Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

OCTOBER 2017

Capital Markets Update

Market commentary

ECONOMIC CLIMATE

- Real U.S. GDP grew 2.3% YoY in the third quarter (3.0% QoQ annualized), above the second quarter growth rate of 2.1% YoY (2.6% QoQ annualized). Consumer spending, government spending and exports provided a positive boost to Q3 growth.
- As of November 3rd, the Q4 Atlanta Fed GDPNow forecast for real U.S. GDP growth was 3.3% (QoQ annualized).
- The U.S. dollar potentially reversed its downward trend in October and appreciated by 1.6% against a basket of major currencies. The Bloomberg Dollar Spot index was down -7.5% year-to-date.
- The ISM Manufacturing index decreased in October from 60.8 to 58.7, below the consensus estimate of 59.5. Readings above 50 indicate general expansion in manufacturing. The inventories sub-index was a detractor – falling from 52.5 to 48.0 in the month.
- The Conference Board's Consumer Confidence Index, a survey of consumers' perception of economic conditions, increased in October from 120.6 to 125.9, above the consensus estimate of 121.0 and well above the 20-year average of 92.8.

DOMESTIC EQUITIES

- Domestic equities experienced positive returns in October (S&P 500 +2.3%). Realized volatility of the index remained low at 4.4% (annualized) during the month, well below the 5-year trailing volatility of 12.0%
- As of November 10th, 91% of S&P 500 companies had reported third quarter earnings. According to FactSet, the blended Q3 earnings growth rate was 6.1% YoY, well above the September 30th estimate of 3.0%.

DOMESTIC FIXED INCOME

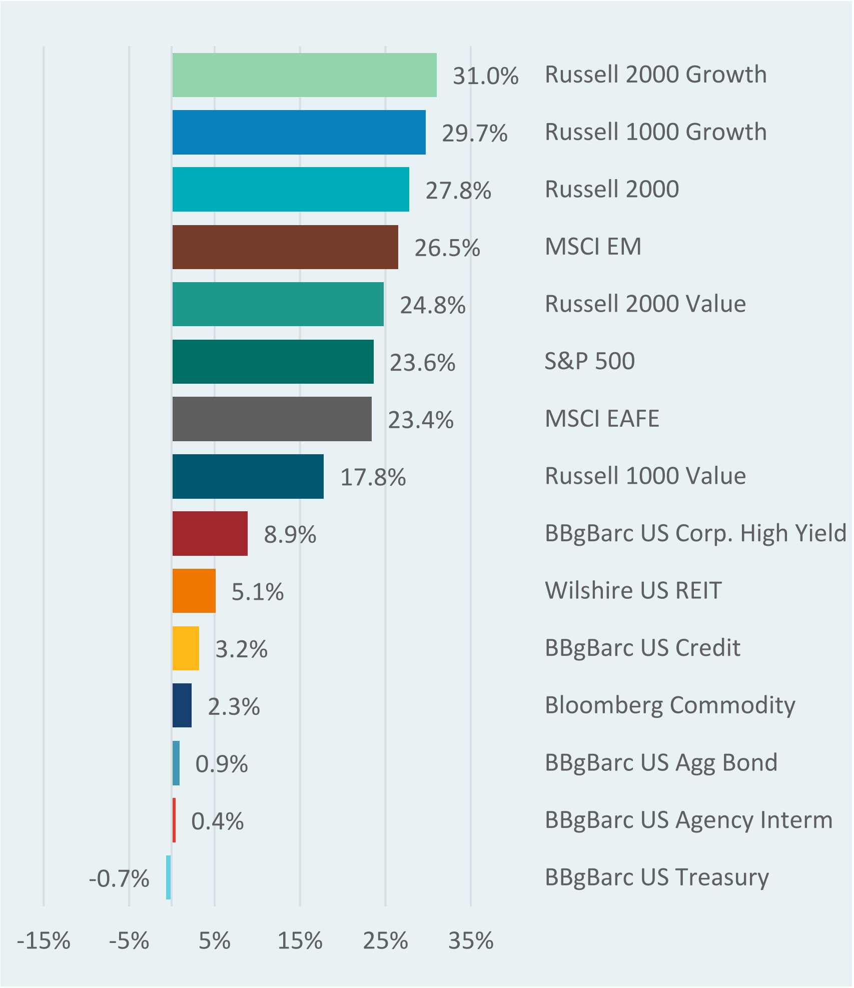
- Domestic fixed income returns were flat in October as the Bloomberg Barclays U.S. Aggregate Index returned 0.1%.
- The U.S. Treasury yield curve flattened slightly as the 10-year minus 2-year spread contracted 8 bps to 0.78%. The 2-year Treasury yield experienced the largest change among tenors in the month, increasing 13 bps to 1.6%.
- Credit spreads remained compressed – the U.S. high yield and investment-grade option-adjusted spreads ended the month near cycle lows of 3.5% and 0.9%, respectively.

INTERNATIONAL MARKETS

- International equities (MSCI ACWI ex U.S. +1.9%) underperformed domestic equities in October (S&P 500 +2.3%). The hedged MSCI ACWI ex U.S. returned 3.2% in the month.
- Eurozone unemployment fell to 8.9% in September, the lowest level since 2011. However, unemployment rates varied greatly among the member states, with Germany at 3.6% and Spain 16.7%.
- Eurozone real GDP grew 2.5% YoY (2.4% QoQ annualized) in the third quarter, above the prior quarter's growth rate of 2.3% YoY (2.6% QoQ annualized) and the fastest YoY rate since 2011.
- The BOE raised interest rates for the first time in nearly ten years, increasing the benchmark rate from 0.25% to 0.50%. The move eliminated the rate cut that was applied shortly after Brexit. October inflation in the U.K. increased by 3.0% YoY, a full percentage point above the BOE's target rate of 2.0%.

