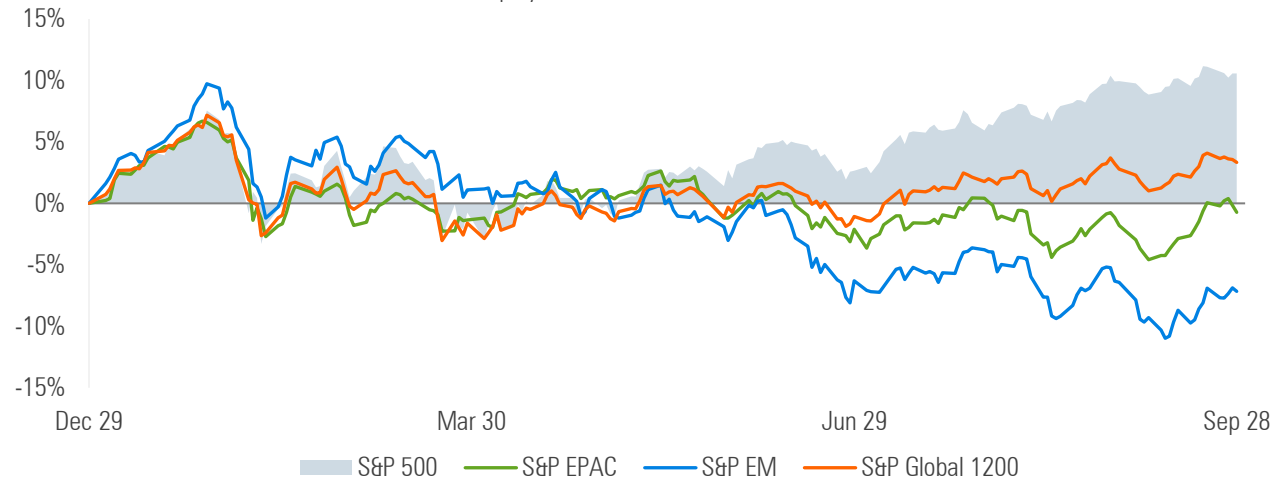


**S&P 500 POSTS ITS BEST QUARTERLY RETURN SINCE 2013**

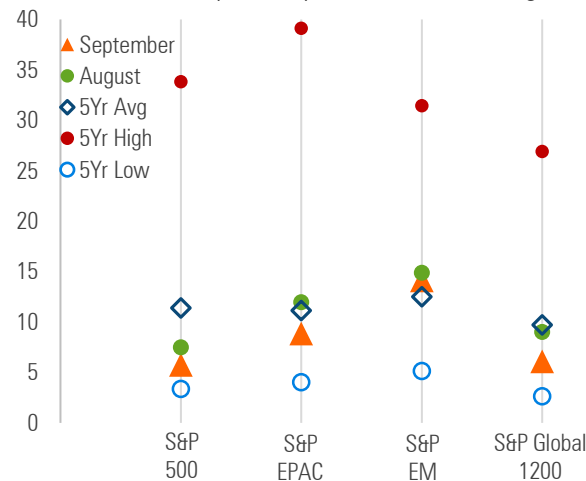
- With a 0.6% return in September, the S&P 500 locked in a 7.7% return for Q3 2018, its best since Q4 2013.
- Out of the last 25 calendar quarters, the S&P 500 has generated just three quarterly losses, only one of which exceeded 1%.
- As U.S. stocks continued their run, EM stocks extended their losing streak, declining for their second straight month and the seventh out of the last eight.
- After climbing six straight months for a total return of 20%, small cap stocks took a breather in September, declining more than 3%.
- After an exceptionally low August, U.S. equity volatility edged even lower in September. In contrast, EM equity volatility remained elevated, again hovering above its five-year monthly average.
- The correlation of the S&P 500 to global ex-US equities declined in September, while its correlation to the U.S. aggregate bond market, increased to its highest level since February.

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

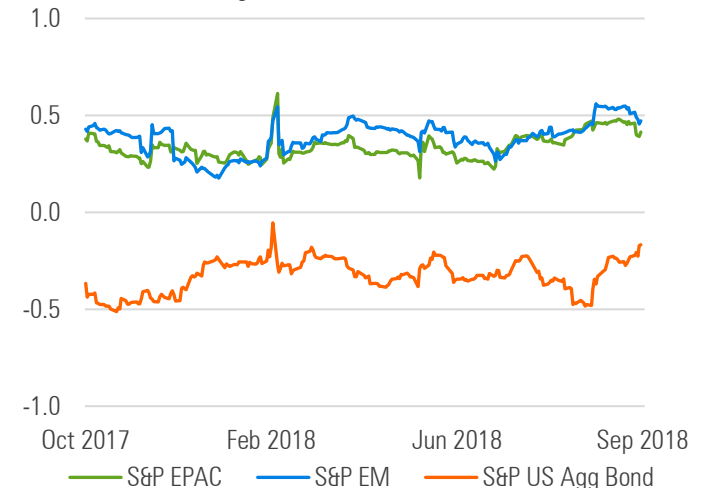
Global Equity Markets: 2018 YTD Cumulative Total Return



