FOR U.S. EQUITY MARKET, DECEMBER 2018 STATS ARE REMINISCENT OF GREAT FINANCIAL CRISIS

- For the S&P 500, the month of December was its worst in several years and across several dimensions. The index wrapped up 2018 with:
  - its highest monthly volatility (30.1%) since August 2011
  - its worst monthly excess return relative to the MSCI ACWI Ex-US Index (-4.5%) since May 2009
  - its worst monthly return (-9.0%) since February 2009
  - and its worst monthly drawdown (-15.7%) since November 2008.
- Down 4.4% and posting its first calendar year loss since 2008, the S&P 500 trailed its 2017 return by 2600 bps, while exhibiting more than 2x the volatility.
- Down 12.1% for the month, small-cap stocks capped off their worst quarter (-20.1%) since 2008.
- Posting their largest calendar year losses since 2008, developed market and EM stocks lagged their 2017 return by a whopping 3850 bps and 5100 bps, respectively.
- Not a single sector offered a positive return this month. Interest rate sensitive utilities generated the smallest loss (-4.3%), while energy stocks, weighed down by falling oil prices, were the biggest losers, down 12.8%.
- Surprisingly, correlation between segments of the global equity market declined during December's market turmoil. Falling interest rates pushed the correlation between stocks and bonds lower.

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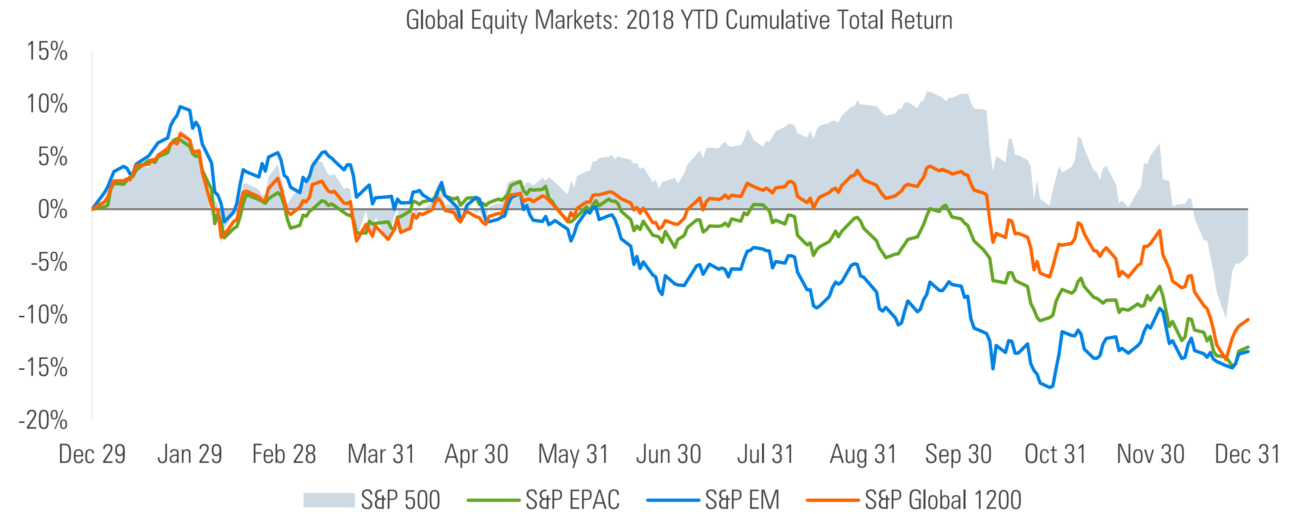
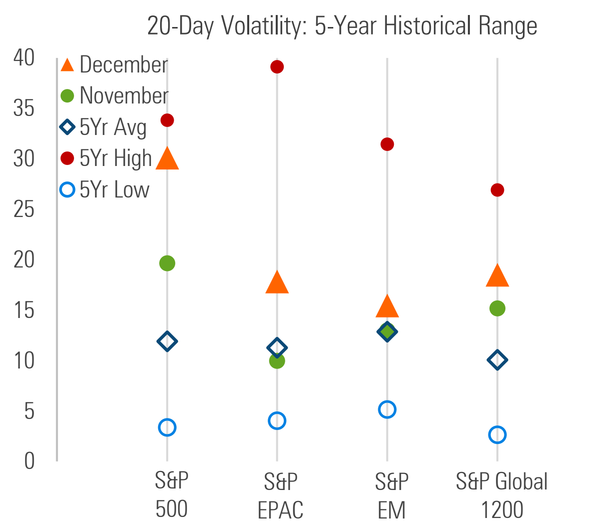
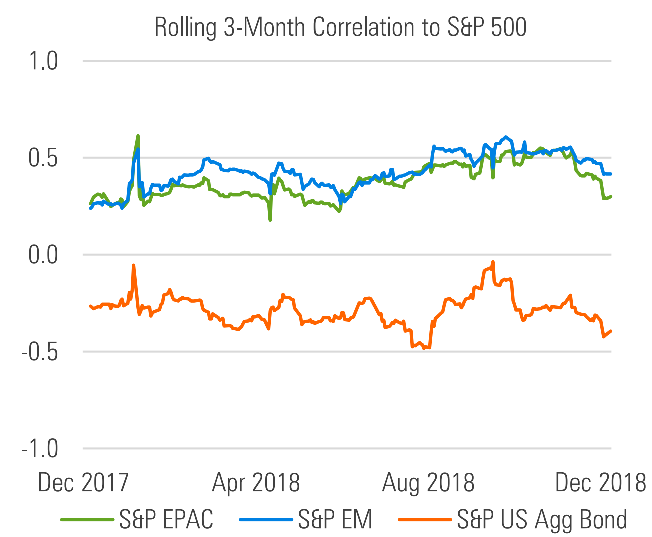




