

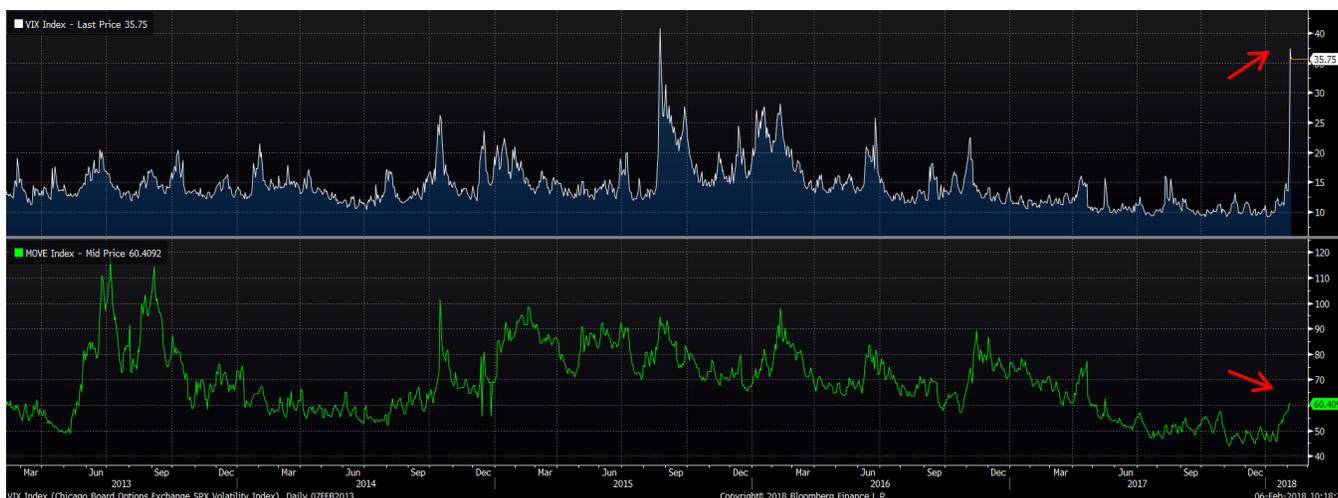
February 7, 2018

Thomas Toerpe

IN BONDS WE TRUST (FOR NOW)

The DJIA provided some thrills this month. After an extended period of record low stock market volatility, this week's roller coaster ride left a lot of investors feeling a bit queasy. While Treasuries participated in the excitement with a 25 basis point peak-to-trough swing in the five year yield, fixed income markets were less volatile than equities. In part, this reflects the fact that the bond prices are typically a more accurate barometer of economic conditions; so, are less prone to large corrections. And the outlook for monetary policy is no mystery. The Federal Reserve has already raised short term interest rates four times this cycle, and has clearly indicated its plan for three or four more this year. (Markets are pricing in three quarter-point rate hikes in 2018.) The new Fed Chair, Jerome Powell, has reaffirmed both the short and long term direction of Fed policy in the post-Yellen era.

.Stock vs Bond Volatility (VIX vs MOVE Indexes)



Source: Bloomberg LP

Of course, bond market volatility has spiked in the past, most notably around the debt ceiling battles that threatened the full faith and credit of the United States in 2011 and 2013. This month's equity bloodbath was a lesson in the dangers of complacency – a lesson that observers of interest rate markets should heed in the coming weeks.

This quarter, the US Treasury Department plans to issue \$441 billion in net new debt, the highest level in eight years. In order to do so, Congress will have to raise the debt limit once again; probably by early March. The Congressional Budget Office (CBO) expects individual tax revenues to drop \$10 to \$15 billion per month starting in February after the IRS revises its withholding tables downward, so the federal government is likely to hit the debt limit about a month earlier than anticipated. Unlike when they only controlled one house of the legislature, the GOP now has a political incentive to lift the debt limit with as little drama as possible, so chances are it will happen in the coming weeks without incident. However, if this week has taught us anything, it's best to be prepared for a little volatility.