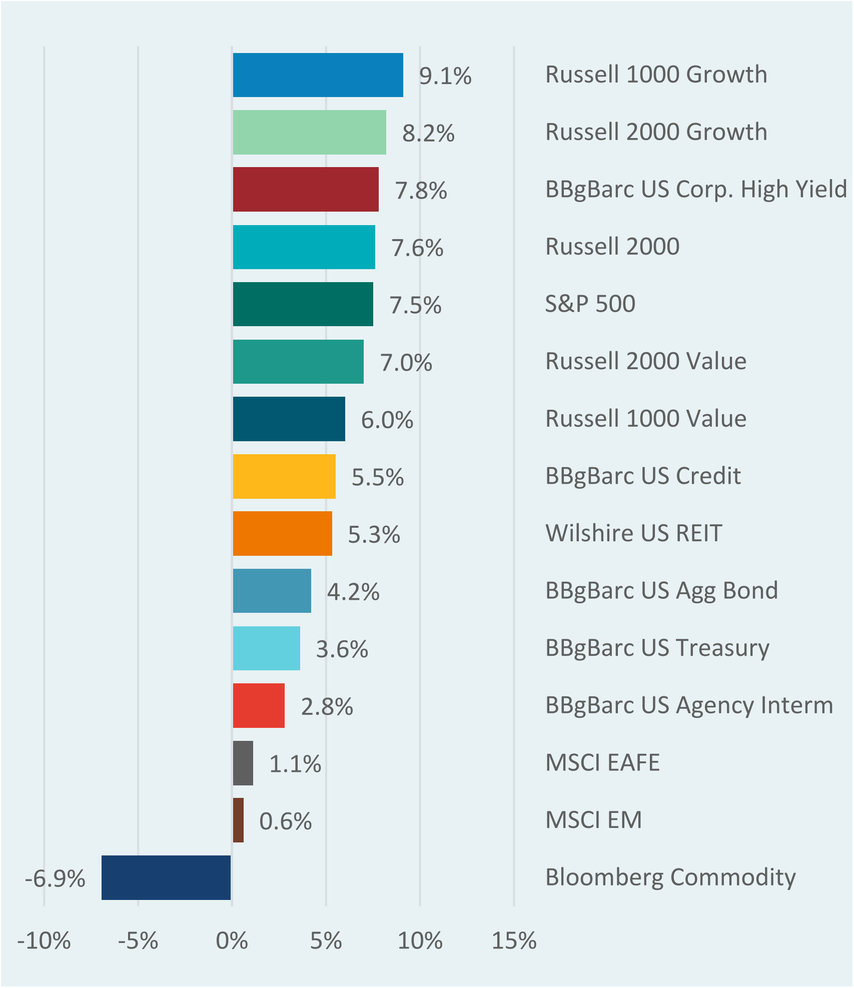
Major asset class returns

ONE YEAR ENDING OCTOBER



Source: Morningstar, as of 10/31/17

TEN YEARS ENDING OCTOBER



Source: Morningstar, as of 10/31/17

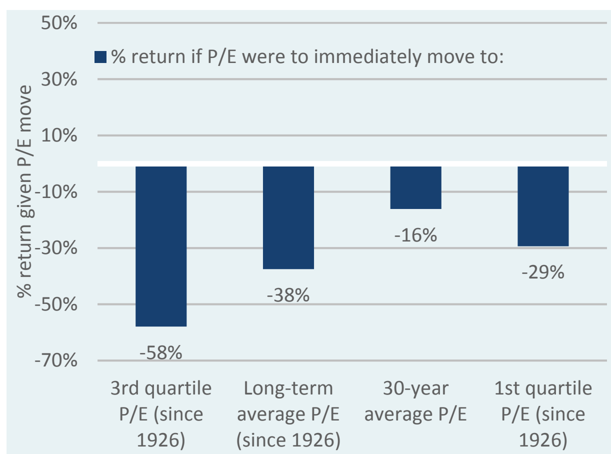
U.S. large cap equities

- Large cap equities posted a positive return for a 12th consecutive month (S&P 500 +2.3%). The index was up 16.9% year-to-date.
- The House and Senate have released initial versions of proposed tax reform legislation that could potentially lower the corporate tax rate to 20%. The outcome remains uncertain and will likely have a material impact on U.S. equity prices.
- According to FactSet, as of November 10th, the estimated Q3 earnings growth rate of the S&P 500 was 6.1% YoY, led by Energy and Information Technology. Revenue growth was 5.8% YoY, above the September 30th estimate of 4.9% led by Materials and Energy.
- U.S. companies with higher global revenue exposure (greater than 50%) experienced materially stronger earnings growth (13.4% versus 2.3%) and revenue growth (10.0% versus 4.2%) in the third quarter.

