

Market commentary

U.S. ECONOMICS

- U.S. real GDP grew at an annualized quarterly rate of 2.6% in the fourth quarter (3.1% YoY), beating estimates of 2.2%. Personal consumption drove growth, contributing 1.9% to the quarterly rate. Private investment activity also saw healthy gains. Spending on research and development grew 3.2% over the quarter (9.9% YoY) to \$425 billion, and now represents 2.3% of total U.S. GDP.
- Non-farm payrolls increased by 20,000 in February, far below expectations of 180,000. Net revisions from the past two months totaled +12,000, and the three-month average figure remained solid at 186,000 jobs added per month.
- Retail sales contracted 1.6% to \$503 billion in December, and expanded 0.2% in January. December's monthly drop was the largest since September 2009, and was led by the non-store sales component including e-commerce, which fell 5.0%.

U.S. EQUITIES

- The U.S. equity market continued its rebound from a tough fourth quarter. The S&P 500 Index returned 3.2%, and all sectors posted positive performance.
- With 494/500 companies reporting, S&P 500 Index constituents notched fourth quarter aggregate earnings and revenue growth of 12.1% and 6.0% YoY, respectively.
- According to FactSet, growth is expected to moderate in 2019. Q1 projections call for revenue growth of 5.2% and earnings contraction of 3.2%. For the calendar year 2019, top- and bottomline growth estimates are 5.1% and 4.1% respectively.

U.S. FIXED INCOME

- The 10-year Treasury yields advanced from 2.63% to 2.72%, leading a slight steepening in the 10-2 yield spread from 18 bps to 20 bps.
- High yield debt (+1.7%) outperformed investment grade credit (-0.1%), as well as Treasury bills (+0.2%). High yield credit spread compression provided slight tailwinds for performance.
- U.S. credit spreads resumed their slide lower. Investment-grade corporate spreads fell 7 bps to 1.21% and high yield spreads declined 44 bps to 3.79%.

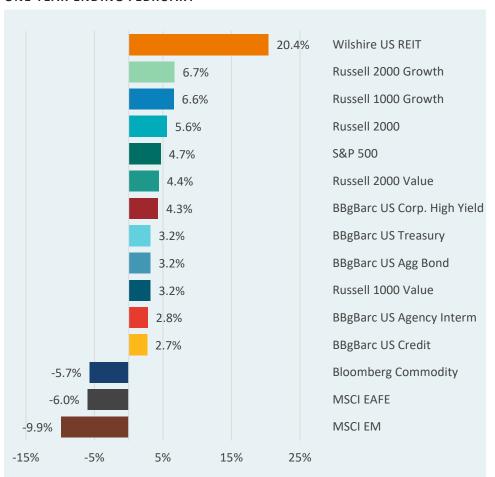
INTERNATIONAL MARKETS

- The spread between the JP Morgan Global Services and Manufacturing PMI's reached 2.7 in February, 1.9 above its mark last year. The recent elevation in the spread signals a divergence in growth between the services sector and the manufacturing sector.
- Growth expectations dipped significantly, as global economic institutions downgraded forward outlooks. The OECD's global GDP growth forecasts drifted from 3.5% to 3.3% for 2019 and from 3.5% to 3.4% for 2020. The European Commission's 2019 Euroarea growth forecast fell from 1.8% to 1.0%, and expectations for growth in Germany and Italy fell to 0.7% and -0.2%, respectively.
- The MSCI U.K. Index returned 3.4% in February, bringing YTD gains to 10.7%. Excluding the impact of currency, returns over the same periods were 2.3% and 6.0%, indicating that U.S. investors in British equities have benefitted from the relative strength of the British pound so far this year.