Key Statistics: Interest Rates, Unemployment and Inflation

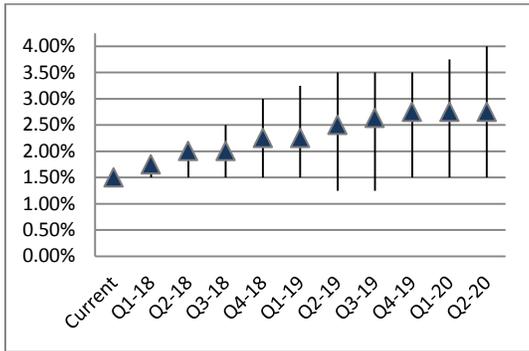
	Year-end <u>2014</u>	Year-end <u>2015</u>	Year-end <u>2016</u>	Year-end <u>2017</u>	CURRENT Feb-06-18
10 yr Treasury yield	2.17%	2.27%	2.44%	2.41%	2.79%
2 yr Treasury yield	<u>0.66%</u>	<u>1.05%</u>	<u>1.19%</u>	<u>1.88%</u>	<u>2.10%</u>
Spread	1.51%	1.22%	1.25%	0.53%	0.69%
1m LIBOR	0.17%	0.43%	0.77%	1.56%	1.58%
5 yr swap	1.82%	1.84%	2.11%	2.43%	2.77%
CPI (y/y change)	0.80%	0.50%	1.70%	2.20%	2.10%
Core PCE (monthly)	1.37%	1.33%	1.65%	1.50%	1.50%
TIPS (market breakeven)	1.21%	1.28%	1.87%	1.88%	2.00%
U-3 Unemployment	5.6%	5.0%	4.7%	4.1%	4.1%
U-6 Underemployment	11.4%	9.9%	9.2%	8.1%	8.2%
Annual change in NFP jobs	3,015,000	2,744,000	2,157,000	2,071,000	2,114,000

US Treasury Yields - YTD



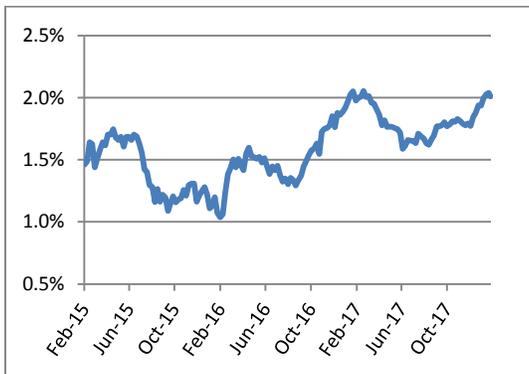
Source: Bloomberg LP

- Treasury yields fell sharply (prices rose) across the curve on February 5 - 6, with a peak-to-trough change of 20 to 25 basis points (0.20 percent to 0.25 percent). Yields bounced back quickly, stabilizing slightly lower.
- Despite the temporary break, the trend toward higher interest rates continues. Ten year treasury yields are now up 38 basis points since the beginning of the year, five year yields are 32 basis points higher, and two year yields are up 22 basis points.



Market analysts expect the Federal Reserve to raise the Fed funds rate five more times over the next two years, according to Bloomberg's ongoing survey. This would bring this benchmark rate to 2.75 percent from its current level of 1.50 percent. The FOMC itself forecasts a slight faster pace, with a "steady state" target of 3.0 percent.

Much of the interest rate rise so far this year reflects the market moving toward the Fed's own estimates as a result of solid economic performance and signs of a tightening labor market. Notably, analysts' expectations range from a low of 1.50% (no change) to a high of 4.0 percent by 2020. (Triangles = median forecast.)



Inflation expectations have risen over the past three years, and now are in line with the Fed's 2.0 percent target. Faster wage growth, higher global commodity prices and a weaker dollar have all contributed to the increase. Among the factors triggering the recent equity market sell-off was 2.9 percent growth in real hourly earnings reported by the Bureau of Labor Statistics. A stronger economy and signs of rising inflation could prompt the Fed to raise rates more aggressively.

Interest rates, economic indicators and survey information is obtained from Bloomberg, LP . Employment and wage data from the Bureau of Labor Statistics, bls.gov.

Associated Bank offers a wide range of instruments for hedging interest rate, commodity and foreign currency risk, including foreign exchange in more than 75 currencies. Companies interested in learning more about these instruments should contact their Associated Bank Relationship Banker or the bank's Capital Markets Department at 866-524-8836.

All rates shown are indications only and subject to change.

Interest rate swap contracts are subject to risk and are NOT deposits or obligations of, insured or guaranteed by Associated Bank, N.A. or any bank or affiliate, are NOT insured by the FDIC or any agency of the United States, and involve INVESTMENT RISK, including POSSIBLE LOSS OF VALUE. This material is provided to you for informational purposes only; and any use for other than informational purposes is disclaimed. It is a summary and does not purport to set forth all applicable terms or issues. It is not intended as an offer or solicitation for the purchase or sale of any financial product and is not a commitment by Associated Banc-Corp, its subsidiaries or affiliates, as to the availability of any such product at any time. The information herein is not intended to constitute legal, tax, accounting, or investment advice, and you should consult your own advisors as to such matters and the suitability of any transaction. We make no representations as to such matters or any other effects of any transaction. In no event shall we be liable for any use of, for any decision made or action taken in reliance upon, or for any inaccuracies or errors in, or omissions from, the information herein. The views expressed here are solely those of the author and do not reflect the views of Associated Banc-Corp, its subsidiaries or affiliates.