

Market commentary

U.S. ECONOMICS

- The U.S. economy was resilient in the second quarter. Real GDP growth surprised to the upside, increasing at an annualized rate of +2.4% in Q2. Continued strength in consumer spending and a large increase in business investment helped drive the print.
- Business activity remained expansionary but grew at a slower pace.
 The S&P U.S. Composite PMI Index came in at 52.0 in July, down from 53.2 in June. Manufacturing rebounded from the prior month while service sector activity slowed due to rising input prices.
- Job growth was cooler than anticipated, although other measures pointed to continued labor market strength. Nonfarm payrolls increased by 187,000, lower than the estimated 200,000. However, the unemployment rate fell to 3.5% and wage growth was resilient, increasing +4.4% year-over-year.

U.S. EQUITIES

- Gains across sectors drove positive performance from all major U.S. equity indices. The S&P 500 Index rallied +3.2% to bring its year-todate ascent to +20.6%. Market volatility remained muted, with the VIX Index continuing to hover near three-year lows.
- 84% of S&P 500 companies had reported second quarter earnings as of August 4th. Though year-over-year earnings have declined, the percentage of firms reporting earnings above estimates has exceeded historical averages, resulting in better-than-expected results.
- The blended Q2 earnings growth rate for the S&P 500 measured

 -5.2% which, if realized, will mark the largest year-over-year decline since Q3 2020, per FactSet. However, this figure has improved significantly since the end of June, when estimates suggested a -7.0% decline.

U.S. FIXED INCOME

- Following what was dubbed a "hawkish pause" in June, the Fed enacted another 25-bp interest rate hike in a move that was widely expected by market participants. The hike brought the upper bound of the Fed's target rate to 5.50%, a 22-year high.
- July remarks from Fed Chairman Jerome Powell revealed that Fed officials no longer expect a 2023 recession given the continued influx of strong economic data. Investor expectations for a rate hike at the September FOMC meeting have largely dissipated.
- Rate moves were concentrated on the long-end of the curve.
 Yields on two-year Treasuries ended the month flat despite dipping early in the month following a cooler-than-expected June CPI print.

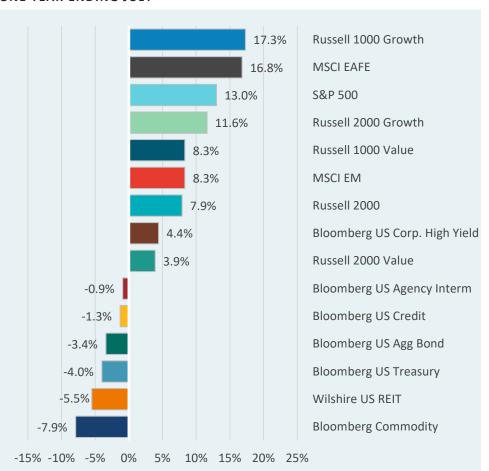
INTERNATIONAL MARKETS

- Eurozone PMI readings pointed toward a worsening economic outlook. The July composite PMI fell to 48.9, signaling contraction, led by drops in the manufacturing and services indices.
 Manufacturing activity was particularly weak due to a sharp decline in new orders.
- The Bank of Japan made a surprise decision to ease yield curve control measures on 10-year JGBs which sent rates on the tenor to nine-year highs. Despite the move, BOJ Governor Ueda noted that the bank intends to stay the course with its longstanding policy.
- Chinese equities rallied +10.8% following additional government measures to increase consumption. Chinese equities have lagged emerging market peers in recent months as a combination of slower pandemic reopening data and geopolitical tension with the U.S. has resulted in negative sentiment.