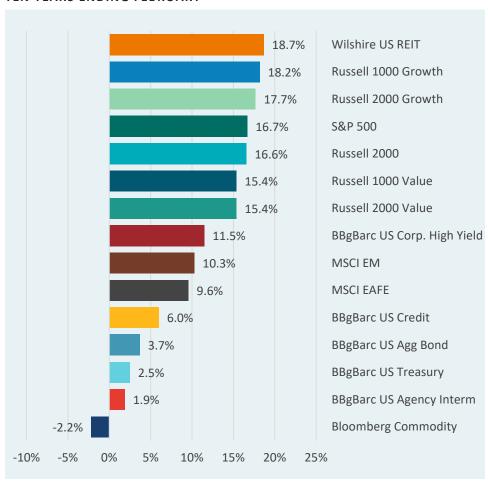


Major asset class returns

ONE YEAR ENDING FEBRUARY



TEN YEARS ENDING FEBRUARY



Source: Morningstar, as of 2/28/19

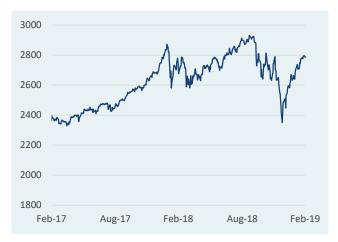
Source: Morningstar, as of 2/28/19



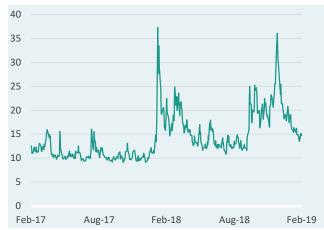
U.S. large cap equities

- The S&P 500 Index returned 3.2%, bringing its YTD gain to 11.5%. Information Technology (+6.9%) and Industrials (+6.4%) outperformed, while Consumer Discretionary (+0.8%) and Communication Services (+0.8%) lagged the overall index.
- Per FactSet, 99 S&P 500 companies have issued EPS guidance for Q1 2019. Of those 99 companies, 73 have issued negative guidance. The percentage of companies offering negative EPS guidance (74%) is slightly above the five-year average of 71%.
- The VIX index continued to drift lower. The implied volatility measure descended from 16.6 to 14.8, well below its recent high of 36.1 which was reached back in December.
- The one-year forward P/E ratio of the S&P 500 Index expanded from 15.7 to 16.3 over the month. Of the GICS sectors, Consumer Discretionary (20.1) was the most expensive based on the forward multiple, and the Financials sector (11.6) was cheapest.

S&P 500 PRICE INDEX

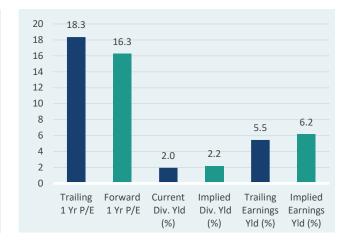


IMPLIED VOLATILITY (VIX INDEX)



Source: CBOE, as of 2/28/19

S&P 500 VALUATION SNAPSHOT



Source: Bloomberg, as of 2/28/19



Domestic equity size and style

- Small cap equities outperformed large cap equities for the second month in a row. The Russell 2000 Index gained 5.2% while the Russell 1000 Index returned 3.4%.
- Outperformance of small-cap equities was broad.
 Energy (+0.3% excess return), producer durables (+1.8%), and utilities (+0.9%) were the only Russell sector indexes where large-cap equities outperformed small-cap equities.
- Forward one-year P/E ratios expanded materially in February. The forward multiple for the Russell 1000 Index moved from 16.0 to 16.5, while the multiple for the Russell 2000 Index moved from 21.1 to 22.5. The multiples were up 20.4% and 27.3% from their December 24th lows, respectively.
- Growth stocks outperformed value stocks across market-cap classifications. Overall, the Russell 3000 Growth Index (+3.8%) outperformed the Russell 3000 Value Index (+3.2%).

VALUE VS. GROWTH RELATIVE VALUATIONS



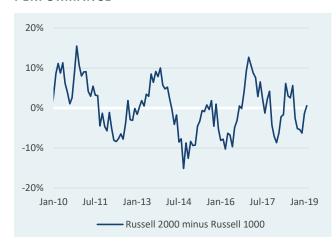
Source: Russell, Bloomberg, as of 2/28/19

VALUE VS. GROWTH 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, as of 2/28/19

SMALL VS. LARGE 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, as of 2/28/19



