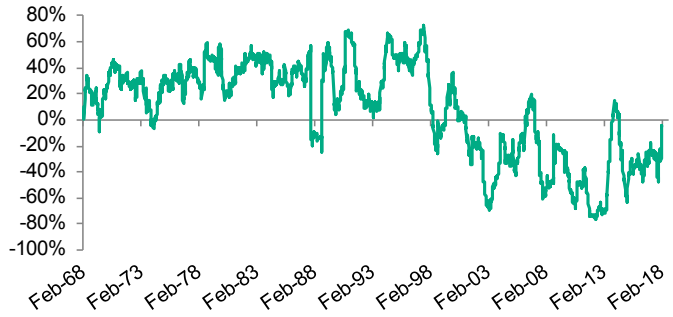
Macro Wrap-Up

The Relationship Between Stocks and Bonds

February 23, 2018 — A lot of fans watching the Olympics ice dancing competition felt that they knew more about the relationship between the two members of the winning pair than even the competitors themselves.[1] The same is true of stocks and bonds: many investors think there is more to the correlation between stocks and bonds than just what appears in the price data. If you look over many decades, there isn't much correlation between stocks and bonds at all,[2] but in the past few years they've been negatively correlated.[3] This month, we've heard that there is some anxiety that this relationship may be changing. Unfortunately, much of the thinking on this topic has been more difficult to follow than figure skating scoring. Part of the problem is that analysts can be inflexible in their understanding of the assets and may have a tendency to downplay the markets' complexity. Such analysis does not hold up to the range of outcomes we see over time.

Trailing 1-Year Correlation Between Stocks and Bonds



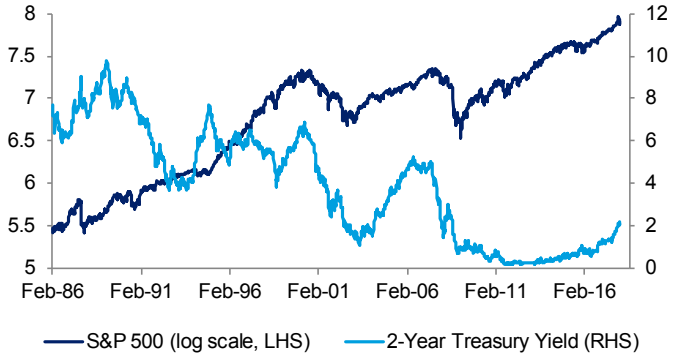
Source: AQR, Bloomberg. For illustrative purposes only. As of February 22, 2018.

Over the last fifty years, the correlation between weekly percentage changes in the S&P 500 Index and the weekly change in 10-year U.S. Treasury yields (negated since bond prices move in the opposite direction of yields) is about 0.07, i.e., stock and bond price movements have had a trivial positive correlation

Two weeks ago we touched on some of the logic behind the negative correlation of the past few years, and how higher wages and inflation could change it. As a reminder, positive growth surprises can help stocks while hurting bonds.[4] Higher growth can be good for earnings, but can make safe assets with steady cash flows such as bonds less attractive.[5] However, if we see a lot concern about inflation, it could be bad for both stocks and bonds. Higher inflation can erode the value of future payments from bonds, and can lead to more economic uncertainty which can be bad for stocks. It could also lead to expectations of Fed hikes, which many investors believe are bad for stocks and bonds (more on that later).

Even if investors become comfortable with the inflation picture, there is another related concern that could affect the relationship between stocks and bonds. It is the direct effect of higher yields on stock prices, rather than a common factor driving both markets. If you look at a chart of yields and stock prices, you can find plenty of times when higher yields (particularly short-term yields driven by Fed hikes) preceded drops in stock prices.[6] It is not hard to make a flow argument: higher yields make bonds more attractive, leading investors to demand better valuations from stocks. It is also easy to make an economic argument that higher yields should lead to a slowing economy and lower earnings because borrowing becomes more expensive, interest costs go up, and businesses become more cautious.

The S&P 500 vs. 2-Year Treasury Yields



Source: AQR, Bloomberg. For illustrative purposes only. As of February 22, 2018.

It may seem unrealistic to think that bond yields could go up without an obvious economic driver, but what this really means is that investors are concerned about the possibility of a Fed error. There are a number of reasons for the Fed to raise rates. Fed economists could be looking at models that show some risk of inflation in the future, or the new Fed Chair could try to prove his inflation fighting credentials by being

aggressive. If this does happen, the relationship between higher rates and stocks is not as straightforward as it may appear. There have been plenty of times when rates have gone up moderately and stocks have maintained a negative correlation to bonds. This may lead you to conclude that rates only matter when they are over a certain threshold, but it is difficult to know where this threshold should be. Just because a certain level was problematic in the past does not mean that it will be in the future. It is unlikely that there is a magic level in yields after which stocks turn from vibranium to tin.