U.S. LARGE CAP EQUITIES

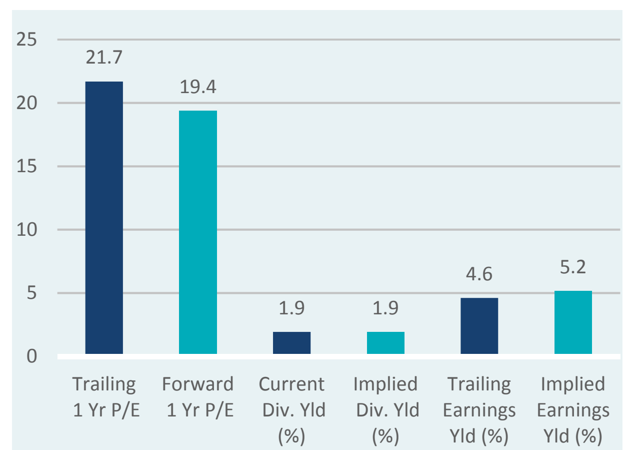
Source: Bloomberg, as of 10/31/17

RETURNS IF TRAILING P/E MOVED TO HISTORIC AVERAGE



Source: Yale/Shiller, Verus, as of 10/31/17

S&P 500 VALUATION SNAPSHOT



Source: Bloomberg, as of 10/31/17

Fixed income

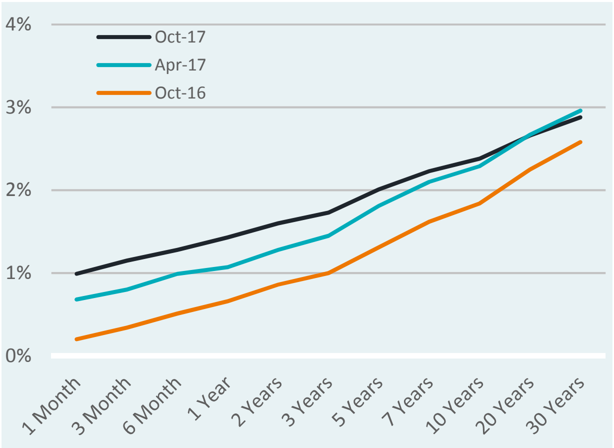
— The U.S. Treasury yield curve flattened slightly in October, as the 10-year minus 2-year spread fell 8 bps to 0.78%. The yield curve also rose across all maturities during the month and the Bloomberg Barclays U.S. Treasury Index experienced a negative return of -0.1%.

— The Bloomberg U.S. Aggregate Bond Index yield ended the month at 2.6%, above the yield 1-year prior of 2.1% but well below the 20-year average of 3.5%.

— On November 1st, the FOMC held the fed funds target rate unchanged at 1.00% - 1.25%. The market is expecting the next hike to occur in December, based on fed fund futures pricing.

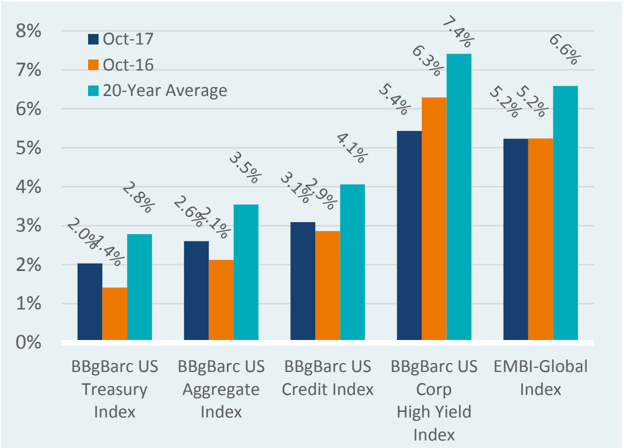
— The fed balance sheet unwind began in October with a $5.6 billion net decrease in Treasuries (-$6 billion expected). Markets await evidence of an unwind in mortgage-backed securities (-$4 billion expected), with a net increase of $2.5 billion during the month.

U.S. TREASURY YIELD CURVE



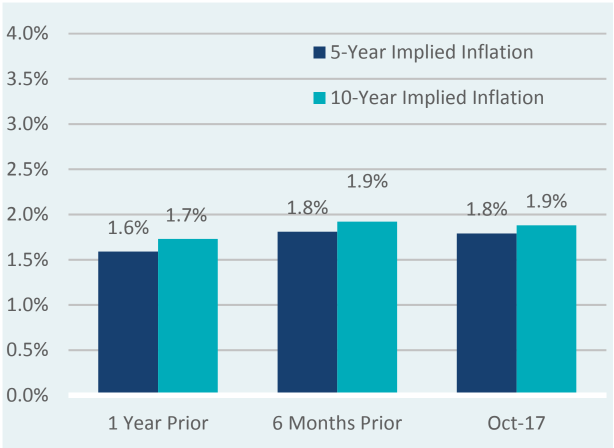
Source: Federal Reserve, as of 10/31/17

NOMINAL FIXED INCOME YIELDS



Source: Morningstar, as of 10/31/17

IMPLIED INFLATION (TIPS BREAKEVEN)



Source: Federal Reserve, as of 10/31/17

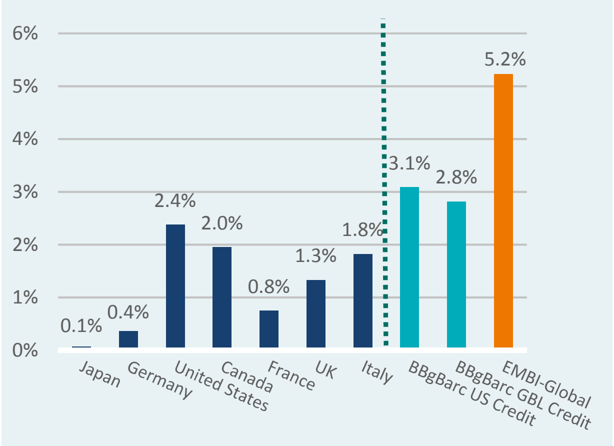
Global markets

— The ECB announced it will continue its asset purchase program but at a reduced rate starting in 2018. The monthly purchases will be reduced from €60 billion to €30 billion and will remain in place through at least September of next year.

