PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

OCTOBER 2020 Capital Markets Update

Verus⁷⁷

Market commentary

U.S. ECONOMICS

- Real U.S. GDP expanded at an annualized quarterly rate of 33.1% in the third quarter (-2.9% year-over-year), following a historic -31.4% plunge in Q2. Personal consumption expenditures contributed 68% to the quarterly annualized advance. Government spending contracted following the expiration of the CARES Act, and weighed on growth.
- The U.S. labor market extended its rebound in October and nonfarm payroll employment rose by 638,000. Notable gains were seen in the leisure and hospitality sector where 4.8 million jobs have been added since April. Still, the sector's payrolls remain 3.5 million below levels seen in February. Broad unemployment improved from 7.9% to 6.9%, though the labor force participation rate remained subdued.
- The ISM Non-Manufacturing PMI ticked down from 57.8 to 56.6 in October but remained in expansionary territory (above 50.0) for the fifth consecutive month.

U.S. EQUITIES

- The S&P 500 Index continued to fall lower in October and declined
 -2.7%. The two largest sectors in the S&P 500, information technology
 (-5.1%) and health care (-4.4%), which make up 25.5% and 10.8% of the index respectively, weighed heavily on performance in October.
- At month-end, the forward 12-month P/E ratio for the S&P 500 was 20.6, well above the 5-year average P/E of 17.3.
- As of month end, 64% of companies in the S&P 500 had reported Q3 results and 86% of those companies have posted better-thanexpected earnings. If 86% is the final percentage, it will be the largest percentage of companies to post positive EPS surprise since 2008.

U.S. FIXED INCOME

- The Federal Reserve left the target range for the federal funds rate unchanged at 0-0.25% and reiterated its commitment to keep rates accommodative until labor markets reach maximum employment and inflation exceeds 2.0% for some time. The Fed will continue to increase its holdings of Treasury securities and agency mortgage-backed securities over the coming months to support the flow of credit to households and businesses.
- Ten-year U.S. Treasury yields pushed up toward the top-end of their trading range through the pandemic and finished the month at 0.87%.
- The yield on the 30-year Treasury bond traded 19 basis points higher in October and ended the period at 1.66%. Long-duration Treasuries (BBgBarc US Treasury Long) returned -3.0%.

INTERNATIONAL MARKETS

- Chinese GDP grew at an annualized quarterly pace of 2.7% in the third quarter following an 11.5% increase in the second quarter. Year-over-year GDP growth picked up from 3.2% to 4.9%.
- The IHS Markit Eurozone Services PMI fell from 48.0 to 46.9 in October, dropping further away from the expansionary level of 50.0 over the month. Input costs increased for the fifth consecutive month, and the print indicated that weak demand led to price discounting amongst service providers.
- Eurozone GDP recovered by more than initial estimates in the third quarter, and grew at an annualized quarterly rate of 12.7% in Q3, up from -11.8% in Q2. Still, Eurozone gross domestic product remained -4.3% below its Q3 2019 level.

Major asset class returns

ONE YEAR ENDING OCTOBER



*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 10/31/20

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Source: Morningstar, as of 10/31/20