Perhaps stocks react to higher bond yields as people react to alcoholic beverages.[7] Some people get really drunk after one cocktail, while others can handle six or seven without even becoming tipsy. In a very strong economic environment, stocks may have a higher tolerance to increases in interest rates. If there are credit problems or valuations are high, stocks may be more susceptible to smaller upward moves in rates. If the Fed were to raise rates to, say, 50% (the equivalent of drinking fifty beers, which would make almost anyone sick), then stocks would probably fall regardless of how strong the economy is. Rarely do things get to a point where it is so clear.

This fickleness is a common theme in markets. It can often seem like investors suddenly become concerned about a specific variable or event after not caring about it for a long period. This was true when markets suddenly got very upset about the wage number two weeks ago. As a result, it's difficult to know what the relationship between stocks and bonds should be at any specific time. It is possible to make dubious assumptions based on short-term price action and recent market news that bonds and stocks are suddenly the same asset, but it's important to remember that historically bonds and stocks have rarely maintained significant correlations (either positive or negative) for long periods, and that the relationship has been very volatile. Now back to trying to figure out what a twizzle is.

What We Are Watching

Fed Chair Powell Testimony (Tuesday)

Every six months, the Federal Reserve Chair spends a day testifying in each house of Congress. The testimony opens with a prepared statement discussing the economy and monetary policy, and afterwards the Chair responds to questions from legislators on various topics. While markets always pay attention to this semi-annual event, this year will draw particular focus, as it will be the first appearance by newly-appointed Fed Chair Jerome Powell. At present, most observers believe Powell's views on the appropriate course of policy are quite similar to those of Janet Yellen, as Powell has never publicly expressed disagreement with Yellen in his years on the Board of Governors. However, now that Powell has taken the reins, market participants will be on the lookout for even subtle differences in thinking that may have implications for the policy outlook. In the past, it has sometimes taken new Fed Chairs a bit of time to learn how to communicate clearly and carefully without rattling markets (for example, Ben Bernanke's early days as Chair featured some turbulence triggered by casual remarks to a member of the press). Further complicating matters, Chair Powell will be making his debut at a time when expectations for Fed policy have been in flux, as tentative signs of increased inflationary pressure in recent weeks have led markets to price in more aggressive rate hikes over the next year. Any unexpectedly hawkish or dovish comments from Chair Powell could generate volatility in U.S. fixed income, equities, and the dollar exchange rate.

Eurozone CPI (Wednesday)

The Eurozone economic recovery strengthened significantly in 2017, but the European Central Bank (ECB) has been cautious about removing monetary stimulus in light of still-low inflation readings. Recent readings on Core CPI, which excludes food and energy, have been stable at around 1%, well below the ECB's goal of inflation "below but close to 2%."[8] Until inflation begins to accelerate, ECB officials are unlikely to consider lifting interest rates from their current levels.

U.S. ISM Manufacturing PMI (Thursday)

An upswing in manufacturing activity over the course of 2016 and 2017 contributed notably to improvement in U.S. (and global) growth. Surveys such as the ISM Manufacturing PMI provided an early indication that the outlook for the sector was improving. While the ISM has remained at strong levels in recent months, there has been some moderation in the latest readings from international surveys such as the Eurozone Manufacturing PMI and the German IFO as well as regional manufacturing surveys in the United States. If the ISM moves lower as well this month, economists and market participants may begin to tone down their expectations for manufacturing growth in 2018.

AQR Capital Management, LLC | Two Greenwich Plaza | Greenwich, CT 06830 | U.S. |
p: +1.203.742.3600 | **f**: +1.203.742.3100 | **w**: aqr.com

1 Sports articles have suggested they are in love and either don't know it or are hiding it. For example https://slate.com/culture/2018/02/i-ship-virtue-moyer-and-now-you-do-too.html

2 Over the last fifty years, the correlation between weekly percentage changes in the S&P 500 Index and the weekly change in 10-year U.S. Treasury yields (negated since bond prices move in the opposite direction of yields) is about 0.07, i.e., stock and bond price movements have had a trivial positive correlation.

3 Over the last twenty years, the correlation has been -0.29.

4 In the case of economic variables and correlations, it is more about the changes in these variables than levels.

5 The opposite is true for weaker growth surprises.

6 This is of course just looking at nominal rates. If you look at real rates, you see a similar picture.

7 We all know that alcohol has created and destroyed many relationships.

8 Eurostat, ECB: The Definition of Price Stability, https://www.ecb.europa.eu/mopo/strategy/pricestab/html/index.en.html