— Italian sovereign bonds rallied in October following a credit rating upgrade from Standard and Poor (BBB), the first upgrade in three decades. The Italian 10-year bond yield fell 28 bps to 1.83% while the price of a 10-year credit default swap decreased by -9.9%.

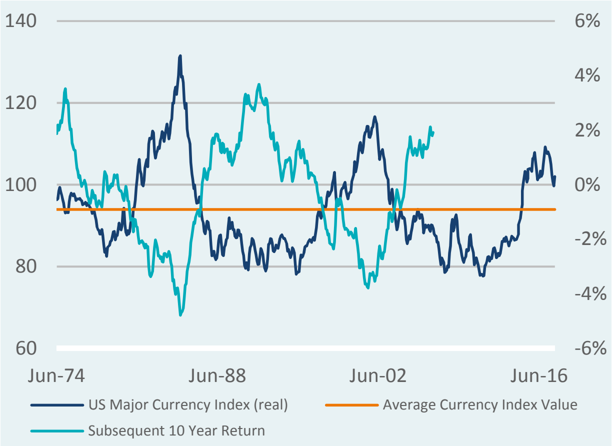
— Japanese equities (Nikkei 225 index +8.2%) outperformed international equities (MSCI ACWI ex U.S. index +1.9%) on an unhedged basis in October. As of November 13th, 91% of Nikkei 225 companies had reported third quarter financials. According to Bloomberg, Q3 earnings and revenue grew by 17.9% and 9.8% annualized, respectively.

GLOBAL SOVEREIGN 10 YEAR INDEX YIELDS



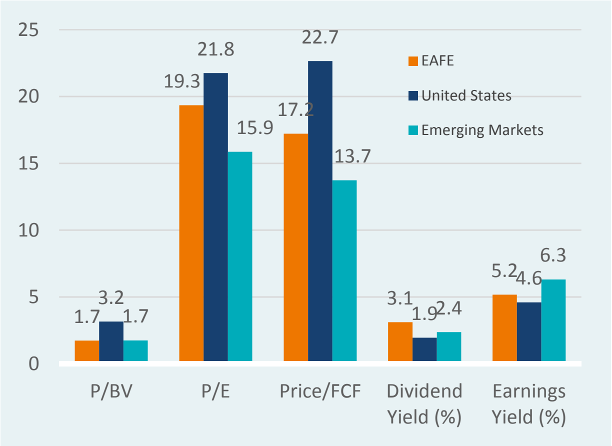
Source: Morningstar, as of 10/31/17

U.S. DOLLAR MAJOR CURRENCY INDEX



Source: Federal Reserve, as of 10/31/17

MSCI VALUATION METRICS (3 MONTH AVERAGE)



Source: Bloomberg, as of 10/31/17

Style tilts: U.S. large value vs. growth

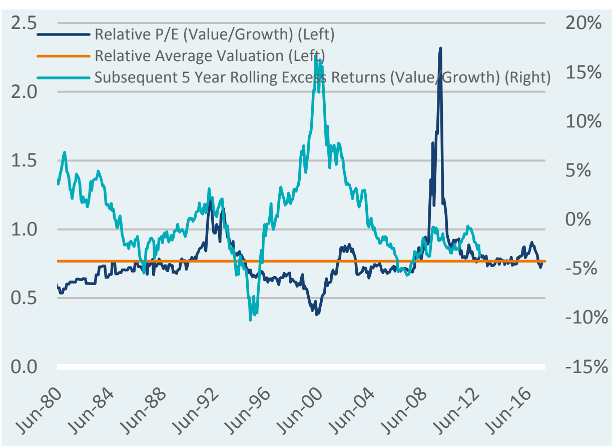
— Growth equities outperformed value equities in October, as the Russell 1000 Growth and Russell 1000 Value returned 3.9% and 0.7%, respectively. Growth equities extended their outperformance YTD to 16.7%.

— Growth equities benefitted from a higher relative concentration to Technology companies. The Tech sub-index (approximately 40% of the Russell 1000 Growth) outperformed all other sectors and returned 7.9% over the month.

— The underperformance of value equities in October was partially attributable to heavy sector allocations in Health Care and Energy, which returned -0.8% and -0.7%, respectively.

— Both value and growth equities experienced low realized volatility during the month (4.8% and 6.3%, respectively) relative to their 5-year annualized averages (approximately 12.4%).

