS. GROWTH 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, Bloomberg, as of 4/30/23

SMALL VS. LARGE 1-YR ROLLING RELATIVE PERFORMANCE





Fixed income

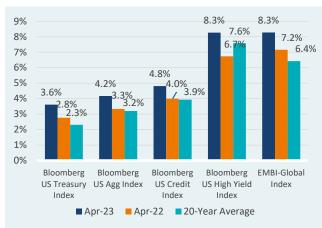
- Fixed income performance was positive across the spectrum, although higher yielding credit outperformed. The Bloomberg U.S. Corporate High Yield index rose +1.0% in April, outpacing the +0.6% gain seen from the Bloomberg U.S. Aggregate.
- Treasury yields ended April slightly lower. Yields fell sharply early in the month after a cooler-than-expected March jobs print which suggested a Fed pivot may come earlier than anticipated. However, further data releases throughout the month quelled such optimism.
- Credit spreads across high-yield and investment grade securities remained rangebound in the face of slower expected economic activity and a tightening in credit conditions. Spreads ended the month at 452 bps and 136 bps for high-yield and investment grade, respectively.
- The ICE BofA MOVE Index, a gauge of U.S. Treasury volatility, fell significantly from peaks seen in mid-March. Volatility briefly rose at the start of April before the index ended the month at 122. For context, the index peaked at 198 in March, the highest level seen since the 2008-2009 Financial Crisis.

U.S. TREASURY YIELD CURVE



Source: Bloomberg, as of 4/30/23

NOMINAL YIELDS



Source: Morningstar, as of 4/30/23

BREAKEVEN INFLATION RATES

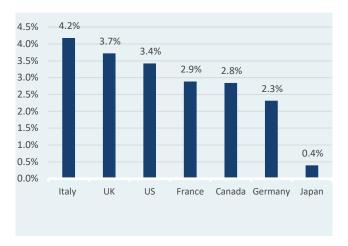




Global markets

- International equities (MSCI ACWI ex US +1.7%)
 outperformed domestic equities in a reversal from the
 prior month. Cooling Eurozone inflation helped
 international developed performance which offset
 declines in emerging Asian equities.
- The MSCI AC Asia ex Japan Index (-2.1%) fell on sharp declines in China (-5.2%) and Taiwan (-4.3%). In contrast, Indonesian equities (+6.7%) gained on a resurgence in global EV supply chain activity and Indian equities (+3.7%) saw robust returns in the Real Estate and Information Technology sectors.
- The MSCI Europe Index (+4.2%) continued its ascent and remains the top performing region globally, now up +15.2% year-to-date. A sharp decline in Eurozone inflation along with a resurgence in demand from Chinese consumers helped the STOXX 50 Index – the region's large cap index – to a 22-year high mid-month.
- The EAFE Small Cap Index (+2.0%) has held up better than the Russell 2000 Index (-1.8%) despite facing similar macroeconomic headwinds. International smallcaps lead domestic peers by +6.1% on the year, gaining steam from the broad recovery in international developed market equities and currencies.

GLOBAL SOVEREIGN 10-YEAR YIELDS

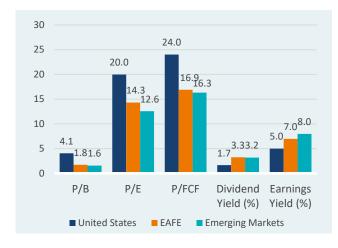


U.S. DOLLAR MAJOR CURRENCY INDEX



Source: Federal Reserve, as of 4/30/23

MSCI VALUATION METRICS (3-MONTH AVG)



Source: Bloomberg, as of 4/30/23



Commodities

- Weakness in grains and industrial metals prices drove a fifth straight month of declines for the Bloomberg Commodity Index (-0.8%). Cooling global demand trends have weighed on commodities, which rank as the weakest performing asset class to date in 2023.
- Within the Softs Sub-Index (+12.5%), sugar (+18.4%) and coffee (+9.1%) led performance. Sugar prices continued to rise and are expected to remain elevated throughout the year due to unseasonal rainfall in India the second largest producer of sugar. Output for 2023 is projected to be 9% lower compared to 2022.
- The Bloomberg Energy Sub-Index fell -0.5% on the month. Natural gas rallied +8.8% on expectations of cooler weather and increased demand in the short term but low sulfur gas oil (-8.9%), RBOB (unleaded) gasoline (-5.6%), and ultra low sulfur diesel (-9.3%) weighed on performance.
- The Bloomberg Precious Metals Sub-Index rose a modest
 1.7%. Although silver gained +4.4% on the month, gold
 (+0.7%) which makes up 15% of the index and roughly
 75% of the sub-index was a drag on performance.

