



Capital Market Review
As of December 31, 2018

4Q18 Market Recap

The dramatic turn in the fourth quarter ended 2018 in an unusual position – both global stocks and global bonds ended the year in negative territory (see slide 5). A number of factors led to the fourth quarter sell off –higher borrowing costs, trade war concerns, and slowing economic growth (see slide 6 for the detail of events causing the market downturn). Oil had a significant price drop during the quarter – from \$73.25 to \$45.41, and volatility doubled from the previous quarter (see slide 4).

Employment continues to improve, and really can't get much better without creating wage inflation, which we are beginning to experience. This is difficult for smaller businesses who are struggling to find workers, constraining their ability to grow. U.S. growth remains reassuring, at least in the short-term (see slide 7).

We have been taking note of the growing divergence between growth and value, which further expanded in the fourth quarter (see slide 10). Additionally, large cap has outperformed small and mid for the last two years. Both of these themes have provided some rebalancing opportunity in portfolios.

Fortunately, as of 1/21/2019, the market has stabilized with some recovery from the fourth quarter.

This quarterly review will be followed up with a short presentation on what Wall Street is highlighting as major themes for 2019, along with our 2019 Wall Street Consensus Report – 10-Year Forward Looking Return Assumptions.

Thank you for the opportunity to serve you!

The Allium Team

Market Dashboard¹ – As of December 31, 2018

Asset Class	Fourth Quarter				4Q18	YTD
Domestic Equity (S&P 500 Index)	<ul style="list-style-type: none"> Ten of the eleven S&P 500 sectors generated negative results, driven by weak performance within Energy (-23.8%) and Industrials (-17.3%). Domestically, global trade tensions and rising interest rates stoked fears of slowing global growth and corporate earnings. 				-13.5%	-4.4%
International Equity (EAFE Index)	<ul style="list-style-type: none"> Outpacing the U.S., Developed International Markets generated negative results during the quarter. The U.S. dollar was mixed relative to most major currencies. In local currency terms, results were mixed. Hong Kong (-4.5%) and Spain (-7.2%) were the best performers while Japan (-17.2%) and Germany (-14.1%) performed the worst 				-12.5%	-13.8%
Emerging Markets Equity (MSCI Emerging Markets Index)	<ul style="list-style-type: none"> Brazil (+10.1%) and India (-1.3%) were the top performers on a local currency basis; Mexico (-14.5%) and Taiwan (-13.1%) were the worst performers on a local currency basis during the quarter. Emerging Market currencies were mixed relative to the USD. The Brazilian Real and Indian Rupee appreciated, while the Russian Ruble and Mexican Peso depreciated significantly. 				-7.5%	-14.6%
Fixed Income (Bloomberg Barclays Capital Aggregate Index)	<ul style="list-style-type: none"> Fixed income performance was positive as interest rates decreased across the yield curve. Long Term Government (+4.2%) and Intermediate Government Bonds (+2.2%) were the strongest sectors during the quarter, driven by a flight to quality amid concerns of slowing global growth. 				1.6%	0.0%
Interest Rates	<ul style="list-style-type: none"> The FOMC voted to raise the target federal funds rate by 25 basis points (0.25%) to a range of 2.25% – 2.50%. The 10-year yield fell 36 basis points (-0.19%) from 3.05% to 2.69%, and the 30-year yield fell 17 basis points (-0.17%) from 3.19% to 3.02%. 					
Currencies	USD/EUR	USD/JPY	USD/GBP	USD/CNY	DXY (U.S. Dollar Index)	
4Q2018	1.2%	-3.5%	2.1%	0.1%	1.1%	
YTD	4.7%	-2.7%	5.9%	5.7%	4.4%	