RELATIVE TRAILING PE RATIO OF U.S. VALUE VS. GROWTH



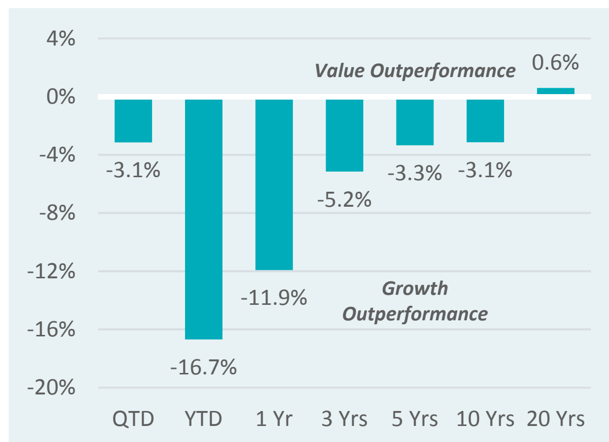
Source: Russell, Bloomberg, as of 10/31/17

U.S. VALUE VS. GROWTH ABSOLUTE PERFORMANCE

	RUSSELL 1000 VALUE ANNUALIZED RETURN TO DATE %	RUSSELL 1000 GROWTH ANNUALIZED RETURN TO DATE %
QTD	0.7	3.9
YTD	8.7	25.4
1 YEAR	17.8	29.7
3 YEARS	8.0	13.1
5 YEARS	13.5	16.8
10 YEARS	6.0	9.1
20 YEARS	7.5	6.9
	SHARPE RATIO	SHARPE RATIO
3 YEARS	0.76	1.17
5 YEARS	1.31	1.60
10 YEARS	0.42	0.62
20 YEARS	0.43	0.36

Source: Morningstar, as of 10/31/17

U.S. VALUE VS. GROWTH RELATIVE PERFORMANCE

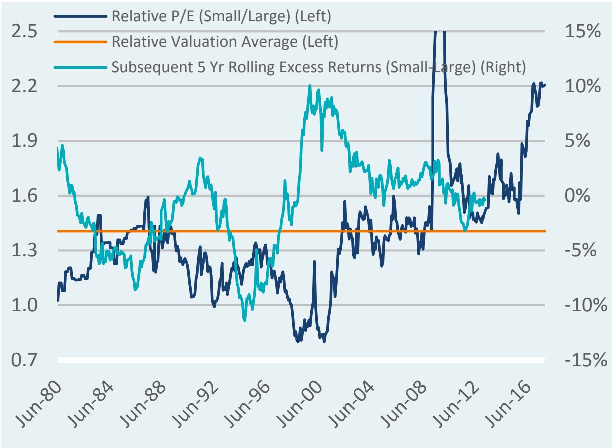


Source: Morningstar, as of 10/31/17

Style tilts: U.S. large vs. small

- U.S. large cap equities outperformed small cap equities, as the Russell 1000 index and Russell 2000 index returned 2.3% and 0.9%, respectively.
- Over all the time periods examined below, large cap equities have provided superior risk-adjusted returns (Sharpe Ratio) relative to small cap equities. Over the previous 5-year period, large cap equities have outperformed on an absolute basis by 0.7% per year with 3.4% less annualized standard deviation.
- The Technology sector experienced the largest performance differential between large and small cap companies. Large cap technology companies outperformed their small cap counterparts by over 4.0%. However, Tech companies within the Russell 1000 were far more concentrated, with the five largest companies (Apple, Microsoft, Intel, Facebook and Alphabet) contributing 56% to the sub-index total return, compared to 25% within the Russell 2000.

RELATIVE TRAILING PE RATIO OF U.S. SMALL VS. LARGE



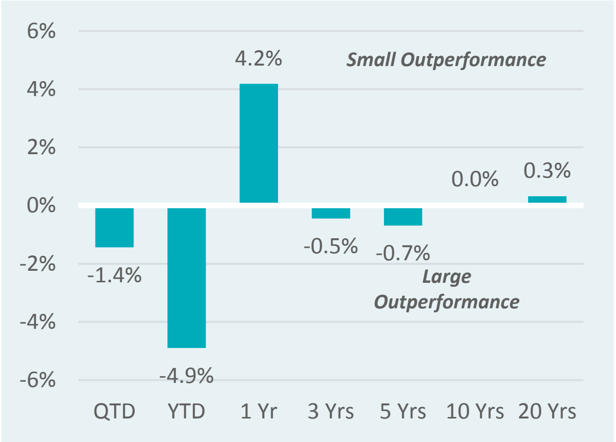
Source: Russell, Bloomberg, as of 10/31/17

U.S. LARGE VS. SMALL ABSOLUTE PERFORMANCE

	RUSSELL 1000 INDEX ANNUALIZED RETURN TO DATE %	RUSSELL 2000 INDEX ANNUALIZED RETURN TO DATE %
QTD	2.3	0.9
YTD	16.8	11.9
1 YEAR	23.7	27.8
3 YEARS	10.6	10.1
5 YEARS	15.2	14.5
10 YEARS	7.6	7.6
20 YEARS	7.5	7.8
	SHARPE RATIO	SHARPE RATIO
3 YEARS	1.01	0.73
5 YEARS	1.51	1.03
10 YEARS	0.53	0.45
20 YEARS	0.42	0.38

Source: Morningstar, as of 10/31/17

U.S. LARGE VS. SMALL RELATIVE PERFORMANCE



Source: Morningstar, as of 10/31/17

Commodities

— The broad Bloomberg Commodity Index increased in October by 2.1%. Industrial Metals (+5.8%), Energy (+2.5%), and Livestock (+10.6%) were the largest contributors during the month.