Fixed income

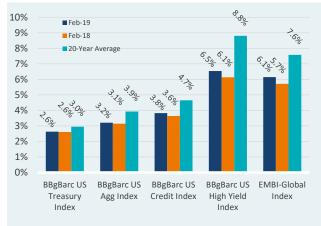
- The European Central Bank cut its 2019 Eurozone growth forecast from 1.7% to 1.1%, citing geopolitics and trade as headwinds. Officials also announced a third injection of stimulus via targeted longer-term refinancing operations (TLTROs), and offered dovish guidance on interest rates.
- Leveraged loans moved higher in February, gaining 1.6% MoM (+3.9% YTD). Some investors have expressed concern over the concentration of "cov-lite" issues, which according to Standard and Poor's represented 85% of the U.S. market as of Q4 2018.
- The Bank of Japan cut its regular purchases of JGBs maturing in 10-to-25 years from ¥200 to ¥180 billion.
 Falling global growth expectations and dovish central bank language likely pressed JGB yields lower, and the BoJ's purchase cut aligned with its goal of targeting 10-year yields around 0%.
- Breakeven inflation rates continued to climb higher from recent December lows. The 5- and 10- year rates rose 13 bps and 8 bps respectively, aided by the recent recovery in crude oil prices.

U.S. TREASURY YIELD CURVE



Source: Bloomberg, as of 2/28/19

NOMINAL YIELDS



Source: Morningstar, as of 2/28/19

BREAKEVEN INFLATION RATES

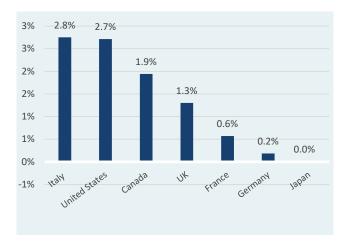




Global markets

- President Trump waived the March 1st deadline for tariff rate hikes on \$200 billion of Chinese imports, citing "substantial progress" made during negotiations.
 Optimism picked up for some sort of formal trade resolution to be reached around the end of March, although the prospective terms remain unclear.
- Chinese mainland equities (CSI 300 Index) rallied 14.6%, bringing the YTD return to 21.9%. An improving outlook on trade, as well as more stimulative domestic policy likely contributed to the advance.
- Parliament will vote on Prime Minister May's Brexit deal for the second time on March 12th. If the vote fails again, May has offered a vote on the extension of "Article 50", which oversees the Brexit departure process. The shift in tone soothed fears of a "no-deal Brexit" and the British pound rallied on the news.
- The Citi Global Economic Surprise Index fell from -18.5 to -26.4 in February, its lowest level since May 2013.
 The low level of the index indicates that recent global economic data has disappointed relative to forecasts.

GLOBAL SOVEREIGN 10-YEAR YIELDS



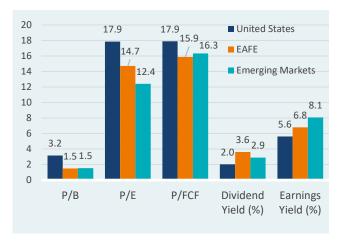
Source: Bloomberg, as of 2/28/19

U.S. DOLLAR MAJOR CURRENCY INDEX



Source: Federal Reserve, as of 2/28/19

MSCI VALUATION METRICS (3-MONTH AVG)





Commodities

- The Bloomberg Commodity Index gained 1.0% over the month, driven by another strong month of performance in the energy sector (+5.4%).
- Energy (+5.4%) and petroleum (+7.8%) boosted the overall index higher. Four-year lows in OPEC+ crude oil supply, faster-than-expected production cuts in Russia and Saudi Arabia, and the imposition of U.S. sanctions on Venezuelan oil put upward pressure on crude prices. Additionally, positive rhetoric around U.S.-China trade relations likely buoyed expectations for global demand.
- Grains, which target a 23% weight in the overall index, underperformed, and lost 5.0% over the month. Wheat led the underperformance as soft wheat fell 11.9% and hard red winter wheat fell 12.6%. Analysts attributed the decline to a pickup in price competition ahead of large harvests in Europe and the Black Sea region.
- Industrial metals gained 3.5% in February, bringing the YTD gain to 11.8%. Rising optimism about a trade resolution with China has likely supported the recent rebound for the sector, which lost 19.5% in 2018.