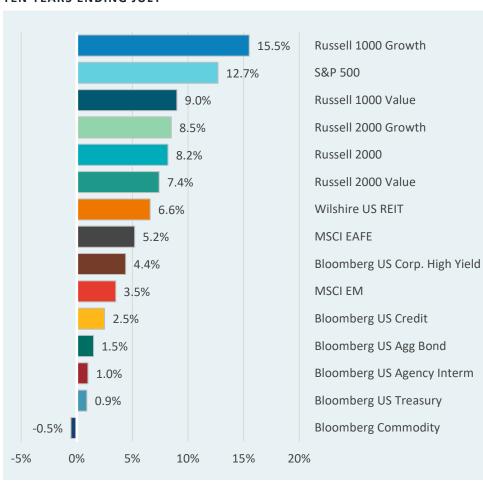


Major asset class returns

ONE YEAR ENDING JULY



TEN YEARS ENDING JULY



*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 7/31/23

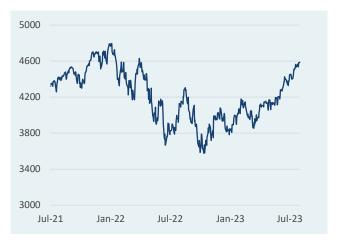
Source: Morningstar, as of 7/31/23



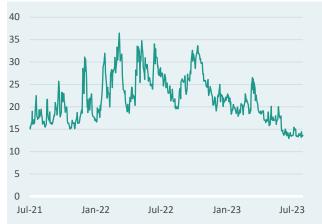
U.S. large cap equities

- The S&P 500 Index (+3.2%) rallied for a third consecutive month. Persistent signs of economic strength helped subdue expectations for a 2023 recession and led market participants to assess a greater likelihood of a soft-landing scenario.
- All 11 sectors advanced in July. Energy (+7.4%) names performed best thanks to a recent rally in fuel prices. Communications Services (+6.9%) was the next best performer, driven by strong Q2 earnings from Alphabet and Meta. Defensive sectors broadly underperformed cyclicals, likely reflecting increased investor optimism surrounding the second-half economic outlook.
- Equity market volatility as measured by the VIX Index remained well below historical averages. The index ended the month flat at 13.6 as market moves were less volatile – there were no daily percentage changes exceeding 1% for the S&P 500 Index in July.
- While Q2 EPS growth has been better than expected, investors have not responded as positively to individual earnings releases compared to prior quarters.
 Companies have traded down by an average of roughly -1% following the release of Q2 earnings, lower than the previous eight quarters per Morgan Stanley.

S&P 500 PRICE INDEX



IMPLIED VOLATILITY (VIX INDEX)



Source: Choe, as of 7/31/23

S&P 500 VALUATION SNAPSHOT



Source: Bloomberg, as of 7/31/23

Source: Bloomberg, as of 7/31/23

Domestic equity size and style

- Small-cap equities (+6.1%) were the best performer among major U.S. equity indices for a second straight month. Regional banks (+17.5%) continued to bounce back from May lows and posted their strongest month since the onset of the banking crisis in March. Energy was also a tailwind, gaining +12.6% over the month.
- Large-cap names (+3.4%) did not see the same magnitude of gains at the sector or index level. The outsized moves from small-caps likely reflect their heightened sensitivity to signs of improving economic conditions relative to large-caps.
- Value (+7.5%) largely outperformed growth in the small-cap space (+4.7%) given strength in the energy and financials sectors, which did not experience the same performance tailwinds as growth-oriented peers in the first two quarters.
- Performance across large-cap value (+3.5%) and growth (+3.4%) was similar over the month, diverging from the trend of growth outperformance. Sector gains were broad and the recent rally in mega-cap tech names cooled as investors digested Q2 earnings.

