

PERSPECTIVES THAT DRIVE

ENTERPRISE SUCCESS

DECEMBER 2018 Capital Markets Update

Market commentary

U.S. ECONOMICS

- Nonfarm payrolls jumped by 312,000 in December, well above expectations for a 176,000 increase. The healthcare sector (+50,000) led job creation, while restaurants and bars (+41,000), construction (+38,000), and manufacturing (+32,000) all contributed strong gains.
- The unemployment rate rose a net 0.2% to 3.9%, driven by an increase in the labor force participation rate, which moved up from 53.9% to 63.1%.
- The ISM Purchasing Managers' indices missed expectations and fell materially over the month. The ISM Manufacturing PMI fell from 59.3 to 54.1, missing expectations of 57.9. The ISM Services PMI slipped from 60.7 to 57.6, impacted by slowing employment and price growth in the services sector.

U.S. EQUITIES

- The S&P 500 Index tumbled 9.0%, experiencing its largest monthly decline since February of 2009. Losses were broad-based – the best performing sector was utilities, which fell 4.0%.
- The CBOE VIX Index reached as high as 36.1, a point off year-todate highs established in February. The implied volatility measure was 25.4 at month-end, above the ten-year average of 18.5.
- Per Factset, the Q4 2018 estimated earnings and revenue growth rates for the S&P 500 are 11.4% and 6.1% respectively. During the fourth quarter, earnings growth estimates for 2019 fell 2.3%.

U.S. FIXED INCOME

- The Federal Reserve hiked the target range for its benchmark interest rate by 25 basis points to a new range of 2.25% - 2.50%. In line with expectations for a "dovish hike", central bank officials lowered expectations for hikes in 2019 from three to two.
- Fed Chair Powell largely failed to reassure markets that future policy would develop with consideration of asset prices. Fed messaging concerning the pace of its balance sheet unwind was perceived as rigid, likely contributing to the market sell-off that followed Powell's press conference.
- High yield credit spreads expanded from 4.2% to 5.3% over the period, a level not reached since August of 2016.

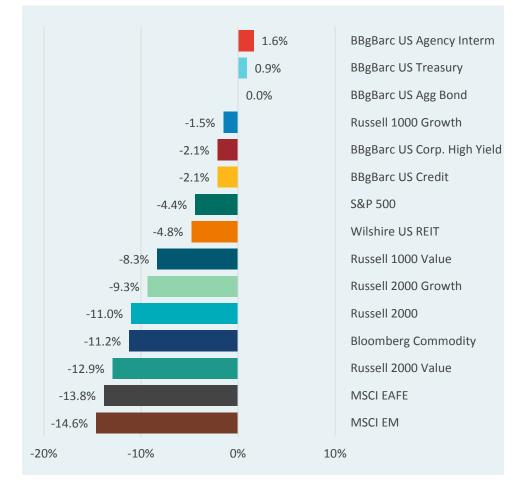
INTERNATIONAL MARKETS

- U.S. and Chinese officials agreed to resume trade talks in Beijing during the first week of January. The U.S. delegation, headed by U.S. trade representative Robert Lighthizer, will work in the shadow of the March 2nd deadline after which tariff rates on \$200 billion in Chinese imports are slotted to rise from 10% to 25%.
- The Caixin/Markit Manufacturing PMI fell from 50.2 to 49.7 in December, missing expectations of 50.1, and signaling a contraction in manufacturing activity on mainland China.
- Despite poor absolute returns in global equity markets, emerging markets provided positive relative performance. The MSCI EM Index returned -2.7%, outperforming the MSCI EAFE Index (-4.9%), and the S&P 500 Index (-9.0%).