¹LCG Associates

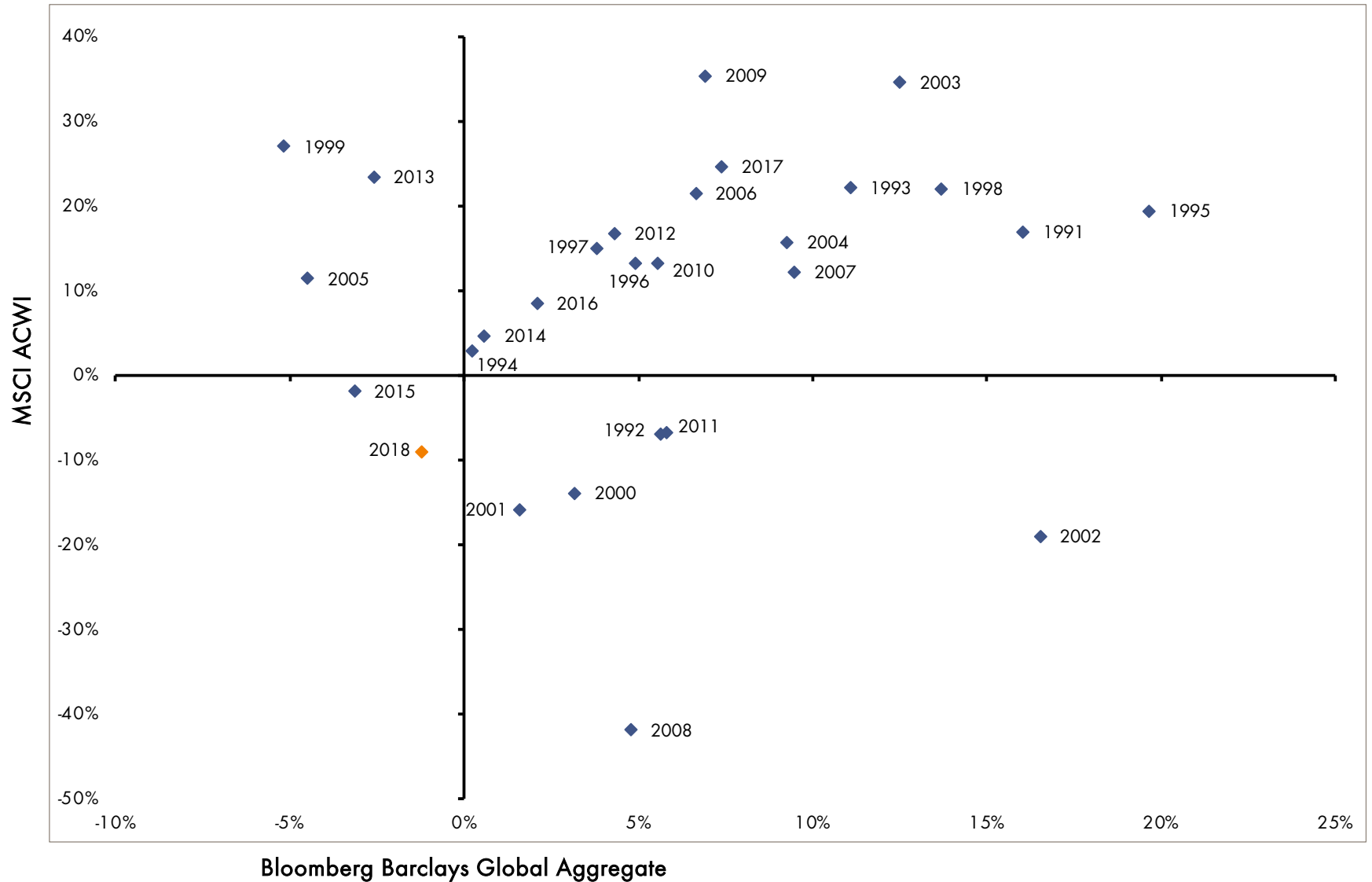
Economic Dashboard – As of December 31, 2018

	Dec – 18	Sept – 18	Dec – 17	10-Year Average
Economic Growth (GDP)	–	3.4%	2.3%	2.1%
Unemployment Rate	3.9%	3.7%	4.1%	6.8%
Labor Participation Rate	63.1%	62.7%	62.4%	63.5%
Core Inflation	–	2.2%	1.8%	1.8%
Inflation (Headline)	–	2.3%	2.1%	1.6%
Consumer Confidence	128.1	135.3	123.1	83.4
WTI Crude Oil (per barrel)	\$45.41	\$73.25	\$60.42	\$73.40
Natural Gas	\$2.94	\$3.01	\$2.95	\$3.48
Volatility	25.4	12.1	11.0	18.7
Gold	\$1,281	\$1,192	\$1,309	\$1,305
LIBOR	2.38%	2.17%	1.43%	0.45%
Federal Funds Target Rate ¹	2.50%	2.25%	1.50%	0.54%
ECB Refinancing Rate	0.00%	0.00%	0.00%	0.51%
10-Year U.S. Treasury Yield	2.68%	3.06%	2.41%	2.48%
10-Year German Bund Yield	0.24%	0.47%	0.42%	1.44%
S&P 500 Index	2,506.9	2,914.0	2,673.6	1,770.5
EUR/USD Exchange Rate	1.147	1.160	1.201	1.258
USD/JPY Exchange Rate	109.7	113.7	112.7	99.7