VALUE VS. GROWTH 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, Bloomberg, as of 7/31/23

SMALL VS. LARGE 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, Bloomberg, as of 7/31/23

1-YEAR SIZE & STYLE PERFORMANCE

	Value	Core	Growth
Large Cap	9.3%	14.5%	19.5%
Mid Cap	7.3%	9.9%	14.2%
Small Cap	4.6%	8.6%	12.4%

Source: FTSE, Bloomberg, as of 7/31/23



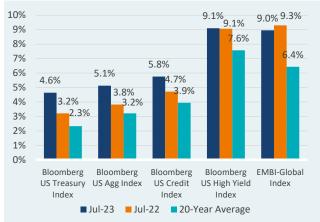
Fixed income

- U.S. rate movements over the month were concentrated in the long-end of the curve, partially due to a larger-than-expected quarterly Treasury issuance for long-dated bonds. Yields on the two-year fell in the first 15 days but ended 1 bp higher, while ten- and thirty-year yields rose 12 bps and 15 bps, respectively.
- These rate movements were reflected in performance, with longer duration bonds taking losses. The
 Bloomberg Long Duration index fell -2.2% in July, in
 contrast to the +0.3% gain seen from the short-duration
 index (Bloomberg 1-3 Year Treasury Index).
- Riskier credit notched another positive month, with emerging market debt in local currency terms outperforming (+2.9%). High-yield bonds, bank loans, and emerging market debt in hard currency terms all gained more than 1.0% in July, adding to strong performance over the year-to-date.
- Despite the positive performance, default and distressed activity has been elevated in 2023 per J.P.
 Morgan. There has been \$55.3B in default and distressed volume across high-yield and bank loans this year, surpassing the 2021- and 2022-year totals of \$13.9B and \$47.8B.

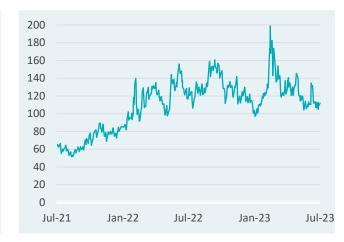
U.S. TREASURY YIELD CURVE



NOMINAL YIELDS



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



Source: Morningstar, as of 7/31/23

Source: Bloomberg, as of 7/31/23

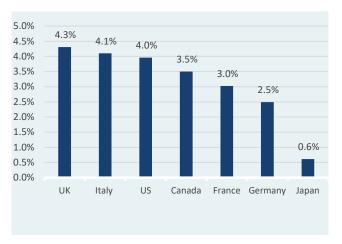


Source: Bloomberg, as of 7/31/23

Global markets

- Global markets started off the third quarter on a positive note. Slowing inflation data, strong labor metrics, and a more resilient global economic growth narrative all helped boost risk assets. Global equities advanced +3.7% over the month, with gains seen across all the regional equity indices we follow.
- The Chinese government continued their campaign to help boost domestic consumption. Reopening growth has been slower than many originally expected, with stimulus being focused on targeted areas rather than broader expansionary policy from the People's Bank of China.
- In a step towards enhancing the sustainability of yield curve control, the Bank of Japan loosened up its policy around 10-year JGBs, effectively expanding its tolerance band from 0.50% to 1.00%. Yield curve control has been a pain point for the Japanese Yen, which has remained depressed as global rates have risen.
- The European Central Bank raised rates by another 25 bps at its July Meeting, as the Eurozone continues to face inflation that is "too high, for too long". Despite the hike, President Lagarde left the door open to the possibility of a rate pause at their upcoming meeting.

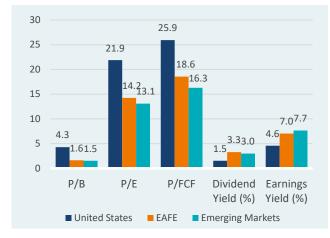
GLOBAL SOVEREIGN 10-YEAR YIELDS



U.S. DOLLAR MAJOR CURRENCY INDEX



MSCI VALUATION METRICS (3-MONTH AVG)



Source: Bloomberg, as of 7/31/23 Source: Federal Reserve, as of 7/31/23 Source: Bloomberg, as of 7/31/23



Commodities

- Commodity prices were broadly higher in July with energy being the main driver of performance. Oil and gas prices got a boost from signs of persistent global economic growth in the face of supply constraints. The Bloomberg Commodity Index recorded its best month of the year, gaining +6.3% in July.
- WTI crude oil prices climbed +15.8% to \$81.80 a barrel in July and notched a three-month high in the process.
 Prices got a bid from multiple factors including lower inventories and rig counts in the U.S., and expectations that Saudi Arabia and Russia would extend their voluntary production cuts.