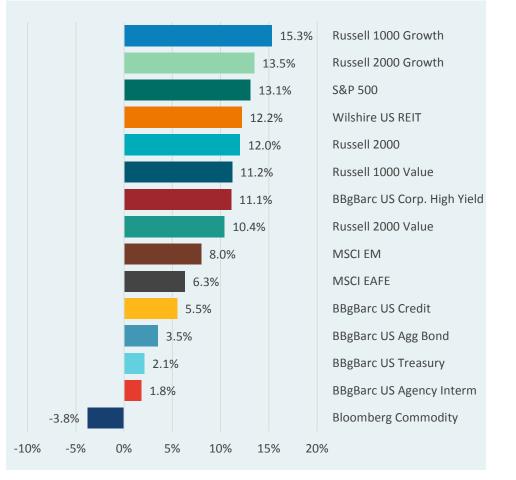


Major asset class returns

ONE YEAR ENDING DECEMBER



TEN YEARS ENDING DECEMBER



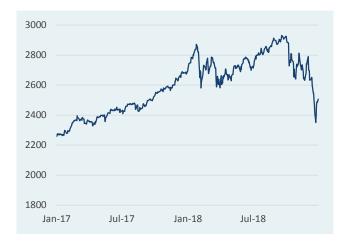
Source: Morningstar, as of 12/31/18

Source: Morningstar, as of 12/31/18

U.S. large cap equities

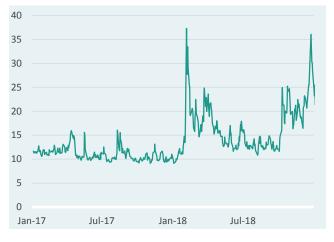
- The S&P 500 Index lost 9.0% and all sectors finished the month with negative returns. Apple, Microsoft, and Amazon were the largest detractors from performance, despite the information technology (-8.5%) and communication services (-7.3%) sectors outperforming slightly.
- Apple lowered its calendar Q4 2018 guidance for revenue from \$89-\$93 billion to \$84 billion, and its gross margin from 38%-38.5% to 38%. Shares fell about 7% on the news, and ended December down 12.2%.
- The trailing 12-month P/E multiple of the S&P 500 continued to compress in December, falling from 18.8x to 17.1x over the month, its lowest level since early 2016, and below the 10-year average of 17.6x.
- Of S&P 500 companies providing Q4 2018 EPS guidance, 72 posted negative guidance and 33 posted positive guidance. The percentage of companies announcing negative guidance (68.5%) was slightly below the five-year average of 70.0%.

S&P 500 PRICE INDEX

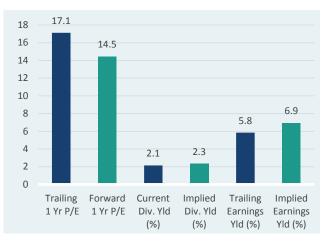


IMPLIED VOLATILITY (VIX INDEX)

Source: CBOE, as of 12/31/18



S&P 500 VALUATION SNAPSHOT



Source: Bloomberg, as of 12/31/18

Verus⁷⁷⁷

Source: Bloomberg, as of 12/31/18

Domestic equity size and style

- Large cap stocks outperformed small cap stocks over the period, despite poor absolute performance. The Russell 1000 Index returned -8.6%, outperforming the Russell 2000 Index, which returned -9.6%.
- The Russell 2000 Index fell 11.9%, its worst monthly loss since February 2009, and its second monthly decline of over 10% in three months. In the fourth quarter, small-cap stocks were down 20.2%.
- Growth outperformed value in both large and small cap equities. The Russell 3000 Growth Index (-8.8%) outperformed the Russell 3000 Value Index (-9.8%) by 1.0%.
- Falling crude oil prices presented headwinds for value equities, which are more exposed to energy stocks. The energy sector represented 9.0% of the Russell 3000 Value Index and 0.8% of the Russell 3000 Growth Index on December 31st, and was down 12.7% for the month.

VALUE VS. GROWTH RELATIVE VALUATIONS



VALUE VS. GROWTH 1-YR ROLLING RELATIVE PERFORMANCE



SMALL VS. LARGE 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, as of 12/31/18

Source: Russell, Bloomberg, as of 12/31/18

Verus⁷⁷

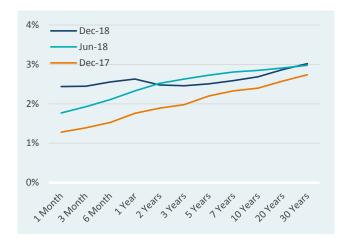
Source: FTSE, as of 12/31/18

Capital Markets Update
December 2018

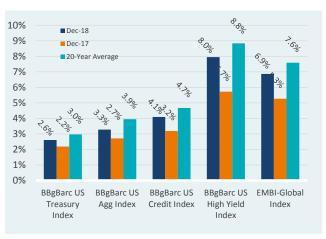
Fixed income

- The ECB officially announced the end of its asset purchase program, and stated it will continue to reinvest maturing securities in full for the foreseeable future. In his statement, ECB President Mario Draghi conveyed a more cautious tone, citing economic risks generally moving to the downside.
- Treasury yields resumed their decline, with 10-year yields falling from 3.0% to 2.7%, and 2-year yields falling from 2.8% to 2.5%. Intra-month, the 10-2 yield spread touched as low as 11 bps, but ended the month little changed around 20 bps.
- Italian 10-year sovereign yields descended from 3.2% to 2.7% in December, down 94 bps from the year-todate peak of 3.68% reached in October at the height of the fiscal budget deficit negotiations between the Italian government and European Union.
- Breakeven inflation rates continued to trend lower. The 5-year breakeven inflation rate finished the month at 1.5%, its lowest level since October 2016, and 68 bps below May's highs. Falling oil prices likely impacted the decline.