— The middle of the WTI crude oil futures curve was in backwardation in October — possibly influenced by expectations of demand exceeding supply – reducing the effect of negative roll yields seen in recent years. Backwardation is a state where spot prices are higher than prices for futures contracts. WTI crude oil spot prices increased 4.8% and ended the month at $54.11 per barrel.

— The Industrial Metals sub-index increased by 5.8%, possibly due to favorable supply and demand fundamentals, led by the price appreciation of Copper (+5.0%) and Nickel (+16.7%).

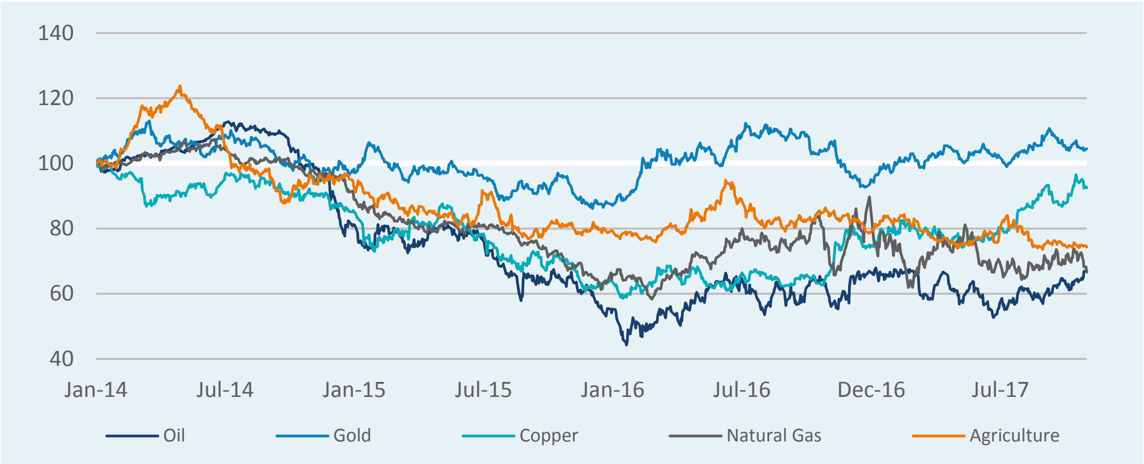
— The Bloomberg Livestock sub-index returned 10.6% in October, led by Lean Hog futures, which increased 13.4% in the month.

INDEX AND SECTOR PERFORMANCE

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	2.1	2.1	(0.8)	2.3	(9.5)	(9.4)	(6.9)
Bloomberg Agriculture	(0.9)	(0.9)	(10.1)	(14.6)	(9.1)	(11.0)	(3.7)
Bloomberg Energy	2.5	2.5	(10.0)	2.3	(23.6)	(16.9)	(18.1)
Bloomberg Grains	(2.5)	(2.5)	(9.2)	(12.0)	(11.1)	(14.0)	(5.6)
Bloomberg Industrial Metals	5.8	5.8	23.6	29.5	0.1	(1.5)	(4.4)
Bloomberg Livestock	10.6	10.6	13.8	30.6	(5.8)	(0.9)	(5.4)
Bloomberg Petroleum	6.4	6.4	0.2	12.7	(21.5)	(15.2)	(12.5)
Bloomberg Precious Metals	(0.7)	(0.7)	7.9	(2.8)	1.5	(8.2)	3.3
Bloomberg Softs	1.0	1.0	(18.1)	(26.6)	(9.2)	(9.2)	(3.2)

Source: Morningstar, as of 10/31/17

COMMODITY PERFORMANCE



Source: Bloomberg, as of 10/31/17

Appendix

Periodic table of returns

BEST

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	YTD	5-Year	10-Year
Emerging Markets Equity	16.6	38.4	23.2	35.2	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	32.3	16.8	9.1
Large Cap Growth	8.1	37.8	23.1	32.9	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	25.4	15.4	8.2
International Equity	6.4	37.2	22.4	31.8	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	21.8	15.2	7.6
Small Cap Growth	4.4	31.0	21.6	30.5	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	18.6	14.5	7.6
Large Cap Equity	3.2	28.5	21.4	22.4	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	16.8	13.6	7.0
60/40 Global Portfolio	2.6	25.7	16.5	16.2	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	14.0	13.5	6.2
Small Cap Equity	0.4	19.6	14.4	13.9	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	11.9	10.3	6.0
Large Cap Value	-1.5	18.5	11.3	12.9	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	8.7	8.5	4.2
Hedge Funds of Funds	-1.8	15.2	10.3	10.6	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	6.8	6.7	3.8
Small Cap Value	-2.0	11.6	9.9	9.7	-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	5.8	4.8	1.1
Real Estate	-2.4	11.1	6.4	5.2	-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	5.1	4.1	0.9
US Bonds	-2.9	7.5	6.0	2.1	-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	3.2	2.0	0.6
Cash	-3.5	5.7	5.1	-3.4	-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	0.7	0.2	0.3
Commodities	-7.3	-5.2	3.6	-11.6	-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	-0.8	-9.4	-6.9

