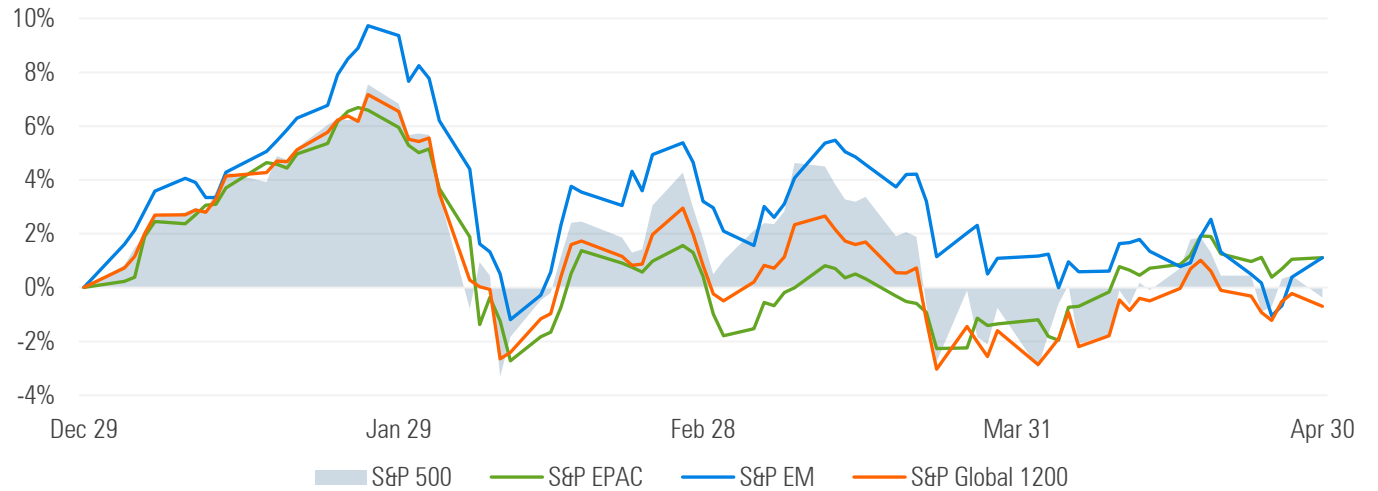


STOCKS SETTLE IN AS INTEREST RATE QUESTIONS LOOM

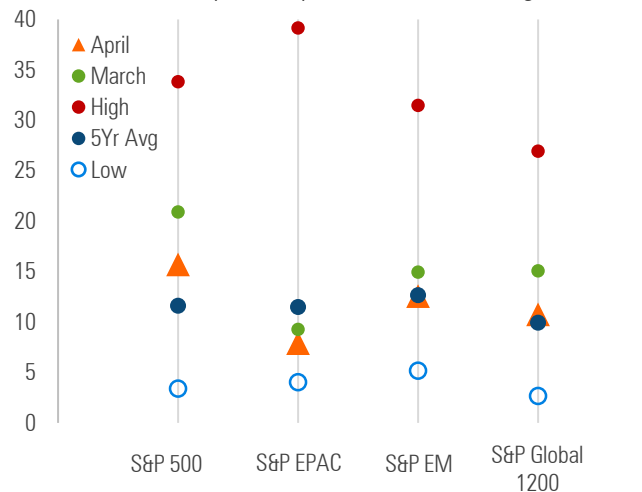
- After two consecutive months of market tumult (comparatively speaking) and negative returns, the S&P 500 in April exhibited greater calm and eked out a positive return.
- Volatility was lower in April than it was in March and closer to its five year average across each of the major segments of the global equity market.
- Unlike 2017, markets in post-January 2018 have been much less decisive. On the one hand, strong global economic growth and pro-growth tax cuts are reasons for optimism. On the other, trade-tariff wars and rising interest rates are undermining investor confidence about potential future earnings growth.
- The US dollar broke upward out of its three-month range, creating a headwind and potentially higher volatility for non-US equities.
- Correlations between major equity market segments were little changed in April. The correlation between US stocks and bonds, however, edged higher as rising interest rates and widening credit spreads weighed on bond market returns.