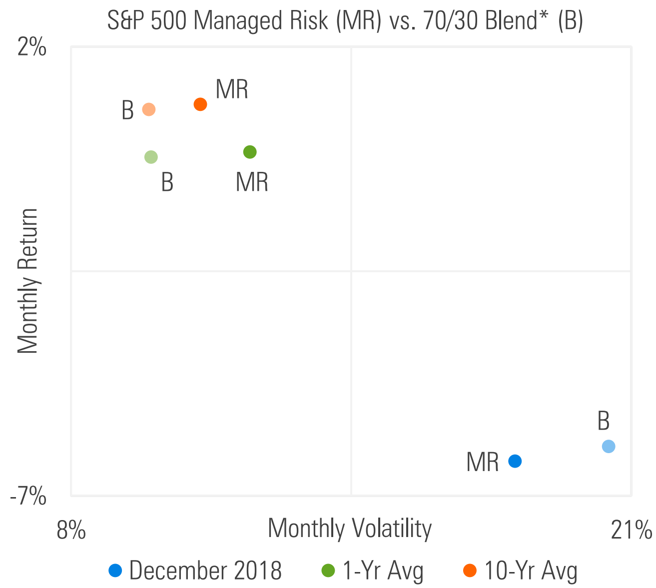


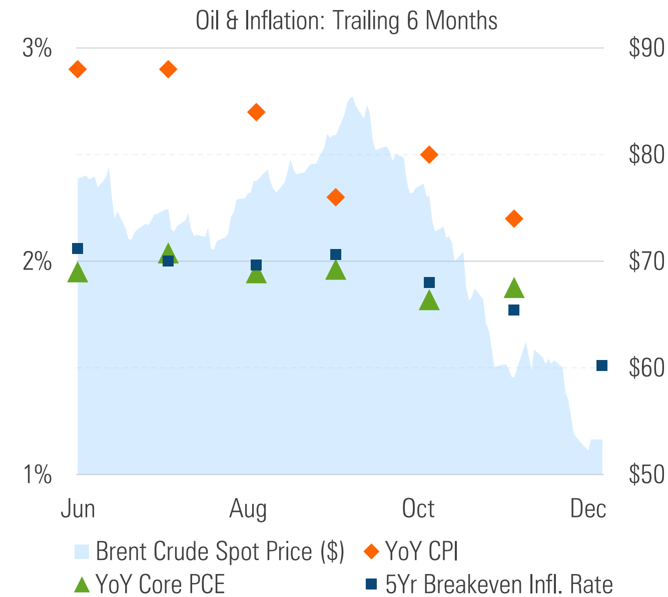
MANAGED RISK INVESTING

- The volatility of the S&P 500 in December remained above the 18% volatility threshold of the S&P 500 Managed Risk Index. As a result, the index continued to reduce its equity exposure as the month wore on, from 73% down to 47% by month end.
- By virtue of its hedging, the Managed Risk Index outperformed the S&P 500 by 272 basis points, with 2/3[rds] the volatility.
- The positive return of the US aggregate bond market was again additive to a 70/30 blend*, helping it to outperform the Managed Risk Index by 30 bps.
- Over the last 10 years, the Managed Risk Index has exhibited one additional percentage point of average monthly volatility over a 70/30 blend*, while generating an average excess monthly return of 10 bps, equal to an annualized excess return of 1.26% per year.

- After its largest monthly decline since October 2008, the price of Brent crude oil fell another 10% in December, resulting in its largest quarterly decline since Q4 2008.
- Year-over-year Core PCI rose modestly to 1.9% while CPI fell to 2.2% and 5-yr breakeven inflation fell to 1.5%, its lowest level since 2016.