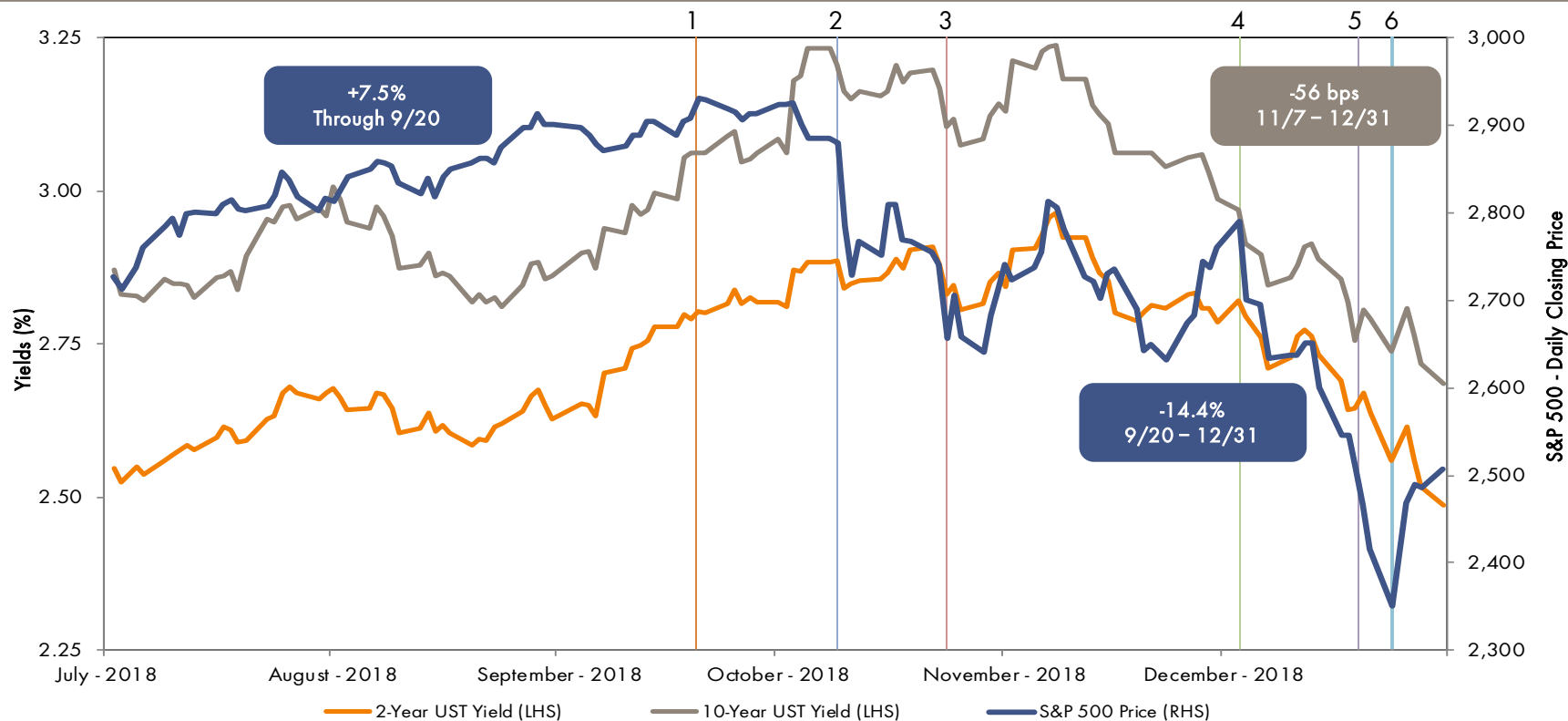
¹Fed Funds rate is a target range of 2.25% – 2.50%

Source: Bloomberg

Total Annual Returns of Global Stocks and Bonds from 1991-2018



Second Half 2018 in Review

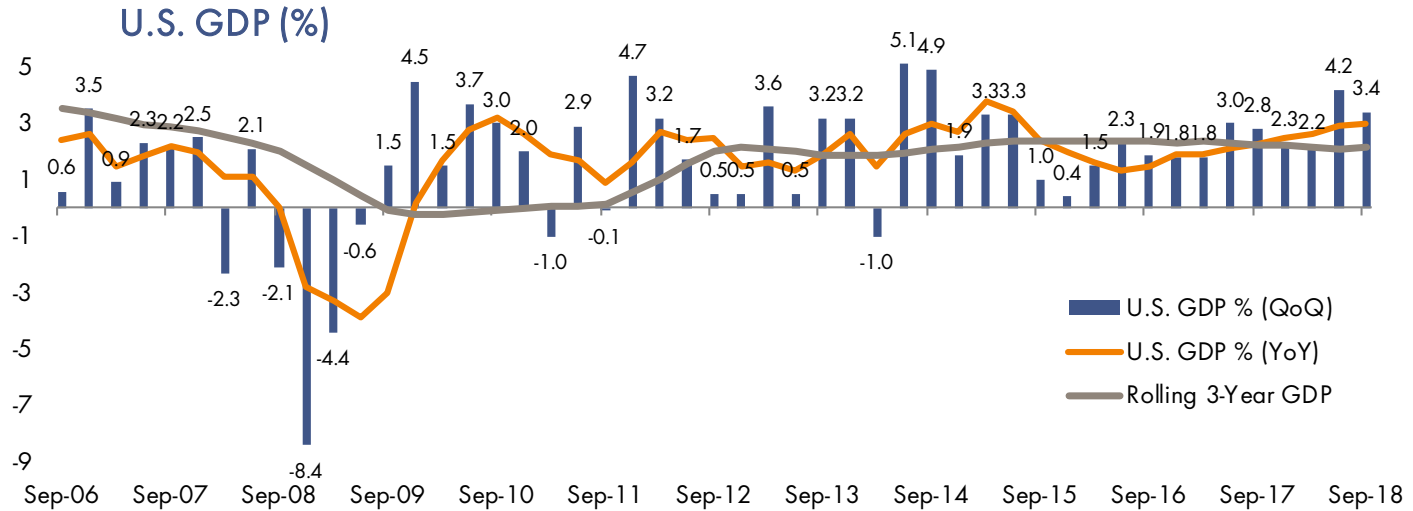


1. The S&P 500 closed at an all-time high, as strong corporate earnings and economic data outweighed concerns regarding global trade tensions and rising rates. (9/20/18)
2. The IMF releases its Global Financial Stability report, lowering growth expectations cautioning the ongoing trade war and other geopolitical tensions could push stock prices lower. (10/9/18)
3. Due to ongoing tariffs and tensions between the U.S. and China, mounting concerns about slowing global growth and corporate earnings boil over. (10/24/18)
4. Major market indexes fell 3% or more as investors signal skepticism over President Trump and Xi Jing Ping's trade compromise. Furthermore, the yield curve exhibited signs of inversion for the first time since the GFC, as 2 and 3 year Treasuries had a higher yield than 5 year Treasuries. (12/4/18)
5. The Fed raises interest rates for the fourth time in 2019, indicating it would raise rates more slowly nodding to signs that global economies are slowing. (12/19/18)
6. Following the first weekend of a government shutdown and rumors the President was considering firing Federal Reserve Chairman Powell, markets tumbled to their worst Christmas Eve session ever. (12/24/18)