Joe Becker, FRM
 Director – Portfolio Strategist
 joe.becker@milliman.com

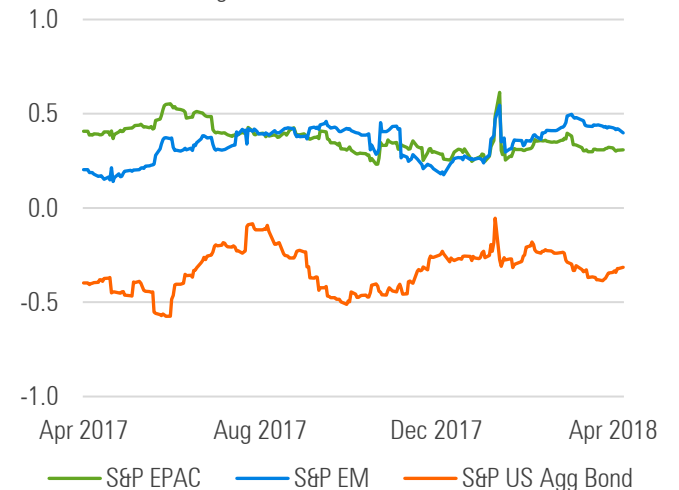
Global Equity Markets: 2018 YTD Cumulative Total Return



20-Day Volatility: 5-Year Historical Range



Rolling 3-Month Correlation to S&P 500

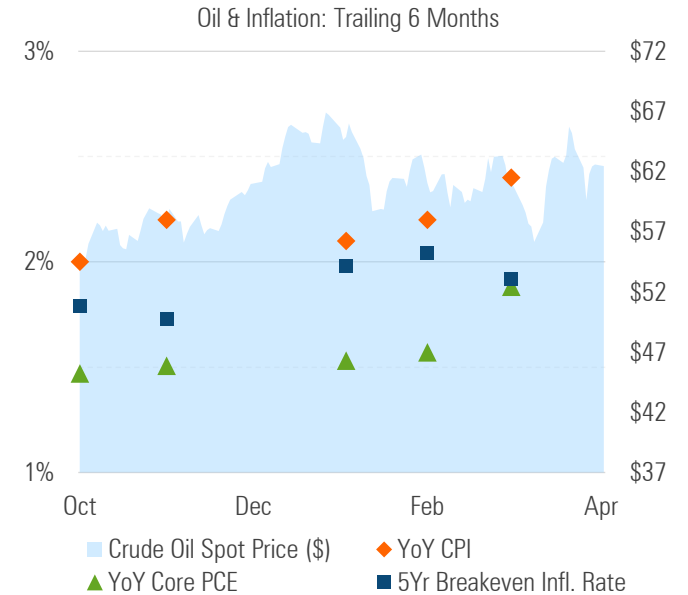
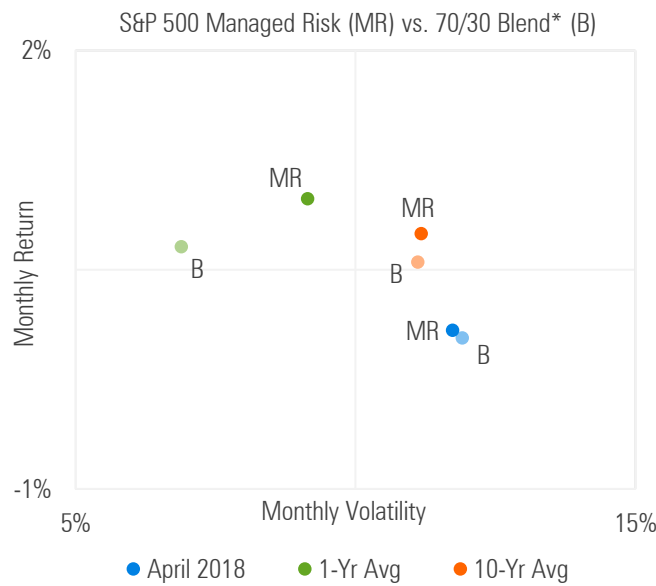


MANAGED RISK INVESTING

- In spite of markets growing calmer from March to April, the **S&P 500 Managed Risk Index**, which has an 18% volatility threshold and no fixed allocation to bonds, maintained a hedge position throughout the month.
- Having begun April at a 67% equity allocation, the index gradually increased its equity exposure to 81% by month end.
- Its hedge position helped it be less volatile than a 70/30 blend* with a marginally higher return.
- Over the last 10 years, the Managed Risk Index has exhibited virtually the same average monthly volatility as a 70/30 blend*, while generating an average excess monthly return of 20 bps.