U.S. TREASURY YIELD CURVE



NOMINAL YIELDS



BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 12/31/18

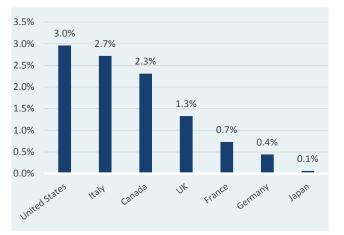
Source: Morningstar, as of 12/31/18

Source: Bloomberg, as of 12/31/18

Global markets

- The Markit France Composite PMI plunged from 54.2 to 48.7, slipping below 50 for the first time since June 2016. The dominant service sector contracted from 55.1 to 49.6, in part due to the weakest level of new business generation since February.
- Theresa May pushed back the U.K. parliament's vote on her EU-approved Brexit deal to January 14th, due to expectations it would have failed in December. Despite surviving a vote of no confidence, May will need to make significant progress in negotiations with the EU in order to avoid a "no-deal" Brexit on March 29th.
- The forward 12-month P/E ratio of the MSCI EAFE Index touched as low as 11.7 over the month, a level not reached since June of 2012. The Eurozone composite PMI posted it's fifth consecutive monthly decline, ending the year at 51.1, slightly above neutral.
- The yen appreciated 3.5% relative to the dollar, outperforming both the euro (+1.0%), and the pound sterling (-0.2%). Haven flows over the course of the month and more dovish language from the Federal Reserve, likely pushed the yen higher.

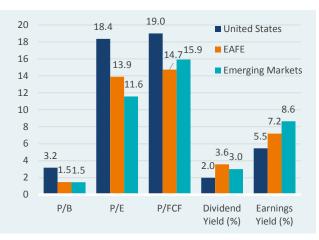
GLOBAL SOVEREIGN 10-YEAR YIELDS



U.S. DOLLAR MAJOR CURRENCY INDEX



MSCI VALUATION METRICS (3-MONTH AVG)



Source: Bloomberg, as of 12/31/18

Source: Federal Reserve, as of 12/31/18

Source: Bloomberg, as of 12/31/18

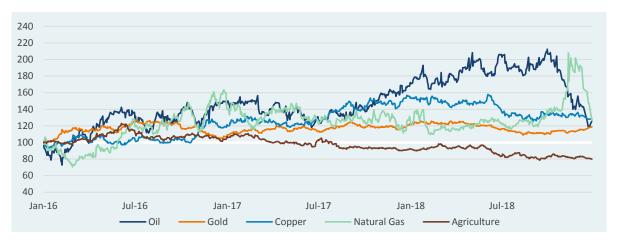
Commodities

- The Bloomberg Commodity Index fell 6.9%, with most sectors declining over the period. Energy, which targets a 30% weight in the overall index, lost 18.7% and led the decline.
- Crude oil continued its slide in December. Over the course of the month, the price of a barrel of WTI crude fell from \$51.09 to \$45.41, ending the month 44% below the yearto-date high of \$75.96 established in October.
- Precious metals, representing around 16% of the overall index, outperformed, gaining 5.8% in December. Gold (+5.1%) and silver (+9.1%) likely benefitted from haven flows amidst the risk-off sentiment in equity markets.
- Volatility remained the story in natural gas markets. After shooting up 37.7% in November, natural gas futures contracts plummeted 33.5% in December. Relatively low storage levels, speculation on weather conditions, and short-covering dynamics all contributed to the recent elevation in volatility.