The Economy

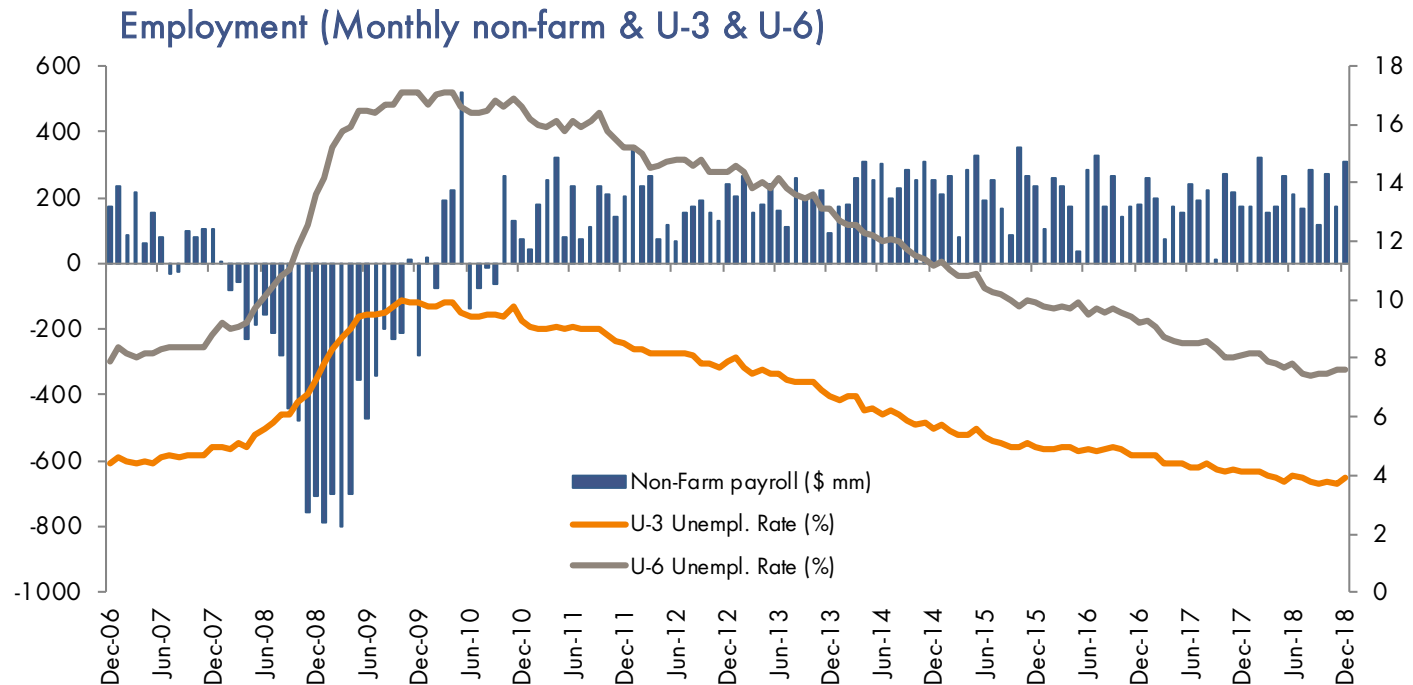
U.S. GDP growth remains reassuring:

- 3Q 18 GDP: +3.4%
- 2017 GDP: +2.5%

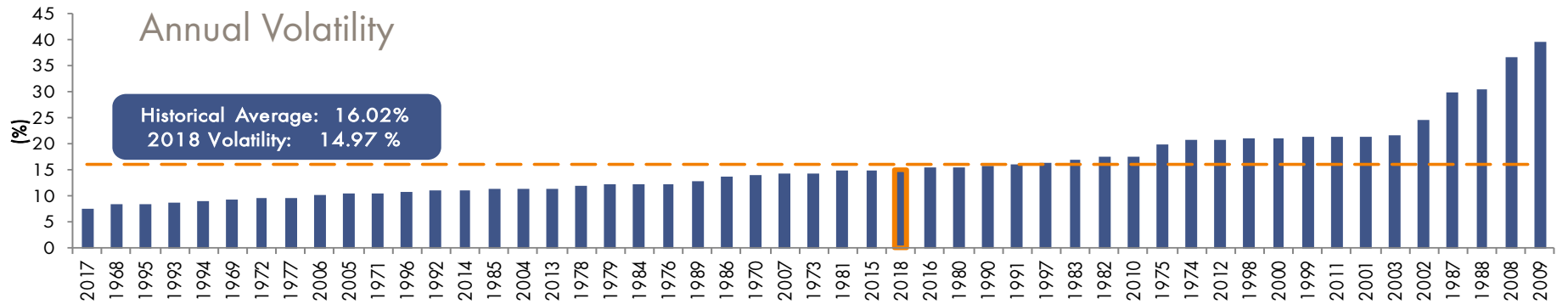
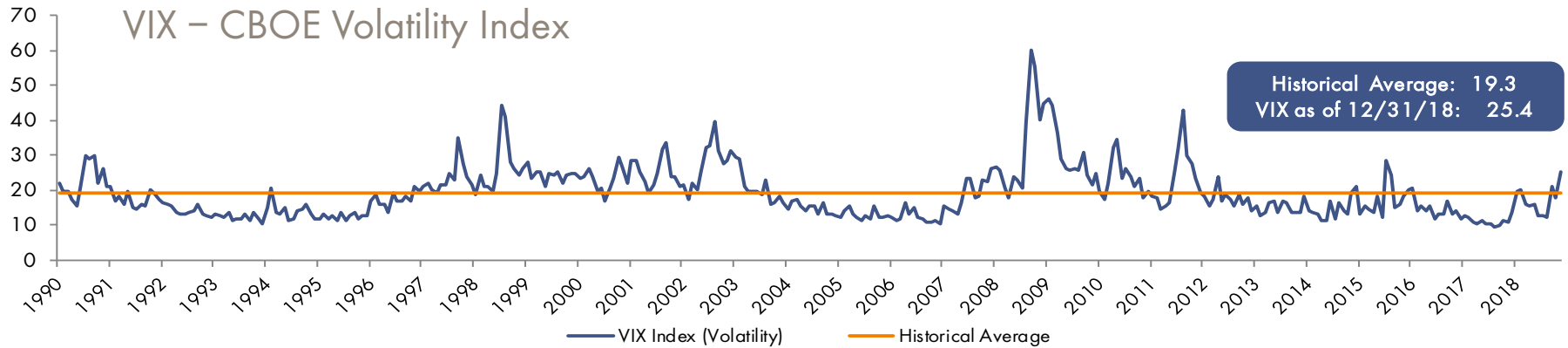
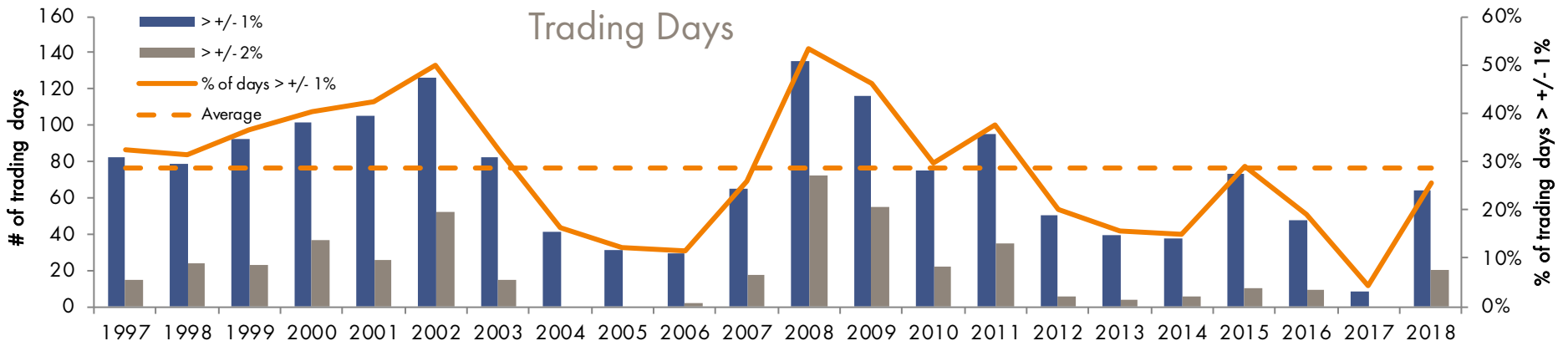


Employment continues to improve:

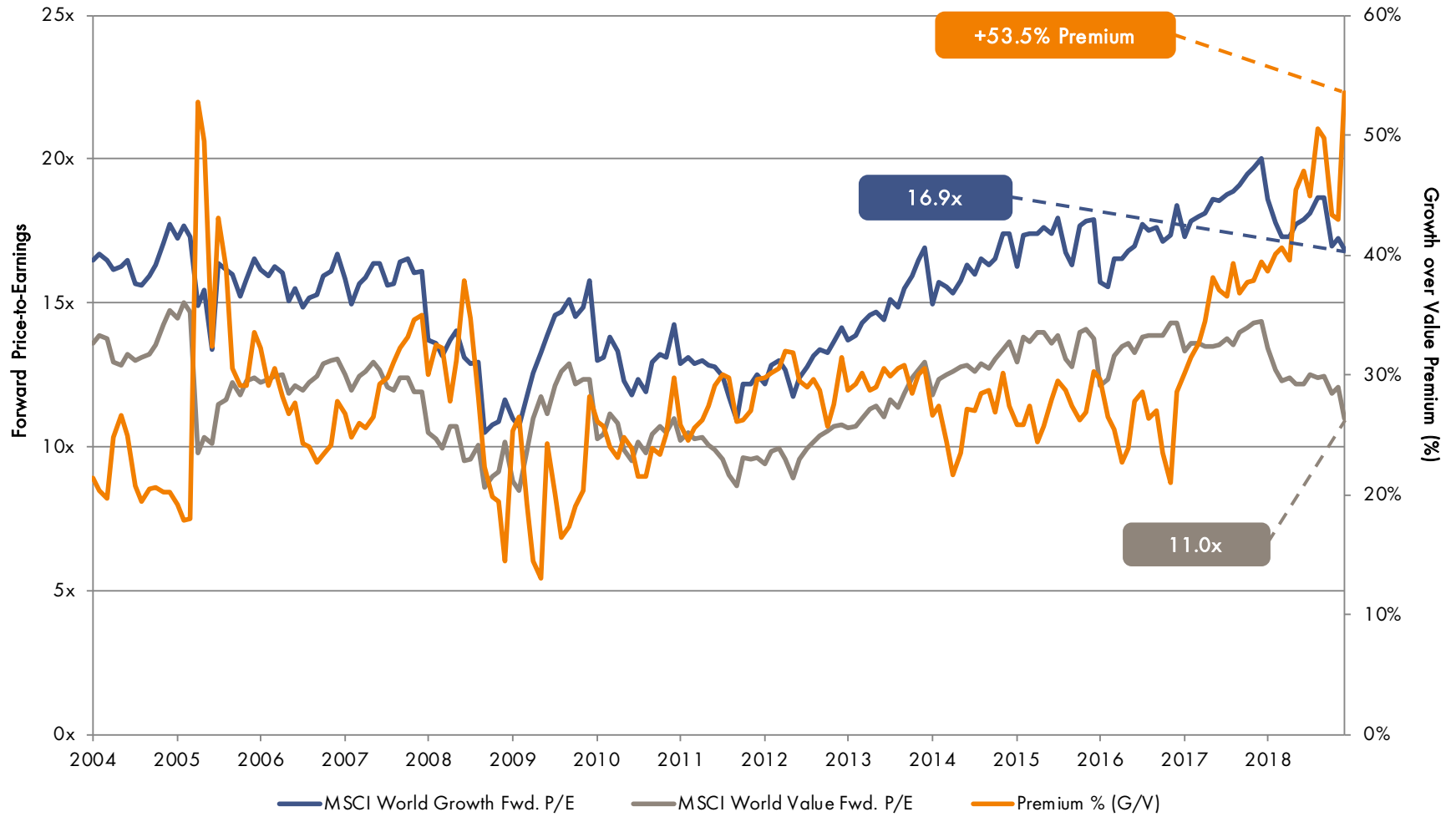
- Non-farm payrolls surged 312,000 in Dec. to avg. 254,000/month during 4Q 18
- U-3 is 3.9% compared to 4.1% in December 2017
- Average hourly earnings increased 3.2% YoY
- Participant rate: 63.1% from 62.4% one year prior