- YoY CPI and PCE both edged higher for the second consecutive month while the unemployment rate dropped, giving the Fed more ammo to raise rates.
- Notwithstanding a rising US dollar, developed international equities led the global equity market higher, bringing them back into positive year-to-date territory.
- Up 9.3% for the month, energy led all sectors by a wide margin, as the outlook for strong global growth pushes oil demand projections higher.

*As measured by the S&P 500 Index and the S&P US Aggregate Bond Index.



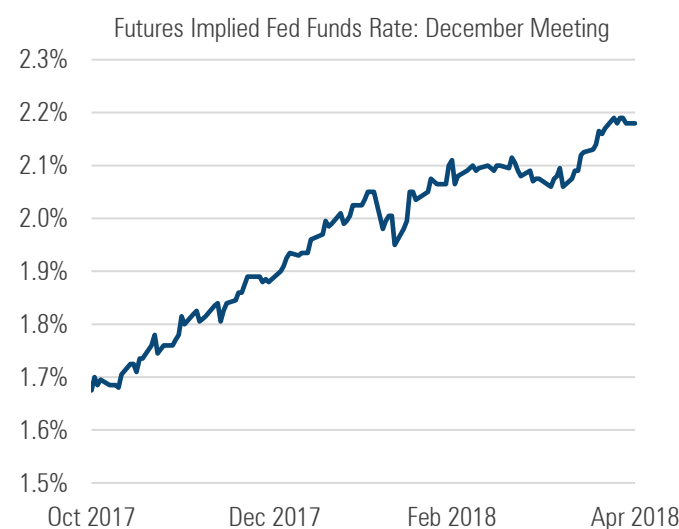
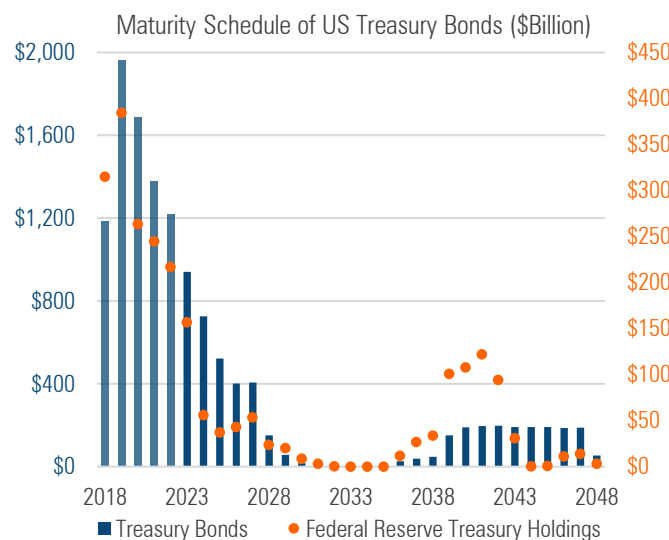
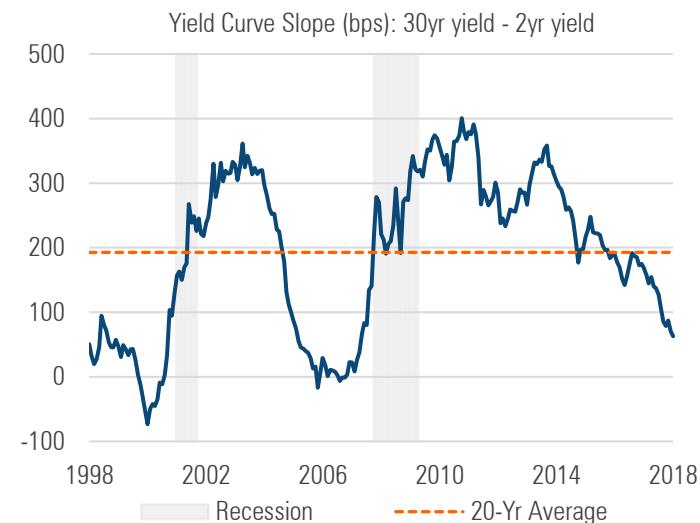
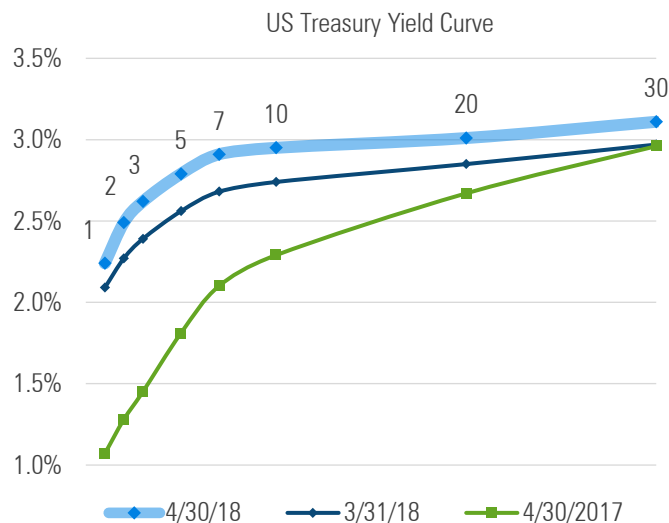
| Total Returns as of April 30, 2018 | | | | | | | | | | |
|------------------------------------|---------|------------|---------|---------|----------|--------|-----------------|------------|-----------|-----------|
| | S&P 500 | S&P 500 MR | S&P 400 | S&P 600 | S&P EPAC | S&P EM | S&P Global 1200 | S&P US AGG | Crude Oil | US Dollar |
| 1 Month | 0.4% | 0.1% | -0.3% | 1.0% | 2.3% | -0.1% | 1.1% | -0.6% | 2.1% | 2.0% |
| 3 Months | -5.8% | -6.8% | -3.8% | -0.9% | -3.7% | -6.6% | -5.1% | -0.9% | -3.7% | 2.4% |
| 6 Months | 3.8% | 2.7% | 2.8% | 4.6% | 3.8% | 5.0% | 3.7% | -1.6% | 13.7% | -2.9% |
| 1 Year | 13.3% | 12.0% | 9.8% | 12.8% | 15.2% | 21.6% | 14.4% | -0.1% | 28.9% | -5.7% |
| 1M Volatility | 15.7% | 10.7% | 13.4% | 14.3% | 7.9% | 12.6% | 10.7% | 2.2% | 39.0% | 5.1% |