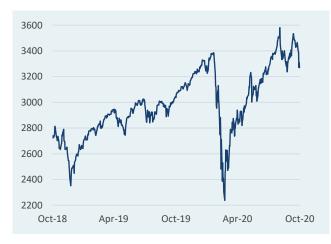
TEN YEARS ENDING OCTOBER

3

U.S. large cap equities

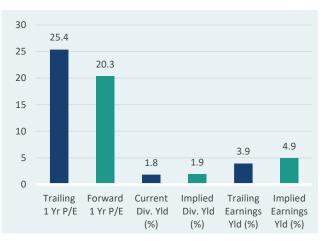
- The S&P 500 Index ended a volatile month down -2.7%. By October 12th, the index had climbed 5.1% over the month-to-date, although gains were erased in the second half of the month. The price index reached intra-month highs of 3534 but finished October at 3270.
- At month-end, 46 companies had issued EPS guidance for the fourth quarter of 2020. Of the few companies issuing guidance, 67% of companies issued positive earnings guidance compared to the five-year average of 32%. While equities remain at lofty valuations, fundamentals appear to be on an encouraging track.
- Of the 11 major sectors in the S&P 500 Index only two, utilities (+1.3%) and telecom (+0.8%), delivered positive returns over the month. The energy (-4.4%) and information technology (-5.1%) sectors underperformed the overall index.
- The Cboe VIX Index of implied volatility jumped 11.6 points in October and closed the month at 38.0, its highest level since June, and a level well above historical averages. Investors continue to expect elevated levels of volatility around the election, levels that may then fall closer to average toward the beginning of 2021.

S&P 500 PRICE INDEX





S&P 500 VALUATION SNAPSHOT



Source: Bloomberg, as of 10/31/20

Source: CBOE, as of 10/31/20

Source: Bloomberg, as of 10/31/20

Domestic equity size and style

- Value stocks (Russell 3000 Value -1.0%) outperformed growth stocks (Russell 3000 Growth -3.2%) for the second consecutive month. Within the small cap universe, the value factor outperformed as well -Russell 2000 Value Index outpaced the Russell 2000 Growth Index by +2.8%.
- The iShares Edge MSCI USA Quality Factor ETF, an index fund which seeks to track the performance of high quality large- and mid-cap stocks based on return-onequity ratios, earnings consistency, and leverage, fell
 -2.3%, but beat the overall S&P 500 Index (-2.7%).
- Small-cap equities (Russell 2000 Index +2.1%) outperformed large-cap equities (Russell 1000 Index -2.4%) in October. The heavy weight of the information technology sector within the large cap index presented material headwinds for performance.
- The S&P 500 Low Volatility High Dividend Index declined -1.3%, outperforming the S&P 500 Index (-2.7%). Investors were paid for positioning themselves more defensively within their equity portfolios in October.

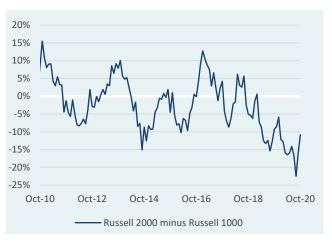
VALUE VS. GROWTH RELATIVE VALUATIONS



VALUE VS. GROWTH 1-YR ROLLING RELATIVE PERFORMANCE



SMALL VS. LARGE 1-YR ROLLING RELATIVE PERFORMANCE



Source: Russell, Bloomberg, as of 10/31/20

Source: FTSE, Bloomberg, as of 10/31/20

Source: FTSE, Bloomberg, as of 10/31/20

5

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Fixed income

- The European Central Bank decided to leave its monetary policy and rates unchanged. The interest rates on the ECB's main refinancing operation, marginal lending facility and deposit facility remain at 0.00%, 0.25% and -0.50%, respectively. The bank hinted that they would strongly consider announcing further monetary stimulus in December.
- Global rates advanced, resulting in negative performance for most bondholders. Credit spreads continued to compress however, leading riskier credit (BBgBarc HY +0.5%) to outperform safer credit (BBgBarc U.S. Agg -0.4%).
- Global risky credit performed relatively well in October. Local-currency denominated emerging market debt (J.P. Morgan GBI-EM) returned +0.4% and outperformed hard-currency denominated emerging market debt (JPM EMBI Global Diversified Index +0.0%).
- Treasury yields drifted higher, likely impacted by the increase in the chances for a Biden presidency which many investors viewed as more likely to deliver larger fiscal stimulus which might increase longer-term expectations for growth and inflation. The 10-year yield rose from 0.69% to 0.88% over the month.