INDEX AND SECTOR PERFORMANCE

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	(6.9)	(9.4)	(11.2)	(11.2)	0.3	(8.8)	(3.8)
Bloomberg Agriculture	(2.4)	0.2	(10.8)	(10.8)	(6.8)	(9.1)	(2.9)
Bloomberg Energy	(18.7)	(25.8)	(12.7)	(12.7)	(1.0)	(18.5)	(13.1)
Bloomberg Grains	(1.2)	0.8	(5.5)	(5.5)	(7.6)	(10.4)	(4.7)
Bloomberg Industrial Metals	(5.1)	(8.7)	(19.5)	(19.5)	7.7	(3.2)	1.6
Bloomberg Livestock	(0.9)	0.7	(1.7)	(1.7)	(0.4)	(2.2)	(2.8)
Bloomberg Petroleum	(9.3)	(34.9)	(19.2)	(19.2)	1.2	(18.6)	(7.0)
Bloomberg Precious Metals	5.8	6.8	(4.6)	(4.6)	5.1	(0.9)	3.1
Bloomberg Softs	(6.3)	0.7	(22.3)	(22.3)	(9.2)	(9.5)	(2.5)

COMMODITY PERFORMANCE



Source: Morningstar, as of 12/31/18

Source: Bloomberg, as of 12/31/18

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Periodic table of returns

Small Cap Equity

Small Cap Value

WORST

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	5-Year	10-Year
Real Estate	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	5.3	10.4	15.3
Cash	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	9.0	13.5
US Bonds	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	8.2	13.3
Large Cap Growth	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	5.9	12.0
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	5.1	11.2
Large Cap 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	4.4	10.4
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	3.6	8.0
Large Cap Value	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	3.1	7.3
Small Cap Growth	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	2.5	6.8
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	1.6	6.3
Commodities	-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	1.5	3.5
Small Cap Value	-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	0.6	3.2
International Equity	-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	0.5	0.4
Emerging Markets Equity	-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	-8.8	-3.8
			Larg	e Cap E	quity				Sma	ll Cap G	irowth				Com	moditie	es						
			Larg	e Cap V	/alue				Inte	rnation	al Equit	ty		Real Estate									
			Larg	e Cap G	Growth	n Emergin			rging M	arkets	Equity		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 9/30/18.

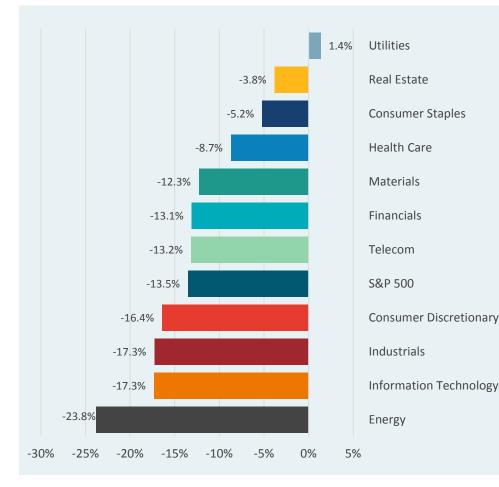
US Bonds

Cash

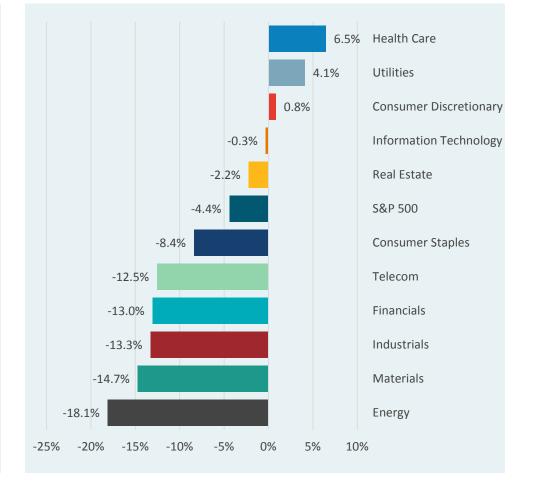


S&P 500 sector returns

QTD



ONE YEAR ENDING DECEMBER



Source: Morningstar, as of 12/31/18

Source: Morningstar, as of 12/31/18



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Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	(9.0)	(13.5)	(4.4)	(4.4)	9.3	8.5	13.1
S&P 500 Equal Weighted	(9.7)	(13.9)	(7.6)	(7.6)	8.0	7.1	15.0
DJ Industrial Average	(8.6)	(11.3)	(3.5)	(3.5)	12.9	9.7	13.2
Russell Top 200	(8.8)	(13.2)	(3.1)	(3.1)	9.9	9.0	13.0
Russell 1000	(9.1)	(13.8)	(4.8)	(4.8)	9.1	8.2	13.3
Russell 2000	(11.9)	(20.2)	(11.0)	(11.0)	7.4	4.4	12.0
Russell 3000	(9.3)	(14.3)	(5.2)	(5.2)	9.0	7.9	13.2
Russell Mid Cap	(9.9)	(15.4)	(9.1)	(9.1)	7.0	6.3	14.0
Style Index							
Russell 1000 Growth	(8.6)	(15.9)	(1.5)	(1.5)	11.1	10.4	15.3
Russell 1000 Value	(9.6)	(11.7)	(8.3)	(8.3)	7.0	5.9	11.2
Russell 2000 Growth	(11.7)	(21.7)	(9.3)	(9.3)	7.2	5.1	13.5
Russell 2000 Value	(12.1)	(18.7)	(12.9)	(12.9)	7.4	3.6	10.4