20-Day Volatility: 5-Year Historical Range



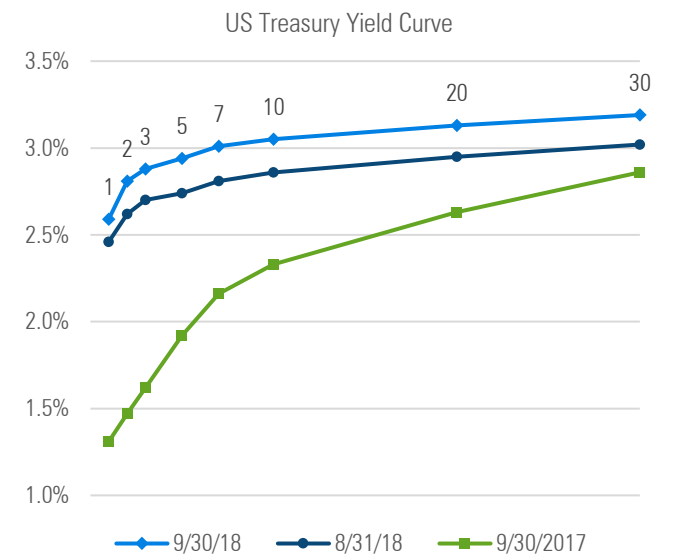
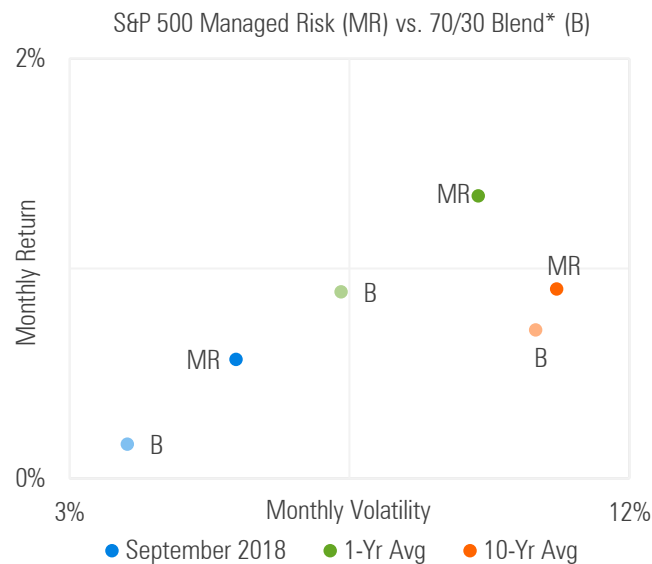
Rolling 3-Month Correlation to S&P 500



### MANAGED RISK INVESTING

- September was the calmest month so far in 2018 for the S&P 500. This left the [S&P 500 Managed Risk Index](#), which has an 18% volatility threshold and no fixed allocation to bonds, at a 100% equity allocation for the entirety of the month.
- In September, the Index outperformed a 70/30 blend\* by 41 bps, its fifth consecutive month of outperformance; for the quarter, the Index outperformed the blend on both an absolute and risk-adjusted basis.
- Over the last 10 years, much of which was a bull market for bonds, the Managed Risk Index has exhibited marginally higher average monthly volatility than a 70/30 blend\*, while generating an average excess monthly return of 20 bps, equal to an annualized excess return of 2.60% per year.
- The price of Brent crude oil climbed 5.5% in September, closing above \$80/barrel for the first time since 2014.
- The Fed made its eighth rate hike in three years, raising the Fed funds rate target to 2.25%.
- The yield curve made an almost perfectly parallel shift upward, finishing the month near the peak of its range of the last four years.