U.S. TREASURY YIELD CURVE



NOMINAL YIELDS



BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 10/31/20

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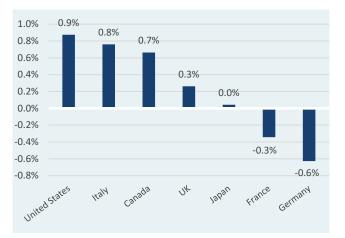
Source: Morningstar, as of 10/31/20

Source: Bloomberg, as of 10/31/20

Global markets

- Emerging market equities (MSCI EM +2.1%) outperformed U.S. (S&P 500 -2.7%) and international developed equities (MSCI EAFE -4.0%) in U.S. dollar terms. Asian EM equities (MSCI EM Asia +3.3%) posted strong performance in October and were a bright spot within the global equity opportunity set.
- COVID-19 case growth accelerated in October, especially in Europe. Social distancing controls were tightened or added across much of the continent, reigniting fears over the economic impacts of a second wave of sweeping lockdowns.
- European sovereign bond yields declined in October. The 10-year German bund yield fell deeper into negative territory from -0.52% to -0.63%, and Italian 10-year bond yields ticked down from 0.86% to 0.76% over the same period.
- Emerging market currencies broadly appreciated relative to the U.S. dollar, bolstering emerging market equities' (MSCI EM Index +2.1%) outperformance of world indices in U.S. dollar-terms. The Mexican peso (+4.4%) and South African rand (+3.1%) appreciated most significantly relative to the dollar in October.

GLOBAL SOVEREIGN 10-YEAR YIELDS

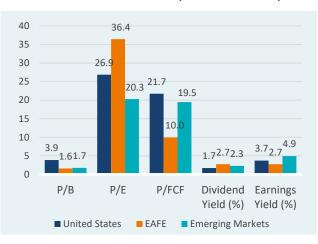


U.S. DOLLAR MAJOR CURRENCY INDEX

Source: Federal Reserve, as of 10/31/20



MSCI VALUATION METRICS (3-MONTH AVG)



Source: Bloomberg, as of 10/31/20

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Source: Bloomberg, as of 10/31/20

Commodities

- The Bloomberg Commodity Index was up +1.4% and was driven higher by the grains (+4.2%) and industrial metals (+3.0%) sectors. Petroleum price movement reflected the downturn in other risk markets and reports of growing U.S. stockpiles likely contributed to declines.
- The petroleum sector declined -10.7% over the month and WTI crude oil prices fell to five-month lows. Accelerating coronavirus infections in Europe brought back concerns over petroleum demand, and higher-thanexpected production in Libya added further downward price pressure within the sector.
- The Bloomberg Industrial Metals Sub-Index advanced +3.0% over the month, as the aluminum (+5.3%), zinc (+4.7%), and nickel (+4.3%) all posted solid gains. Copper, which holds the highest weight amongst industrial metals in the overall Bloomberg Commodity Index (7.0%), gained just +0.5%.
- The Bloomberg Agriculture Index gained +3.9% over the month. Grains (+4.2%) advanced on the strong performance of soybeans (+4.2%) and corn (+4.9%). The performance of softs (+1.6%), another component of the agriculture index, was supported by sugar prices (+6.3%).

INDEX AND SECTOR PERFORMANCE

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	1.4	1.4	(10.8)	(8.7)	(4.4)	(2.7)	(6.4)
Bloomberg Agriculture	3.9	3.9	(0.3)	5.0	(3.6)	(4.6)	(6.1)
Bloomberg Energy	(0.5)	(0.5)	(44.3)	(42.0)	(16.7)	(13.5)	(15.0)
Bloomberg Grains	4.2	4.2	1.8	4.0	(2.4)	(5.9)	(6.2)
Bloomberg Industrial Metals	3.0	3.0	4.9	2.8	(1.8)	5.8	(3.6)
Bloomberg Livestock	(1.2)	(1.2)	(26.2)	(26.6)	(13.9)	(8.1)	(4.9)
Bloomberg Petroleum	(10.7)	(10.7)	(55.6)	(50.3)	(19.3)	(14.0)	(12.8)
Bloomberg Precious Metals	(0.5)	(0.5)	22.1	22.0	11.9	8.7	1.5
Bloomberg Softs	1.6	1.6	(8.5)	3.4	(8.3)	(5.9)	(9.4)