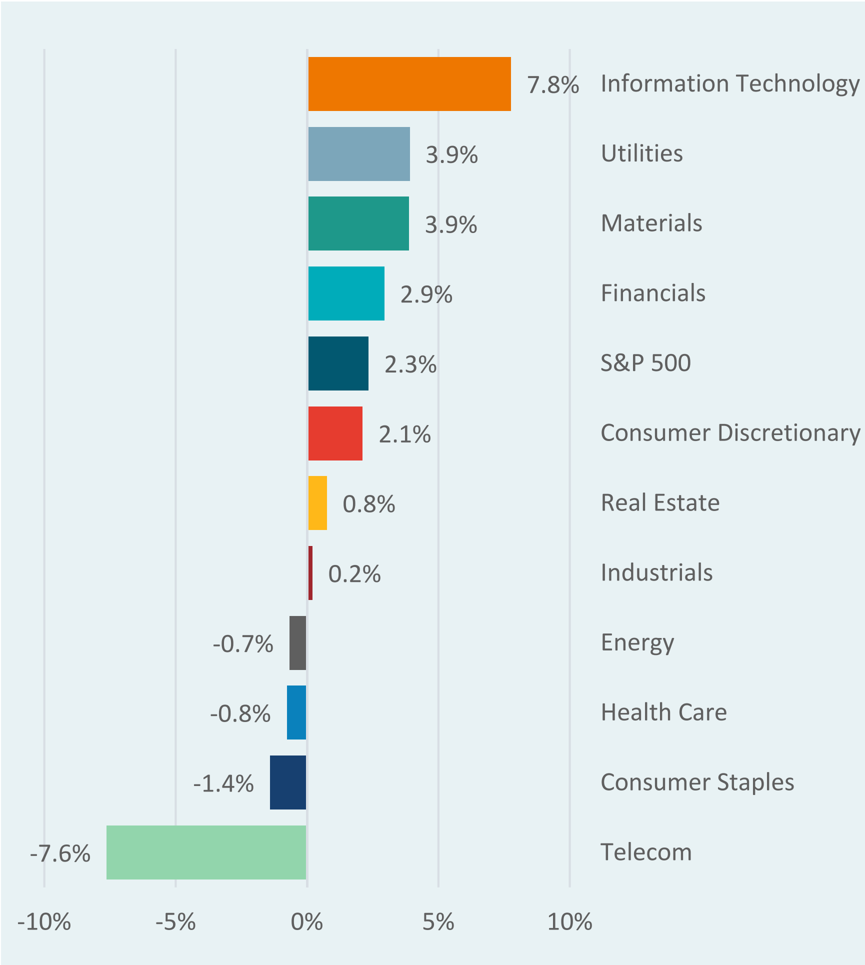
WORST

- Large Cap Equity
- Large Cap Value
- Large Cap Growth
- Small Cap Equity
- Small Cap Value
- Small Cap Growth
- International Equity
- Emerging Markets Equity
- US Bonds
- Cash
- Commodities
- Real Estate
- Hedge Funds of Funds
- 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 9/30/17.