INDEX AND SECTOR PERFORMANCE

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	6.3	6.3	(2.0)	(7.9)	18.0	6.5	(0.5)
Bloomberg Agriculture	2.6	2.6	1.6	6.0	25.3	10.2	0.4
Bloomberg Energy	11.9	11.9	(10.4)	(31.4)	24.7	(0.8)	(7.9)
Bloomberg Grains	1.7	1.7	(4.4)	0.0	23.5	8.1	(1.4)
Bloomberg Industrial Metals	6.9	6.9	(6.3)	(0.4)	12.3	5.8	2.7
Bloomberg Livestock	2.8	2.8	7.9	12.3	11.7	(0.4)	(1.8)
Bloomberg Petroleum	17.1	17.1	6.7	(1.7)	43.0	7.6	(3.3)
Bloomberg Precious Metals	4.0	4.0	7.1	14.4	(0.5)	8.8	2.8
Bloomberg Softs	5.3	5.3	17.8	15.5	22.5	10.4	(0.0)

Source: Morningstar, as of 7/31/23

- Grain prices rose following Russia's withdrawal from the Black Sea Grain Initiative. The end of the deal, which allowed the safe exit of grain ships from Ukrainian ports, raised concerns of future increases in global food prices. Prices for corn and wheat climbed +3.2% and +2.3%, respectively.
- The Industrial Metals Sub-Index advanced +6.9%. Prices were likely supported by optimism that economic growth might be better than feared. Prices for nickel and copper jumped near month end following an upgrade to the IMF's global growth forecast and the release of a strong Q2 U.S. GDP print.

COMMODITY PERFORMANCE



Source: Bloomberg, as of 7/31/23



Appendix



Periodic table of returns

Large Cap Growth

Small Cap Equity

Small Cap Value

		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	YTD	5-Year	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	33.4	15.2	15.5
Large Cap	p 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	20.7	11.9	12.4
Small Cap	Growth	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	18.9	8.0	9.0
Internation	nal Equity	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	15.3	6.5	8.5
Small Cap	p Equity	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	14.7	5.9	8.2
60/40 Globa	al Portfolio	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	11.5	5.1	7.8
Emerging Ma	rkets 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	11.4	4.8	7.4
Small Ca	p 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	10.2	4.8	5.4
Large Ca	p Value	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	8.8	4.7	5.2
Hedge Fund	ds of Funds	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	3.4	4.5	3.5
Cas	sh	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	2.7	3.5	3.4
US Bo	onds	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	2.0	1.7	1.5
Commo	odities	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	-2.0	1.5	1.0
Real E	state	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	-3.8	0.7	-0.5
	Large Cap Equity							Small Cap Growth					Commodities											
Large Cap Value						International Equity Real Estate																		

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 6/30/23.