Source: Bloomberg, as of 10/31/20

COMMODITY PERFORMANCE



Source: Morningstar, as of 10/31/20





Periodic table of returns

Small Cap Equity

Small Cap Value

BEST

WORST

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	YTD	5-Year	10-Yea
Large Cap Growth	38.7	66.4	31.8	14.0	25.9	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	20.1	17.3	16.3
US Bonds	27.0	43.1	22.8	8.4	10.3	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	6.3	11.8	13.0
Small Cap Growth	20.3	33.2	12.2	7.3	6.7	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	4.7	10.4	12.0
Large Cap Equity	19.3	27.3	11.6	3.3	1.6	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	3.8	7.9	9.6
Hedge Funds of Funds	16.2	26.5	7.0	2.8	1.0	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	2.5	7.3	9.5
60/40 Global Portfolio	8.7	21.3	4.1	-2.4	-6.0	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	22.4	2.1	6.7	9.4
merging Markets Equity	15.6	24.3	6.0	2.5	-5.9	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	22.0	0.9	6.3	7.1
Real Estate	4.9	20.9	-3.0	-5.6	-11.4	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	0.5	5.8	5.8
Cash	1.2	13.2	-7.3	-9.1	-15.5	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	0.4	4.1	3.8
Small Cap Equity	-2.5	11.4	-7.8	-9.2	-15.7	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	-6.8	3.7	3.6
International Equity	-5.1	7.3	-14.0	-12.4	-20.5	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	-10.8	3.1	2.9
Commodities	-6.5	4.8	-22.4	-19.5	-21.7	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	-10.8	2.8	2.4
Large Cap Value	-25.3	-0.8	-22.4	-20.4	-27.9	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	-12.7	1.1	0.6
Small Cap Value	-27.0	-1.5	-30.6	-21.2	-30.3	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	-18.7	-2.7	-6.4
			Large	e Cap Ec	quity				Small	Cap Gro	owth				Comm	odities									
			Large	e Cap Va	alue				Intern	ationa	l Equity				Real Es	state									
			Large	e Cap Gi	rowth				Emerg	ing Ma	rkets Eq	uity			Hedge	Funds o	of Funds								
				•						-					0										

60% MSCI ACWI/40% BBgBarc Global Bond

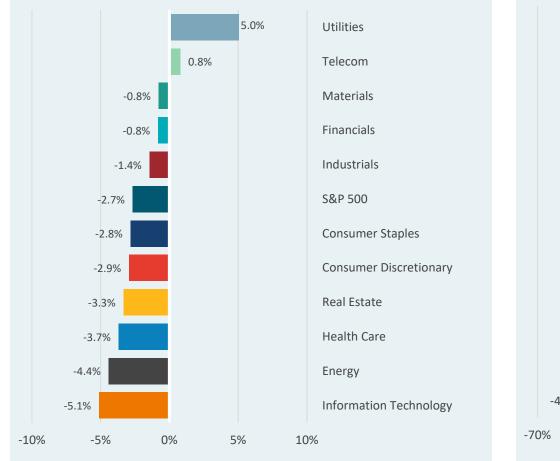
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 9/30/20.