Equity Volatility Has Reverted To More Normal Levels

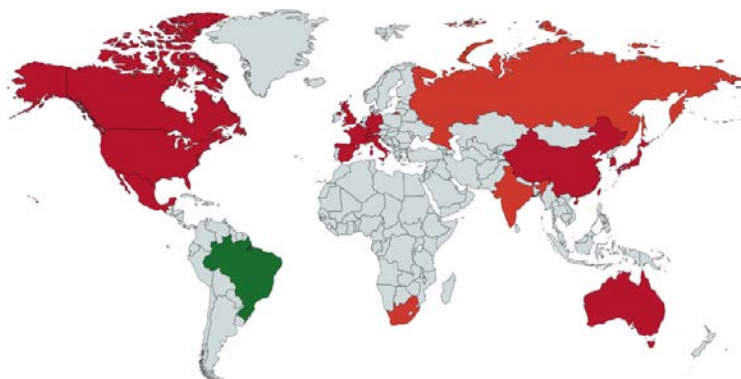


Growth vs. Value – divergence expands

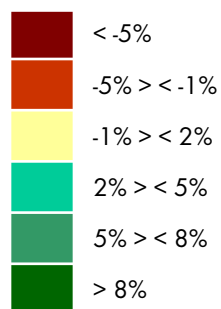


Global Equity Returns

Fourth Quarter Relative Strength

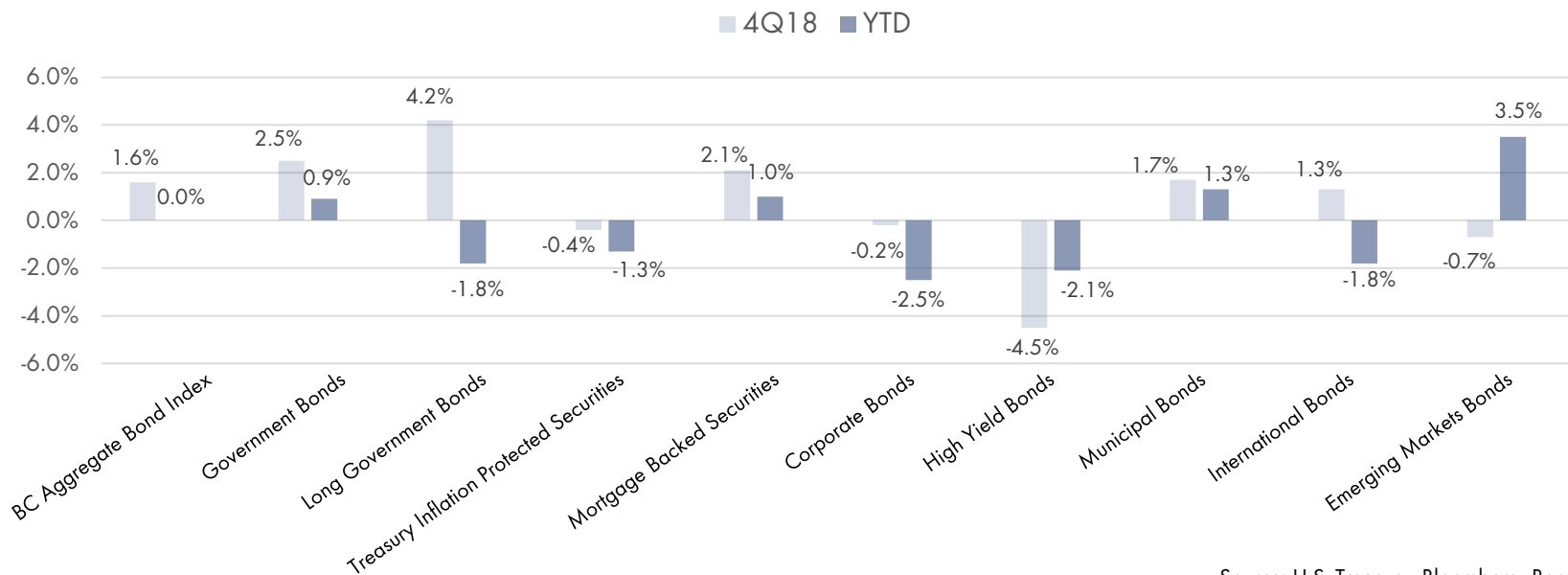
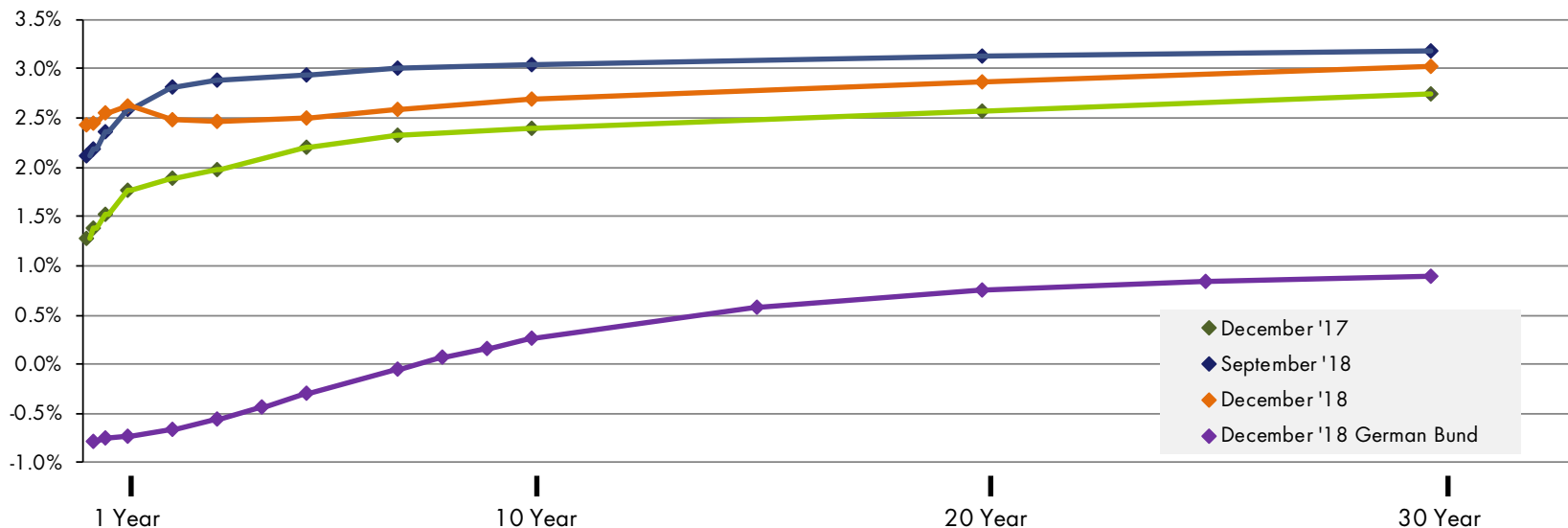


Relative Strength



	4Q2018		2018	
	Local Return	USD Return	Local Return	USD Return
North America				
Canada	-10.5%	-15.3%	-9.7%	-17.2%
United States	-13.5%	-13.5%	-4.4%	-4.4%
Europe				
France	-13.7%	-15.0%	-8.4%	-12.8%
Germany	-14.1%	-15.5%	-18.2%	-22.2%
Italy	-10.4%	-11.8%	-13.6%	-17.8%
Spain	-7.2%	-8.7%	-12.0%	-16.2%
Switzerland	-8.1%	-8.9%	-8.0%	-9.1%
United Kingdom	-9.7%	-11.8%	-8.8%	-14.2%
Asia Pacific				
Australia	-7.5%	-10.0%	-2.2%	-12.0%
Hong Kong	-4.5%	-4.5%	-7.7%	-7.8%
Japan	-17.2%	-14.2%	-15.1%	12.9%
International Developed Markets Index				
MSCI EAFE Index	-12.2%	-12.5%	-11.0%	-13.8%
Emerging Markets				
Brazil	10.1%	13.4%	16.3%	-0.5%
China	-10.7%	-10.7%	-18.7%	-18.9%
India	-1.3%	-2.5%	1.4%	-7.3%
Korea	-12.6%	-13.1%	-17.6%	-20.9%
Mexico	-14.5%	-18.8%	-15.0%	-15.5%
Russia	-4.3%	-9.0%	16.7%	-0.7%
South Africa	-2.2%	-3.8%	-12.6%	-24.8%
Taiwan	-13.1%	-13.7%	-5.9%	-8.9%
Emerging Markets Index				
MSCI EM Index	-7.4%	-7.5%	-10.1%	-14.6%