Emerging Markets Equity

US Bonds

Cash

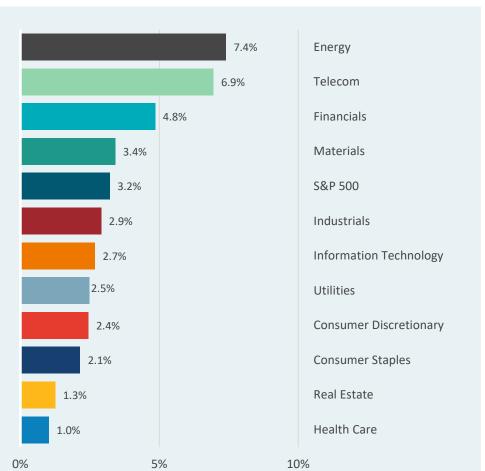


Hedge Funds of Funds

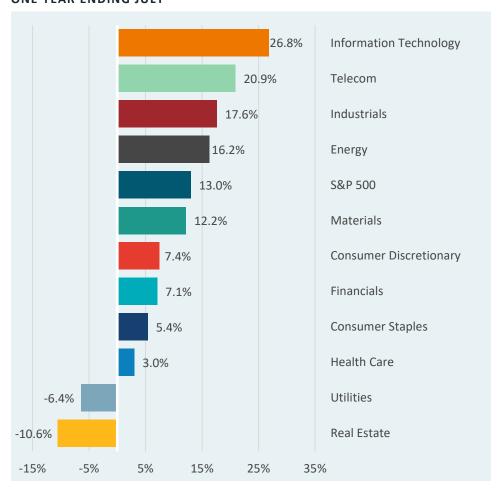
60% MSCI ACWI/40% Bloomberg Global Bond

S&P 500 sector returns

QTD



ONE YEAR ENDING JULY



Source: Morningstar, as of 7/31/23

Source: Morningstar, as of 7/31/23



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	3.2	3.2	20.6	13.0	13.7	12.2	12.7	Bloomberg US TIPS	0.1	0.1	2.0	(5.4)	(0.8)	2.6	2.0
S&P 500 Equal Weighted	3.5	3.5	10.7	8.3	15.3	10.3	11.3	Bloomberg US Treasury Bills	0.4	0.4	2.7	4.0	1.4	1.6	1.0
DJ Industrial Average	3.4	3.4	8.5	10.6	12.6	9.3	11.2	Bloomberg US Agg Bond	(0.1)	(0.1)	2.0	(3.4)	(4.5)	0.7	1.5
Russell Top 200	3.3	3.3	23.3	14.4	13.7	13.1	13.3	Bloomberg US Universal	0.1	0.1	2.4	(2.4)	(4.0)	1.0	1.8
Russell 1000	3.4	3.4	20.7	12.9	13.2	11.9	12.4	Duration							
Russell 2000	6.1	6.1	14.7	7.9	12.0	5.1	8.2	Bloomberg US Treasury 1-3 Yr	0.3	0.3	1.3	0.1	(1.0)	1.0	0.8
Russell 3000	3.6	3.6	20.3	12.6	13.1	11.4	12.1	Bloomberg US Treasury Long	(2.2)	(2.2)	1.5	(11.2)	(13.9)	(1.0)	1.8
Russell Mid Cap	4.0	4.0	13.3	8.7	11.8	8.8	10.1	Bloomberg US Treasury	(0.4)	(0.4)	1.2	(4.0)	(5.3)	0.5	0.9
Style Index								Issuer							
Russell 1000 Growth	3.4	3.4	33.4	17.3	12.2	15.2	15.5	Bloomberg US MBS	(0.1)	(0.1)	1.8	(4.7)	(3.8)	0.0	1.1
Russell 1000 Value	3.5	3.5	8.8	8.3	14.1	8.0	9.0	Bloomberg US Corp. High Yield	1.4	1.4	6.8	4.4	2.0	3.4	4.4
Russell 2000 Growth	4.7	4.7	18.9	11.6	6.5	4.8	8.5	Bloomberg US Agency Interm	0.2	0.2	1.7	(0.9)	(2.0)	0.8	1.0
Russell 2000 Value	7.5	7.5	10.2	3.9	17.5	4.7	7.4	Bloomberg US Credit	0.3	0.3	3.4	(1.3)	(4.3)	1.6	2.5
INTERNATIONAL EQUITY								OTHER							
Broad Index								Index							
MSCI ACWI	3.7	3.7	18.1	12.9	10.4	8.2	8.6	Bloomberg Commodity	6.3	6.3	(2.0)	(7.9)	18.0	6.5	(0.5)
MSCI ACWI ex US	4.1	4.1	13.9	13.4	7.1	3.9	4.7	Wilshire US REIT	3.1	3.1	10.0	(5.5)	8.1	4.9	6.6
MSCI EAFE	3.2	3.2	15.3	16.8	9.3	4.5	5.2	CS Leveraged Loans	1.3	1.3	7.7	9.5	6.0	4.1	4.2
MSCI EM	6.2	6.2	11.4	8.3	1.5	1.7	3.5	S&P Global Infrastructure	2.0	2.0	5.9	2.2	10.3	5.4	6.4
MSCI EAFE Small Cap	4.4	4.4	10.2	7.9	6.1	2.1	6.0	Alerian MLP	6.1	6.1	16.5	23.9	35.5	5.8	1.4
Style Index								Regional Index							
MSCI EAFE Growth	2.0	2.0	16.4	13.6	5.4	5.4	6.1	JPM EMBI Global Div	1.9	1.9	6.1	6.4	(3.7)	0.4	2.9
MSCI EAFE Value	4.5	4.5	14.2	20.2	12.9	3.3	4.0	JPM GBI-EM Global Div	2.9	2.9	10.9	14.3	(1.5)	0.5	(0.2)
Regional Index								Hedge Funds							
MSCI UK	3.4	3.4	12.2	12.9	13.3	3.3	3.6	HFRI Composite	1.5	1.5	5.0	5.3	7.6	5.2	4.7
MSCI Japan	3.0	3.0	16.4	15.1	7.3	3.7	5.5	HFRI FOF Composite	1.0	1.0	3.4	4.0	4.6	3.5	3.4
MSCI Euro	2.7	2.7	23.2	30.0	11.3	5.1	5.6	Currency (Spot)							
MSCI EM Asia	6.2	6.2	10.5	6.6	0.1	2.3	5.2	Euro	1.1	1.1	3.3	8.1	(2.3)	(1.2)	(1.8)
MSCI EM Latin American	5.1	5.1	24.6	30.9	14.4	4.0	1.7	Pound Sterling	1.2	1.2	7.0	5.7	(0.7)	(0.4)	(1.6)
								Yen	1.7	1.7	(7.1)	(5.9)	(9.4)	(4.7)	(3.6)