US Bonds

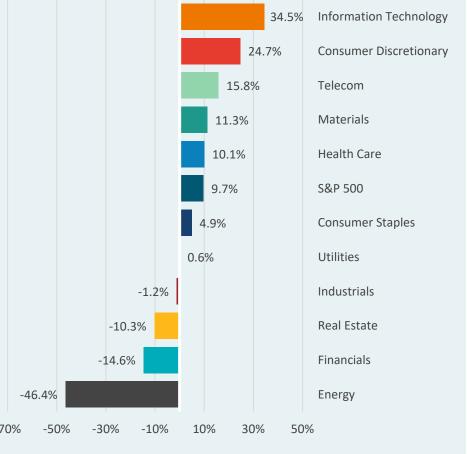
Cash



S&P 500 sector returns



ONE YEAR ENDING OCTOBER



Source: Morningstar, as of 10/31/20

Source: Morningstar, as of 10/31/20



OCTOBER

Detailed index returns

DOMESTIC EQUITY							
	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	(2.7)	(2.7)	2.8	9.7	10.4	11.7	13.0
S&P 500 Equal Weighted	(0.6)	(0.6)	(5.3)	0.6	5.9	8.6	11.6
DJ Industrial Average	(4.5)	(4.5)	(5.4)	0.3	6.7	11.1	11.8
Russell Top 200	(3.4)	(3.4)	5.9	13.4	12.1	12.9	13.7
Russell 1000	(2.4)	(2.4)	3.8	10.9	10.6	11.8	13.0
Russell 2000	2.1	2.1	(6.8)	(0.1)	2.2	7.3	9.6
Russell 3000	(2.2)	(2.2)	3.1	10.1	10.0	11.5	12.8
Russell Mid Cap	0.6	0.6	(1.7)	4.1	6.8	9.0	11.4
Style Index							
Russell 1000 Growth	(3.4)	(3.4)	20.1	29.2	18.8	17.3	16.3
Russell 1000 Value	(1.3)	(1.3)	(12.7)	(7.6)	1.9	5.8	9.5
Russell 2000 Growth	0.8	0.8	4.7	13.4	7.9	10.4	12.0
Russell 2000 Value	3.6	3.6	(18.7)	(13.9)	(4.1)	3.7	7.1
INTERNATIONAL EQUITY							
Broad Index							
MSCI ACWI	(2.4)	(2.4)	(1.1)	4.9	5.5	8.1	7.9
MSCI ACWI ex US	(2.1)	(2.1)	(7.5)	(2.6)	(0.2)	4.3	3.4

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	(0.6)	(0.6)	8.5	9.1	5.5	4.4	3.2
BBgBarc US Treasury Bills	0.0	0.0	0.7	1.0	1.7	1.2	0.7
BBgBarc US Agg Bond	(0.4)	(0.4)	6.3	6.2	5.1	4.1	3.6
Duration							
BBgBarc US Treasury 1-3 Yr	(0.0)	(0.0)	3.1	3.2	2.7	1.8	1.3
BBgBarc US Treasury Long	(3.0)	(3.0)	17.7	13.8	10.8	7.7	7.2
BBgBarc US Treasury	(0.9)	(0.9)	7.9	6.9	5.2	3.6	3.1
Issuer							
BBgBarc US MBS	(0.0)	(0.0)	3.6	3.9	3.7	3.0	2.9
BBgBarc US Corp. High Yield	0.5	0.5	1.1	3.5	4.2	6.3	6.3
BBgBarc US Agency Interm	(0.1)	(0.1)	3.9	3.9	3.2	2.3	1.9
BBgBarc US Credit	(0.2)	(0.2)	6.2	6.7	6.0	5.6	4.9
Index							
Index							
Bloomberg Commodity	1.4	1.4	(10.8)	(8.7)	(4.4)	(2.7)	(6.4)
Wilshire US REIT	(2.5)	(2.5)	(18.8)	(20.5)	(0.1)	5.7	12.7
CS Leveraged Loans	0.2	0.2	(0.7)	1.5	3.0	4.6	5.0
Alerian MLP	4.4	4.4	(46.1)	(44.9)	(19.5)	(13.2)	(4.0)
Regional Index	(0.0)	(0.0)	(0.5)				
JPM EMBI Global Div	(0.0)	(0.0)	(0.5)	1.0	3.4	5.6	5.2
JPM GBI-EM Global Div	0.4	0.4	(5.9)	(3.8)	1.3	3.9	0.4
Hedge Funds	0.4		4.2		2.6	2.0	2.5
HFRI Composite	0.4	0.4	1.2	4.2	2.6	3.8	3.5
HFRI FOF Composite	0.2	0.2	2.8	5.4	2.6	3.0	2.8
Currency (Spot)	(0.7)	(0.7)	2.0	4.4	(0,0)	1 1	(1.0)
Euro	(0.7)	(0.7)	3.8	4.4	(0.0)	1.1	(1.8)
Pound	0.0	0.0	(2.4)	(0.1)	(0.9)	(3.5)	(2.1)
Yen	0.9	0.9	4.0	3.4	2.8	2.9	(2.6)