INDEX AND SECTOR PERFORMANCE

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	1.0	6.5	6.5	(5.7)	3.6	(8.8)	(2.2)
Bloomberg Agriculture	(3.9)	(1.0)	(1.0)	(16.8)	(5.9)	(11.1)	(2.0)
Bloomberg Energy	5.4	15.2	15.2	3.6	10.0	(17.1)	(10.0)
Bloomberg Grains	(5.0)	(3.3)	(3.3)	(16.7)	(7.9)	(12.2)	(3.6)
Bloomberg Industrial Metals	3.5	11.8	11.8	(8.1)	11.1	(0.4)	3.4
Bloomberg Livestock	(0.0)	(1.5)	(1.5)	(0.0)	(1.7)	(4.6)	(2.3)
Bloomberg Petroleum	7.8	22.7	22.7	0.4	13.3	(15.5)	(3.6)
Bloomberg Precious Metals	(1.1)	2.1	2.1	(1.9)	1.2	(2.3)	2.4
Bloomberg Softs	(3.5)	1.1	1.1	(16.7)	(6.3)	(12.5)	(2.4)

Source: Morningstar, as of 2/28/19

COMMODITY PERFORMANCE



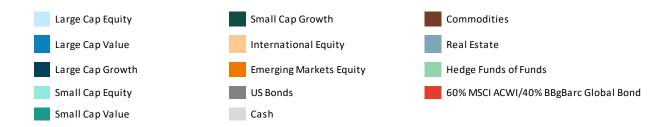


Appendix



Periodic table of returns

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	YTD	5-Year	10-Year
Small 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	18.8	12.6	18.2
Small Cap Equity	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	17.0	10.4	17.7
Small Cap Value	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	15.2	9.3	16.8
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	12.9	8.2	16.6
Large Cap Equity	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	12.0	8.1	15.4
Large Cap Value	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	11.2	7.4	15.4
International Equity	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	9.3	6.5	10.3
Emerging Markets Equity	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	9.0	4.2	9.6
60/40 Global Portfolio	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	6.8	4.1	9.0
Commodities	-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	6.5	2.3	7.5
Hedge Funds of Funds	-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	3.3	2.1	3.7
US Bonds	-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	1.0	1.8	3.4
Cash	-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	0.4	0.7	0.4
Real Estate	-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	0.0	-8.8	-2.2

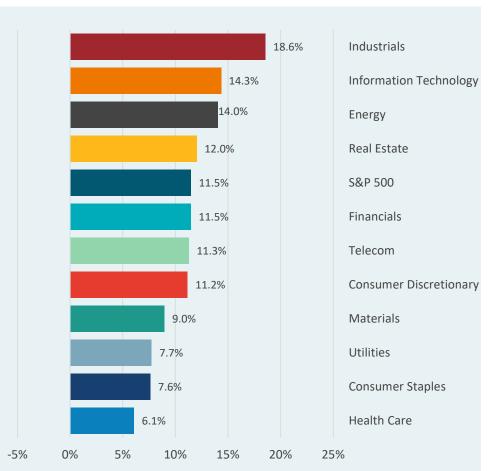


Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 12/31/18.