INDEX AND SECTOR PERFORMANCE

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	(0.8)	(8.0)	(6.1)	(16.6)	21.1	4.7	(1.5)
Bloomberg Agriculture	(1.7)	(1.7)	(1.6)	(10.3)	25.4	7.8	(0.6)
Bloomberg Energy	(0.5)	(0.5)	(19.1)	(34.3)	26.7	(2.6)	(9.1)
Bloomberg Grains	(6.5)	(6.5)	(8.8)	(19.3)	21.2	5.7	(2.7)
Bloomberg Industrial Metals	(3.4)	(3.4)	(5.5)	(19.7)	18.8	4.4	2.3
Bloomberg Livestock	1.7	1.7	(2.6)	6.1	8.5	(2.3)	(2.7)
Bloomberg Petroleum	(0.4)	(0.4)	(6.3)	(11.8)	57.5	5.1	(3.7)
Bloomberg Precious Metals	1.7	1.7	8.1	5.1	6.8	7.5	1.5
Bloomberg Softs	12.5	12.5	23.0	9.0	29.9	9.8	(0.3)

Source: Morningstar, as of 4/30/23

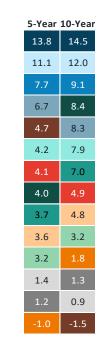
COMMODITY PERFORMANCE

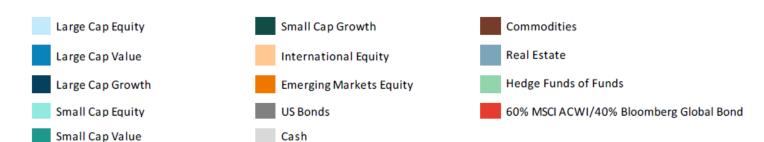




Appendix

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	YTD
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	15.5
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	11.5
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	8.8
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	6.7
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	4.8
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	3.6
Emerging Markets Equity	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	2.8
Large Cap Value	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	2.5
Hedge Funds of Funds	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	1.4
Cash	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	1.4
Small Cap Equity	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	0.9
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
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	-3.1
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	-6.1



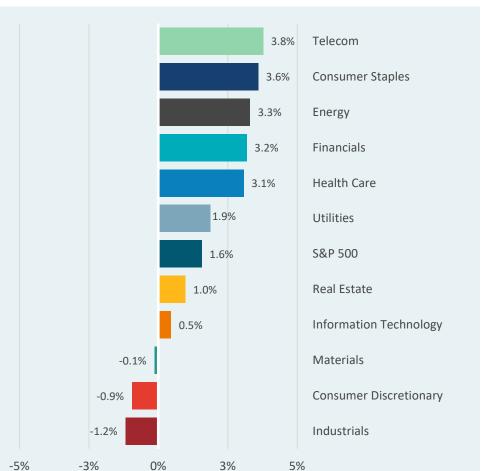


Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, Bloomberg US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, Bloomberg Global Bond. NCREIF Property Index performance data as of 3/31/23.