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UPWARD PRESSURE ON RATES IS MOUNTING

- Rates across the yield curve moved higher in April, with the 10-year yield breaking above 3% and touching its highest level since the end of 2013.
- The rise in the curve was accompanied by more flattening, pushing it to its lowest month-end slope in nearly 11 years and further confounding investors' outlook for strong growth.
- For US taxpayers, the rise in interest rates is coming at a less-than-ideal time. A look at the maturity schedule of the \$12.8 trillion in publicly-held outstanding Treasury bonds reveals that fully two-thirds is set to mature by the end of 2023.
- This group of bonds was issued with a weighted average maturity of 6.6 years and coupon of 1.86%. As of the end of April, the yield on a six-year Treasury bond was 2.9%, 100 bps higher.
- The Congressional Budget Office is projecting higher budget deficits in the years ahead, meaning additional debt will likely need to be issued on top of the large amounts already being refinanced.
- This is happening just as the Fed is raising its overnight rate and becoming a smaller source of Treasury bond demand by reinvesting increasingly less of its maturing Treasury holdings.
- Rising rates effectively raise the bar for required equity returns, which may well be expected to result in higher equity market volatility.



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MILLIMAN.COM/FRM

Chicago

71 South Wacker Drive
Chicago, IL 60606
+1 855 645 5462

London

11 Old Jewry Road
London
EC2R 8DU
UK
+44 0 20 7847 1557

Sydney

32 Walker Street
North Sydney, NSW 2060
Australia
+610 2 8090 9100

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