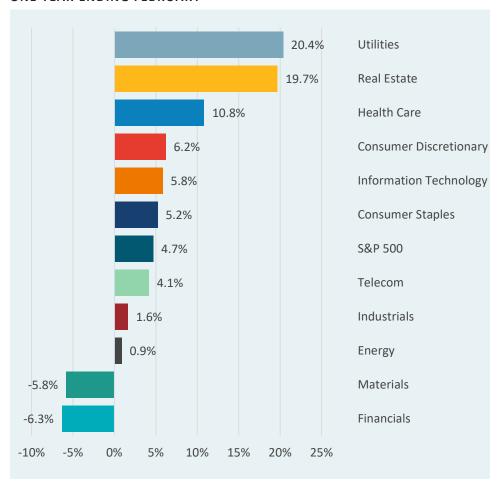


S&P 500 sector returns

QTD



ONE YEAR ENDING FEBRUARY



Source: Morningstar, as of 2/28/19 Source: Morningstar, as of 2/28/19



Detailed index returns

Core Index S&P 500	Month 3.2	QTD	YTD	1 Year											
	2.2			I i cai	3 Year	5 Year	10 Year		Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
S&P 500	2.2							Broad Index							
	5.2	11.5	11.5	4.7	15.3	10.7	16.7	BBgBarc US TIPS	(0.0)	1.3	1.3	1.9	1.7	1.5	3.8
S&P 500 Equal Weighted	3.7	13.9	13.9	5.3	14.6	9.5	18.8	BBgBarc US Treasury Bills	0.2	0.4	0.4	2.1	1.1	0.7	0.4
DJ Industrial Average	4.0	11.6	11.6	5.9	19.0	12.4	16.8	BBgBarc US Agg Bond	(0.1)	1.0	1.0	3.2	1.7	2.3	3.7
Russell Top 200	3.0	10.7	10.7	4.8	15.8	11.2	16.5	Duration							
Russell 1000	3.4	12.0	12.0	5.0	15.4	10.4	16.8	BBgBarc US Treasury 1-3 Yr	0.1	0.4	0.4	2.3	0.8	0.8	1.0
Russell 2000	5.2	17.0	17.0	5.6	16.7	7.4	16.6	BBgBarc US Treasury Long	(1.2)	(0.6)	(0.6)	4.0	(0.3)	4.5	5.1
Russell 3000	3.5	12.4	12.4	5.0	15.5	10.2	16.8	BBgBarc US Treasury	(0.3)	0.2	0.2	3.2	0.5	1.7	2.5
Russell Mid Cap	4.3	15.5	15.5	5.6	14.5	8.6	17.8	Issuer							
Style Index								BBgBarc US MBS	(0.1)	0.7	0.7	3.6	1.4	2.3	3.1
Russell 1000 Growth	3.6	12.9	12.9	6.6	18.0	12.6	18.2	BBgBarc US Corp. High Yield	1.7	6.3	6.3	4.3	9.8	4.5	11.5
Russell 1000 Value	3.2	11.2	11.2	3.2	12.8	8.1	15.4	BBgBarc US Agency Interm	0.1	0.5	0.5	2.8	1.0	1.3	1.9
Russell 2000 Growth	6.5	18.8	18.8	6.7	18.3	8.2	17.7	BBgBarc US Credit	0.2	2.4	2.4	2.7	3.5	3.1	6.0
Russell 2000 Value	3.9	15.2	15.2	4.4	15.0	6.5	15.4								
INTERNATIONAL EQUITY								OTHER							
Broad Index								Index							
MSCI ACWI	2.7	10.8	10.8	(0.8)	12.9	6.3	12.7	Bloomberg Commodity	1.0	6.5	6.5	(5.7)	3.6	(8.8)	(2.2)
MSCI ACWI ex US	2.0	9.7	9.7	(6.5)	10.7	2.5	9.6	Wilshire US REIT	0.9	12.4	12.4	20.4	7.8	8.5	18.7
MSCI EAFE	2.5	9.3	9.3	(6.0)	9.3	2.1	9.6	CS Leveraged Loans	1.6	3.9	3.9	3.8	6.8	3.9	8.1
MSCI EM	0.2	9.0	9.0	(9.9)	15.0	4.1	10.3	Alerian MLP	0.2	13.1	13.1	4.4	7.5	(4.5)	10.7
MSCI EAFE Small Cap	2.2	10.5	10.5	(10.5)	10.2	4.3	13.5	Regional Index							
Style Index								JPM EMBI Global Div	1.0	5.5	5.5	3.1	6.4	5.4	8.8
MSCI EAFE Growth	3.4	10.1	10.1	(4.2)	9.2	3.4	10.2	JPM GBI-EM Global Div	(1.1)	4.3	4.3	(5.4)	6.8	0.1	5.1
MSCI EAFE Value	1.7	8.5	8.5	(7.9)	9.4	0.6	8.9	Hedge Funds							
Regional Index								HFRI Composite	1.4	4.9	4.9	(0.4)	5.6	2.8	5.6
MSCI UK	3.4	10.7	10.7	(1.5)	7.6	(0.2)	9.6	HFRI FOF Composite	0.8	3.3	3.3	(1.7)	3.7	1.8	3.4
MSCI Japan	(0.0)	6.1	6.1	(10.3)	9.5	5.2	8.1	Currency (Spot)							
MSCI Euro	3.2	9.8	9.8	(8.9)	9.1	0.6	8.4	Euro	(8.0)	(0.4)	(0.4)	(6.6)	1.6	(3.8)	(1.1)
MSCI EM Asia	1.7	9.1	9.1	(9.8)	15.2	6.1	12.2	Pound	1.1	4.4	4.4	(3.5)	(1.5)	(4.5)	(0.7)

Source: Morningstar, HFR, as of 2/28/19

(3.7) 10.7



MSCI EM Latin American

(2.2) (1.4) (1.4) (4.1) 0.5

(1.7)

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