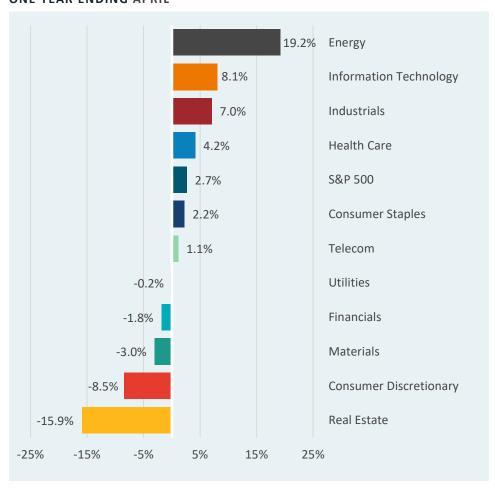


S&P 500 sector returns

QTD



ONE YEAR ENDING APRIL



Source: Morningstar, as of 4/30/23

Source: Morningstar, as of 4/30/23



Detailed index returns

DOMESTIC EQUITY								FIXED INCOME							
	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year		Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index								Broad Index							
S&P 500	1.6	1.6	9.2	2.7	14.5	11.4	12.2	Bloomberg US TIPS	0.1	0.1	3.5	(4.0)	0.9	3.0	1.4
S&P 500 Equal Weighted	0.3	0.3	3.3	0.4	16.8	9.9	11.3	Bloomberg US Treasury Bills	0.4	0.4	1.5	2.8	1.0	1.5	0.9
DJ Industrial Average	2.6	2.6	3.5	5.6	14.2	9.5	11.2	Bloomberg US Agg Bond	0.6	0.6	3.6	(0.4)	(3.1)	1.2	1.3
Russell Top 200	1.8	1.8	10.7	3.0	14.4	12.2	12.7	Bloomberg US Universal	0.6	0.6	3.6	(0.3)	(2.5)	1.3	1.6
Russell 1000	1.2	1.2	8.8	1.8	14.2	11.1	12.0	Duration							
Russell 2000	(1.8)	(1.8)	0.9	(3.6)	11.9	4.2	7.9	Bloomberg US Treasury 1-3 Yr	0.3	0.3	1.9	1.0	(8.0)	1.2	0.8
Russell 3000	1.1	1.1	8.3	1.5	14.1	10.6	11.7	Bloomberg US Treasury Long	0.5	0.5	6.7	(7.3)	(11.8)	0.1	1.1
Russell Mid Cap	(0.5)	(0.5)	3.5	(1.7)	13.8	8.0	9.9	Bloomberg US Treasury	0.5	0.5	3.6	(0.9)	(4.2)	1.0	0.9
Style Index								Issuer							
Russell 1000 Growth	1.0	1.0	15.5	2.3	13.6	13.8	14.5	Bloomberg US MBS	0.5	0.5	3.1	(0.9)	(3.3)	0.4	1.0
Russell 1000 Value	1.5	1.5	2.5	1.2	14.4	7.7	9.1	Bloomberg US Corp. High Yield	1.0	1.0	4.6	1.2	4.7	3.3	4.0
Russell 2000 Growth	(1.2)	(1.2)	4.8	0.7	7.8	4.0	8.4	Bloomberg US Agency Interm	0.4	0.4	2.3	0.5	(1.6)	1.0	0.9
Russell 2000 Value	(2.5)	(2.5)	(3.1)	(8.0)	15.4	3.7	7.0	Bloomberg US Credit	0.8	0.8	4.3	0.7	(1.9)	1.9	2.1
INTERNATIONAL EQUITY								OTHER							
Broad Index								Index							
MSCI ACWI	1.4	1.4	8.8	2.1	12.0	7.0	7.9	Bloomberg Commodity	(8.0)	(0.8)	(6.1)	(16.6)	21.1	4.7	(1.5)
MSCI ACWI ex US	1.7	1.7	8.7	3.0	9.7	2.5	4.0	Wilshire US REIT	0.8	0.8	4.1	(16.9)	8.4	5.5	5.3
MSCI EAFE	2.8	2.8	11.5	8.4	11.7	3.6	4.8	CS Leveraged Loans	0.9	0.9	4.1	2.9	7.2	3.6	3.9
MSCI EM	(1.1)	(1.1)	2.8	(6.5)	4.3	(1.0)	1.8	S&P Global Infrastructure	2.6	2.6	6.7	2.4	13.1	5.9	6.2
MSCI EAFE Small Cap	2.0	2.0	7.0	(1.2)	9.2	1.0	5.7	Alerian MLP	1.7	1.7	5.2	16.3	29.2	5.6	0.7
Style Index								Regional Index							
MSCI EAFE Growth	2.4	2.4	13.8	8.2	9.2	5.1	5.8	JPM EMBI Global Div	0.5	0.5	2.4	(0.9)	(0.6)	(0.2)	1.8
MSCI EAFE Value	3.2	3.2	9.3	8.4	13.8	1.8	3.4	JPM GBI-EM Global Div	0.9	0.9	6.1	6.6	(0.1)	(1.6)	(1.8)
Regional Index								Hedge Funds							
MSCI UK	5.3	5.3	11.7	8.4	14.7	3.1	3.6	HFRI Composite	0.4	0.4	1.6	(0.3)	9.1	4.7	4.4
MSCI Japan	0.4	0.4	6.6	4.3	5.7	1.2	4.2	HFRI FOF Composite	0.7	0.7	1.4	(0.1)	6.2	3.2	3.2
MSCI Euro	3.2	3.2	19.4	19.9	16.2	3.9	5.7	Currency (Spot)							
MSCI EM Asia	(2.4)	(2.4)	2.3	(6.8)	3.2	(0.3)	3.8	Euro	1.6	1.6	3.4	4.7	0.3	(1.8)	(1.8)
MSCI EM Latin American	2.7	2.7	6.7	5.0	16.8	(1.1)	(1.6)	Pound Sterling	1.7	1.7	4.5	0.1	(0.1)	(1.8)	(2.1)
								Yen	(2.3)	(2.3)	(3.1)	(4.9)	(7.7)	(4.3)	(3.3)

Source: Morningstar, HFRI, as of 4/30/23.



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				
FTSE NAREIT Equity REIT	(16.4)	(2.0)	2.9	6.3

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.

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



^{*} Includes Buyout, Growth Equity and Venture Capital.

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

Notices & disclosures

Past performance is no guarantee of future results. This document is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and is not intended for retail investors. Nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security or pursue a particular investment vehicle or any trading strategy. This document may include or imply estimates, outlooks, projections and other "forward-looking statements." No assurance can be given that future results described or implied by any forward looking information will be achieved. Investing entails risks, including possible loss of principal. Additional information about Verus Advisory, Inc. is available on the SEC's website at www.adviserinfo.sec.gov.

Verus – also known as Verus Advisory™.