FIXED INCOME

3.8

2.4

6.5

6.2

1.3

1.1

5.8

2.2

5.5

(6.1)

Source: Morningstar, HFRI, as of 10/31/20

(4.0)

2.1

(3.5)

(4.0)

(4.0)

(5.0)

(1.6)

(6.6)

3.3

(1.1)

(4.0)

2.1

(3.5)

(4.0)

(4.0)

(5.0)

(1.6)

(6.6)

3.3

(1.1)

(10.8)

0.9

(7.5)

0.5

(21.6)

(27.3)

(2.3)

(15.0)

11.6

(36.8)

(6.9)

8.3

(1.4)

5.2

(18.4)

(22.3)

0.3

(11.4)

20.1

(33.1)

(1.2)

1.9

(0.4)

4.8

(7.4)

(7.4)

1.8

(4.5)

5.0

(11.1)

2.8

7.9

5.4

6.6

(1.1)

(2.8)

5.1

1.2

10.4

0.6



MSCI EM Latin American

MSCI EAFE

Style Index MSCI EAFE Growth

MSCI EAFE Value

Regional Index MSCI UK

MSCI Japan

MSCI Euro

MSCI EM Asia

MSCI EAFE Small Cap

MSCI EM

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	4.0	10.5	8.8	12.0
Global Private Equity Direct Funds *	9.3	13.8	12.1	14.5
U.S. Private Equity Direct Funds *	9.7	14.8	12.3	15.5
Europe Private Equity Direct Funds *	5.1	12.6	14.0	13.5
Asia Private Equity Direct Funds *	13.1	13.0	11.0	13.4
Public Index Time-weighted Returns				
MSCI World	2.8	6.7	6.9	10.0
S&P 500	7.5	10.7	10.7	14.0
MSCI Europe	(6.8)	0.0	1.5	5.7
MSCI AC Asia Pacific	1.0	3.2	4.0	6.0

Private Real Estate Pooled IRRs	1 Year	3 Year	5 Year	10 Year
U.S. All Private Real Estate	(1.4)	6.0	7.7	12.3
Public Index Time-weighted Returns				
FTSE NAREIT Equity REIT	(13.0)	0.0	4.1	9.1

Private Credit Pooled IRRs	1 Year	3 Year	5 Year	10 Year
U.S. All Private Debt **	(1.5)	5.2	6.5	10.0
Public Index Time-weighted Returns				
S&P / LSTA U.S. Leveraged Loan 100 Index	(0.5)	2.5	3.0	4.1

Private Real Assets Pooled IRRs	1 Year	3 Year	5 Year	10 Year
Global Nature Resources ***	(23.7)	(7.3)	(4.3)	0.5
Global Infrastructure	3.2	8.4	10.0	9.8
Public Index Time-weighted Returns				
S&P Global Natural Resources	(16.8)	(0.1)	0.9	1.5
S&P Global Infrastructure	(14.8)	(0.9)	2.6	6.9

Source: Pooled IRRs are from Thompson Reuters C|A and Time-weighted Returns are from Investment Metrics, as of June 30th, 2020. All returns in U.S. dollars.

* 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.



13

Notices & disclosures

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