Fixed Income – Treasury Yield Curve and Returns by Sector



Source: U.S. Treasury, Bloomberg, Barclays

Tactical Positioning 4Q18

Asset Class	Underweight Overweight Neutral to Target	Comments
Cash	Overweight for clients with regular spending	Use the money market funds when possible in lieu of cash reserves
Low Duration	Overweight	To be used for rebalancing and interest rate risk management
Fixed Income	Underweight	Active management preferred, diversified including global bonds International bonds – 20% or less of overall fixed income exposure
Credit Alternatives	Overweight	Important to recognize added risk for increased return potential, illiquidity
Large Cap	Underweight	Growth/value tilt neutral
Mid Cap	Neutral	Growth/value tilt neutral
Small Cap	Overweight	Growth/value tilt neutral
International	Neutral	Prefer active management
Emerging Markets	Overweight	Prefer active management
Liquid Alternatives	Neutral	Include inflation sensitive strategies
Long/Short Equity	Neutral to overweight	Actively adding to or initiating positions to hedge market volatility
Private Equity	Neutral	
Private Real Estate	Neutral	Geographical diversification, selective opportunities

Annual Total Returns of Key Asset Classes 2005 – 3Q 2018

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	15 Year Annualized
Best	Emg Mkts 39.4	US Bonds 5.2	Emg Mkts 78.5	US Small Cap 26.9	Real Estate 16.0	Emg Mkts 18.2	US Small Cap 38.8	US Large Cap 13.7	Real Estate 15.0	US Small Cap 21.3	Emg Mkts 37.3	Inflation 1.9	US Mid Cap 8.9
	Intl Equity 16.7	Inflation 0.1	Intl Equity 41.4	US Mid Cap 25.5	US Bonds 7.8	US Mid Cap 17.3	US Mid Cap 34.8	US Mid Cap 13.2	Long/Short Eq 3.6	US Mid Cap 13.8	Intl Equity 27.2	US Bonds 0.0	Emg Mkts 7.9
	Real Estate 16.0	Real Estate -10.0	US Mid Cap 40.5	Emg Mkts 18.9	Inflation 3.0	Intl Equity 16.8	US Large Cap 32.4	Real Estate 12.5	US Large Cap 1.4	US Large Cap 12.0	US Large Cap 21.8	US Large Cap -4.4	US Large Cap 7.8
	Long/Short Eq 13.7	Long/Short Eq -19.8	US Small Cap 27.2	Real Estate 16.4	US Large Cap 2.1	US Small Cap 16.3	Long/Short Eq 17.7	US Bonds 6.0	Inflation 0.7	Emg Mkts 11.2	US Mid Cap 18.5	US Mid Cap -9.1	US Small Cap 7.5
	US Bonds 7.0	US Small Cap -33.8	US Large Cap 26.5	US Large Cap 15.1	US Mid Cap -1.5	US Large Cap 16.0	Intl Equity 15.3	Long/Short Eq 5.5	US Bonds 0.5	Real Estate 8.8	US Small Cap 14.6	US Small Cap -11.0	Intl Equity 5.2
	US Mid Cap 5.6	US Large Cap -37.0	Long/Short Eq 19.5	Intl Equity 11.2	US Small Cap -4.2	Real Estate 10.9	Real Estate 13.9	US Small Cap 4.9	US Mid Cap -2.4	Intl Equity 4.5	Long/Short Eq 13.4	Intl Equity -14.2	US Bonds 3.9
	US Large Cap 5.5	US Mid Cap -41.5	US Bonds 5.9	Long/Short Eq 9.3	Long/Short Eq -7.3	Long/Short Eq 8.2	Inflation 1.5	Inflation 0.8	US Small Cap -4.4	US Bonds 2.6	Real Estate 7.6	Emg Mkts -14.6	Inflation 2.1
	Inflation 4.1	Intl Equity -45.5	Inflation 2.7	US Bonds 6.5	Intl Equity -13.7	US Bonds -2.0	US Bonds -2.0	Emg Mkts -2.2	Intl Equity -5.7	Inflation 2.1	US Bonds 3.5	Long/Short Hedge Eq and Real Estate not available as of 1/15/2019	
Worst	US Small Cap -1.6	Emg Mkts -53.3	Real Estate -29.8	Inflation 1.5	Emg Mkts -18.4	Inflation 1.7	Emg Mkts -2.6	Intl Equity -3.9	Emg Mkts -14.9	Long/Short Eq -3.4	Inflation 2.1		

Note: Long/Short Hedge Equity and Real Estate return data lags the timing of our quarterly updates. It will be included on an annual basis.

Source: Morningstar

Important Disclosures

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