INTERNATIONAL EQUITY							
Broad Index							
MSCI ACWI	(7.0)	(12.8)	(9.4)	(9.4)	6.6	4.3	9.5
MSCI ACWI ex US	(4.5)	(11.5)	(14.2)	(14.2)	4.5	0.7	6.6
MSCI EAFE	(4.9)	(12.5)	(13.8)	(13.8)	2.9	0.5	6.3
MSCI EM	(2.7)	(7.5)	(14.6)	(14.6)	9.2	1.6	8.0
MSCI EAFE Small Cap	(6.4)	(16.0)	(17.9)	(17.9)	3.7	3.1	10.5
Style Index							
MSCI EAFE Growth	(4.8)	(13.3)	(12.8)	(12.8)	2.9	1.6	7.1
MSCI EAFE Value	(4.9)	(11.7)	(14.8)	(14.8)	2.8	(0.6)	5.5
Regional Index							
MSCI UK	(3.8)	(11.8)	(14.2)	(14.2)	1.6	(1.7)	6.8
MSCI Japan	(6.7)	(14.2)	(12.9)	(12.9)	3.4	3.1	5.3
MSCI Euro	(4.8)	(13.2)	(16.4)	(16.4)	2.4	(0.9)	4.4
MSCI EM Asia	(3.2)	(9.3)	(15.5)	(15.5)	8.6	3.9	9.8
MSCI EM Latin American	(0.8)	0.4	(6.6)	(6.6)	14.9	(1.7)	5.0

FIXED INCOME							
	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	0.5	(0.4)	(1.3)	(1.3)	2.1	1.7	3.6
BBgBarc US Treasury Bills	0.2	0.6	1.9	1.9	1.0	0.6	0.4
BBgBarc US Agg Bond	1.8	1.6	0.0	0.0	2.1	2.5	3.5
Duration							
BBgBarc US Treasury 1-3 Yr	0.8	1.3	1.6	1.6	0.9	0.8	1.0
BBgBarc US Treasury Long	5.5	4.2	(1.8)	(1.8)	2.6	5.9	4.1
BBgBarc US Treasury	2.2	2.6	0.9	0.9	1.4	2.0	2.1
Issuer							
BBgBarc US MBS	1.8	2.1	1.0	1.0	1.7	2.5	3.1
BBgBarc US Corp. High Yield	(2.1)	(4.5)	(2.1)	(2.1)	7.2	3.8	11.1
BBgBarc US Agency Interm	1.0	1.6	1.6	1.6	1.3	1.4	1.8
BBgBarc US Credit	1.5	0.0	(2.1)	(2.1)	3.2	3.2	5.5

OTHER							
Index							
Bloomberg Commodity	(6.9)	(9.4)	(11.2)	(11.2)	0.3	(8.8)	(3.8)
Wilshire US REIT	(8.4)	(6.9)	(4.8)	(4.8)	2.1	7.9	12.2
CS Leveraged Loans	(2.3)	(3.1)	1.1	1.1	5.0	3.3	8.3
Alerian MLP	(8.3)	(16.3)	(11.9)	(11.9)	(1.6)	(6.9)	10.7
Regional Index							
JPM EMBI Global Div	1.3	(1.3)	(4.3)	(4.3)	5.2	4.8	8.2
JPM GBI-EM Global Div	1.3	2.1	(6.2)	(6.2)	5.9	(1.0)	3.5
Hedge Funds							
HFRI Composite	(2.0)	(5.4)	(4.1)	(4.1)	3.2	2.3	5.0
HFRI FOF Composite	(1.2)	(4.4)	(3.5)	(3.5)	1.5	1.5	3.2
Currency (Spot)							
Euro	1.0	(1.6)	(4.8)	(4.8)	1.7	(3.7)	(1.9)
Pound	(0.2)	(2.3)	(5.9)	(5.9)	(4.8)	(5.1)	(1.2)
Yen	3.5	3.5	2.7	2.7	3.1	(0.9)	(1.9)

Source: Morningstar, HFR, as of 12/31/18



Notices & disclosures

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