Source: Morningstar, HFRI, as of 7/31/23.



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	(8.7)	19.7	16.2	13.8
Global Private Equity Direct Funds *	(9.4)	19.2	17.3	15.9
U.S. Private Equity Direct Funds *	(9.1)	21.8	19.5	17.6
Europe Private Equity Direct Funds *	(9.4)	16.8	15.6	14.0
Asia Private Equity Direct Funds *	(8.3)	11.3	10.3	12.8
Public Index Time-weighted Returns				
MSCI World	(18.1)	4.9	6.1	8.9
S&P 500	(18.1)	7.7	9.4	12.6
MSCI Europe	(15.1)	1.3	1.9	4.6
MSCI AC Asia Pacific	(17.2)	(0.8)	0.2	4.3

(0.6)	1.9	3.1	3.2
1 Year	3 Year	5 Year	10 Year
20.8	10.9	5.0	3.6
2 1	11 2	10.4	10.9
	1 Year 20.8	1 Year 3 Year 20.8 10.9	1 Year 3 Year 5 Year

5.3

10.3

(0.2)

Private Credit Pooled IRRs

Public Index Time-weighted Returns

Public Index Time-weighted Returns

S&P Global Natural Resources

S&P Global Infrastructure

U.S. All Private Debt **

Private Real Estate Pooled IRRs	1 Year	3 Year	5 Year	10 Year
U.S. All Private Real Estate	5.8	12.0	10.9	12.7
Public Index Time-weighted Returns				
FTSE NAREIT Equity REIT	(24.4)	(0.1)	3.7	6.5

 $Source: Pooled\ IRRs\ are\ from\ Thompson\ Reuters\ C/A\ and\ Time-weighted\ Returns\ are\ from\ Investment\ Metrics,\ as\ of\ December\ 31^{st},\ 2022.\ All\ returns\ in\ U.S.\ dollars.$

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



1 Year 3 Year 5 Year 10 Year

12.3

7.3

3.9

11.3

4.9

6.5

15.3

11.6

1.7

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

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

Notices & disclosures

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