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



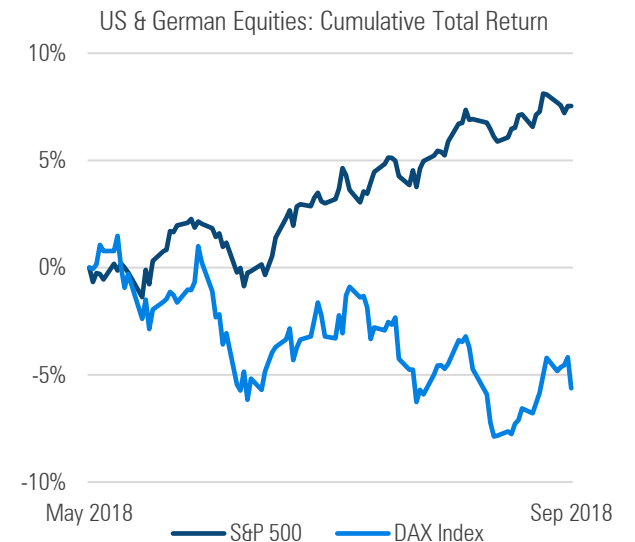
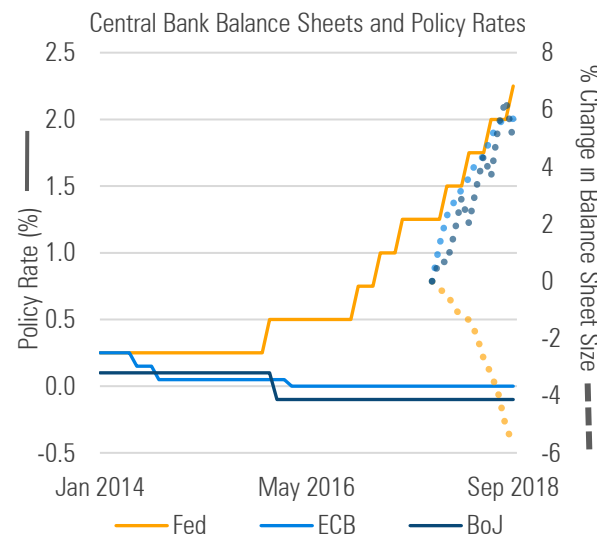
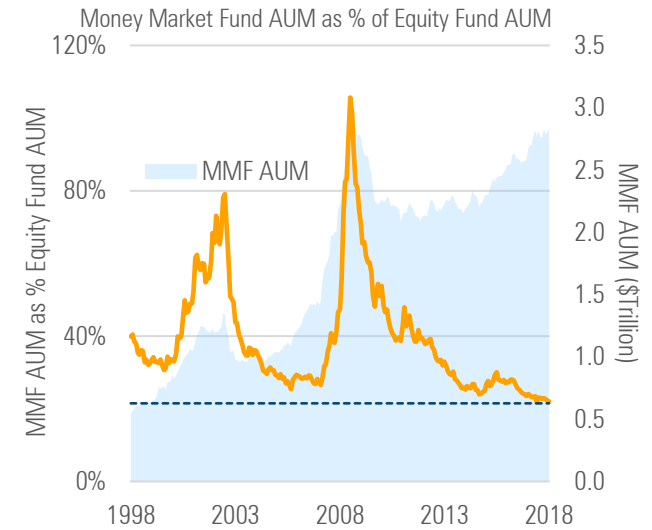
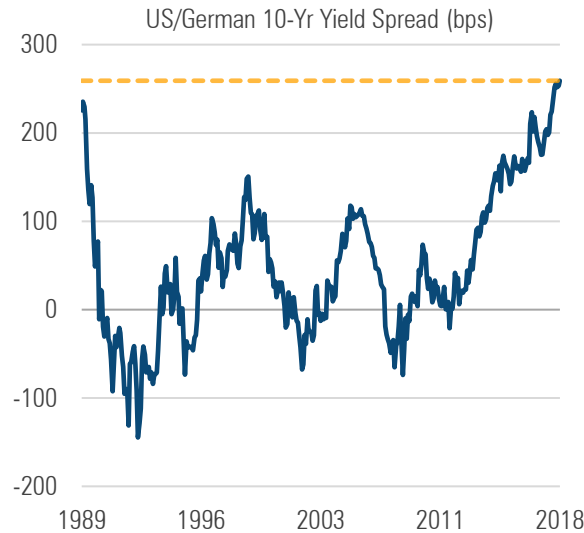
### Total Returns as of September 30, 2018

	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 (Brent)	US Dollar	70/30 Stock/Bond
1 Month	0.6%	0.6%	-1.1%	-3.2%	1.1%	-0.8%	0.7%	-0.5%	5.5%	0.1%	0.2%
3 Months	7.7%	7.7%	3.9%	4.7%	1.4%	-0.9%	5.1%	0.1%	5.3%	0.2%	5.0%
6 Months	11.4%	10.6%	8.3%	13.9%	0.4%	-8.3%	6.4%	0.0%	17.6%	5.2%	7.2%
1 Year	17.9%	16.1%	14.2%	19.1%	3.7%	-0.1%	11.4%	-0.9%	41.3%	2.0%	10.6%
1M Volatility	5.8%	5.8%	6.8%	8.5%	8.9%	14.1%	6.1%	1.9%	19.2%	4.7%	3.9%



**CAPITAL MARKETS INCREASINGLY REFLECT GROWING DIVERGENCE**

- Expectations of higher growth and inflation in the U.S. have lifted the yield on the 10-year U.S. Treasury bond to its highest level in nearly 30 years, relative to its German government counterpart.
- If money market funds are the destination of risk averse capital, then on a nominal basis, their historically high level of assets would suggest that investors were feeling cautious. Relative to equity fund assets, however, it suggests that over the last 20 years investors have never felt more confident.
- The Federal Reserve is now nearly three years, eight rate hikes and \$200 billion into its normalization of U.S. monetary policy. The European Central Bank and Bank of Japan, on the other hand, continue to hold their policy rates at 0% and are still conducting quantitative easing to keep longer-term yields low.
- Consistent with the widening yield spread between the US and German government bonds, U.S. and German equities are also diverging. The S&P 500 is up 8% since mid-May, while the DAX Index is down 6%.
- When the historical relationship between two entities continues to diverge, expectations of reversion to the norm tend to increase. One might argue that central bank-induced divergence, now eight+ years in the making, is due for a reversion.



## Creating transformational improvement in the retirement savings industry.

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