*Measured by the S&P 500 and the S&P U.S. Agg Bond Index



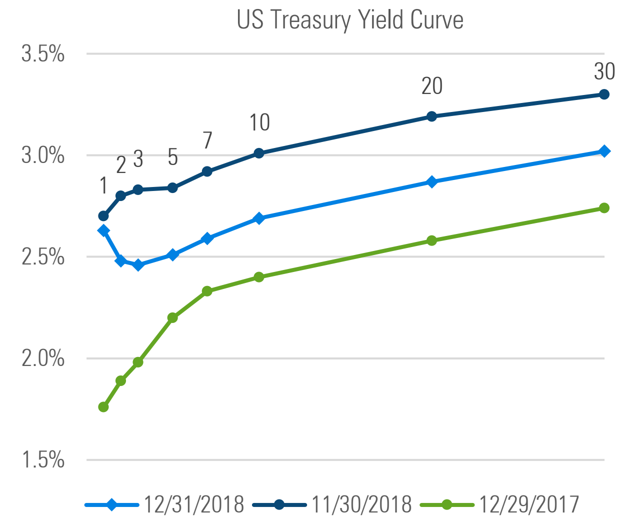


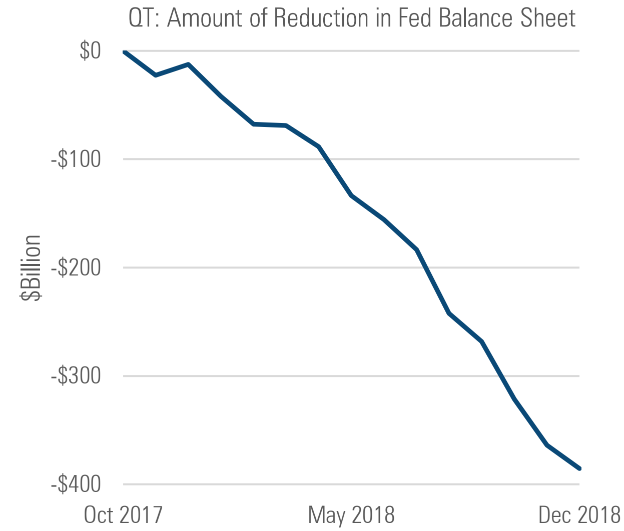
Total Returns as of December 31, 2018

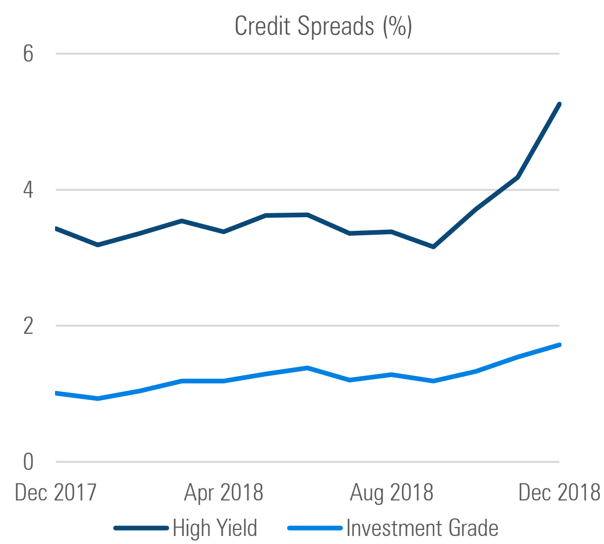
	S&P 500	S&P 500 MR	S&P 400	S&P 600	S&P EPAC	S&P EM	S&P Global 1200	S&P US AGG	Crude Oil (Brent)	US Dollar	70/30 Stock/Bond*
1 Month	-9.0%	-6.3%	-11.3%	-12.1%	-4.9%	-2.5%	-7.3%	1.5%	-9.9%	-1.0%	-6.0%
3 Months	-13.5%	-11.2%	-17.3%	-20.1%	-12.4%	-6.8%	-12.9%	1.4%	-34.9%	1.1%	-9.5%
6 Months	-6.9%	-4.4%	-14.1%	-16.3%	-11.2%	-7.7%	-8.5%	1.5%	-31.5%	1.2%	-4.9%
1 Year	-4.4%	-3.3%	-11.1%	-8.5%	-13.1%	-13.5%	-8.2%	0.1%	-19.9%	3.1%	-4.1%
1M Volatility	30.1%	18.6%	29.1%	31.4%	17.8%	15.5%	18.5%	2.3%	54.0%	5.5%	20.5%

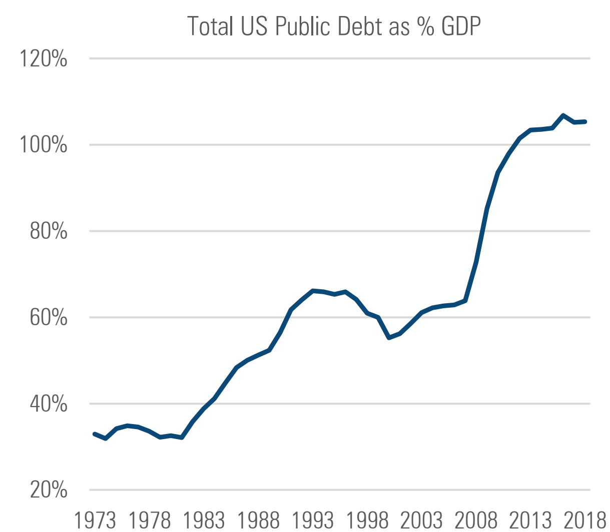
THE YIELD CURVE FINISHED NOVEMBER 20 BPS AWAY FROM INVERSION

- If the stock market was volatile, the bond market might be said to have wandered into the realm of absurdity, as the yield curve shifted lower and, in some segments, into inversion levels not seen in more than a decade.
- The yields on the 5-yr & 10-yr Treasury bonds both declined 30 bps, finishing the month 8 bps below and 10 bps above, respectively, the yield on the 1-year Treasury. This is the steepest and closest to inversion for both tenors since late summer in 2007.
- As rates were falling, credit spread were rising to their widest levels since early 2016, more than offsetting the price pressure from falling rates.
- Meanwhile, the Federal Reserve made its ninth rate hike in three years and further reduced the size of its balance sheet in another round of quantitative tapering (QT).
- As the Fed was reducing its demand for U.S. debt, the Treasury was increasing supply, adding $124B in December, bringing 2018's increase to $1.5T and total U.S. debt to $22T, approximately 105% of US GDP.
- The yield curve's inversion is the market's way of saying the Fed has set its policy rate too high. At the end of the month, the fed fund futures market indicated a 12.8% probability of a rate ***cut*** by the end of 2019.
- As this battle between the Fed and bond market wages on, elevated volatility seems likely to persist, as investors watch to see who surrenders first.









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