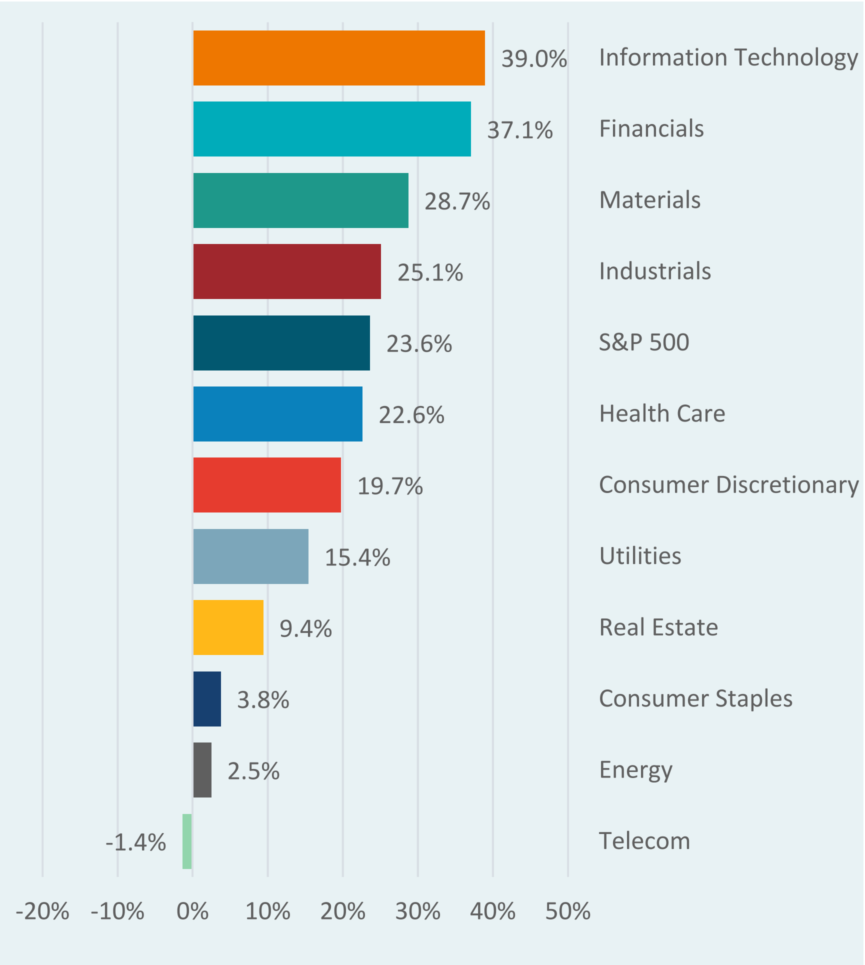
S&P 500 sector returns

QTD



Source: Morningstar, as of 10/31/17

ONE YEAR ENDING OCTOBER



Source: Morningstar, as of 10/31/17

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	2.3	2.3	16.9	23.6	10.8	15.2	7.5
S&P 500 Equal Weighted	1.1	1.1	13.2	20.4	9.4	15.5	8.9
DJ Industrial Average	4.4	4.4	20.6	32.1	13.2	15.1	8.1
Russell Top 200	2.5	2.5	18.1	24.7	11.2	15.3	7.4
Russell 1000	2.3	2.3	16.8	23.7	10.6	15.2	7.6
Russell 2000	0.9	0.9	11.9	27.8	10.1	14.5	7.6
Russell 3000	2.2	2.2	16.4	24.0	10.5	15.1	7.6
Russell Mid Cap	1.7	1.7	13.6	21.1	9.0	14.9	8.1
Style Index							
Russell 1000 Growth	3.9	3.9	25.4	29.7	13.1	16.8	9.1
Russell 1000 Value	0.7	0.7	8.7	17.8	8.0	13.5	6.0
Russell 2000 Growth	1.5	1.5	18.6	31.0	10.5	15.4	8.2
Russell 2000 Value	0.1	0.1	5.8	24.8	9.7	13.6	7.0

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US Treasury US TIPS	0.2	0.2	1.9	(0.1)	1.4	(0.1)	3.8
BBgBarc US Treasury Bills	0.1	0.1	0.7	0.7	0.4	0.3	0.5
BBgBarc US Agg Bond	0.1	0.1	3.2	0.9	2.4	2.0	4.2
Duration							
BBgBarc US Treasury 1-3 Yr	(0.1)	(0.1)	0.6	0.2	0.7	0.6	1.7
BBgBarc US Treasury Long	(0.1)	(0.1)	5.9	(2.4)	3.9	2.8	6.7
BBgBarc US Treasury	(0.1)	(0.1)	2.1	(0.7)	1.7	1.3	3.6
Issuer							
BBgBarc US MBS	(0.0)	(0.0)	2.3	0.5	2.1	2.0	4.0
BBgBarc US Corp. High Yield	0.4	0.4	7.5	8.9	5.6	6.3	7.8
BBgBarc US Agency Interm	(0.0)	(0.0)	1.4	0.4	1.3	1.1	2.8
BBgBarc US Credit	0.3	0.3	5.4	3.2	3.6	3.1	5.5

INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
MSCI ACWI	2.1	2.1	19.7	23.2	7.9	10.8	3.7
MSCI ACWI ex US	1.9	1.9	23.4	23.6	5.7	7.3	0.9
MSCI EAFE	1.5	1.5	21.8	23.4	6.1	8.5	1.1
MSCI EM	3.5	3.5	32.3	26.5	5.7	4.8	0.6
MSCI EAFE Small Cap	1.7	1.7	27.5	27.5	12.5	13.0	4.2
Style Index							
MSCI EAFE Growth	2.3	2.3	25.2	23.6	7.6	9.3	1.9
MSCI EAFE Value	0.8	0.8	18.5	23.2	4.5	7.7	0.2
Regional Index							
MSCI UK	0.6	0.6	16.4	21.6	1.8	4.9	0.2
MSCI Japan	4.6	4.6	19.6	17.8	9.9	12.0	2.2
MSCI Euro	0.8	0.8	27.0	30.6	7.2	9.5	(0.4)
MSCI EM Asia	5.3	5.3	38.8	32.3	9.3	8.6	2.2
MSCI EM Latin American	(3.6)	(3.6)	22.2	10.1	(1.5)	(2.6)	(2.2)

OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Index							
Bloomberg Commodity	2.1	2.1	(0.8)	2.3	(9.5)	(9.4)	(6.9)
Wilshire US REIT	(0.9)	(0.9)	1.5	5.1	5.7	9.5	5.3
CS Leveraged Loans	0.7	0.7	3.7	5.2	4.1	4.5	4.4
Regional Index							
JPM EMBI Global Div	0.4	0.4	9.4	6.3	6.0	4.8	7.2
JPM GBI-EM Global Div	(2.8)	(2.8)	11.1	5.2	(1.2)	(1.6)	3.1
Hedge Funds							
HFRI Composite	1.3	1.3	7.2	9.1	4.0	5.1	2.9
HFRI FOF Composite	1.2	1.2	6.8	8.0	2.8	4.1	0.9
Currency (Spot)							
Euro	(1.5)	(1.5)	10.4	6.3	(2.4)	(2.1)	(2.1)
Pound	(1.0)	(1.0)	7.5	8.8	(6.0)	(3.8)	(4.4)
Yen	(0.9)	(0.9)	2.6	(7.5)	(0.4)	(6.8)	0.1

Source: Morningstar, as of 10/31/17

Definitions

Conference Board Consumer Confidence Index – *a barometer of the health of the U.S. economy from the perspective of the consumer. The index is based on consumers' perceptions of current business and employment conditions, as well as their expectations for six months hence regarding business conditions, employment, and income. (www.conference-board.org)*

ISM Manufacturing Index – *based on data compiled from purchasing and supply executives nationwide. Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured (New Orders, Backlog of Orders, New Export Orders, Imports, Production, Supplier Deliveries, Inventories, Customers' Inventories, Employment and Prices), this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction and the negative economic direction, and the diffusion index. (www.instituteforsupplymanagement.org)*

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