



MORNING BRIEFING

May 21, 2018

Bond Market's Message

See the [collection](#) of the individual charts linked below.

(1) Fed, not inflation, is driving bond yields higher. (2) Fed isn't behind the curve on inflation. (3) Peak bond yield likely to be 3.50% over next 12-18 months. (4) Bond Vigilantes Model compares nominal GDP growth and bond yield. (5) Fewer reasons to be vigilant since 2008 as central bankers eased to avert deflation. (6) Inflation Premium Model based on unmeasurable r^* . (7) Yield Curve Model posits that shape of yield curve indicates outlook for short-term interest rates. (8) Bond yield discounting not only investors' inflationary expectations but also Fed's perceived inflationary expectations and policy response. (9) Does the federal budget deficit matter? (10) Foreign bond yields matter.

Bond Market I: Four Models. What is driving the bond market currently, and how much higher will it take bond yields? In my new book [Predicting the Markets](#), I discuss four of the most widely followed models used to explain the 10-year US Treasury bond yield and to predict it. I won't keep you in suspense: The bond yield isn't being driven by inflationary expectations, in my opinion, but rather by the federal funds rate (FFR) and the perceptions of how high the Fed will take it during the current tightening cycle ([Fig. 1](#) and [Fig. 2](#)).

My central premise is that the bond market perceives that the Fed isn't behind the curve on fighting inflation but rather on top of it. This explains why the yield curve has been flattening as the Fed has been tightening. The FFR is up from near zero since late 2016 to 1.50%-1.75% currently. It is likely to be raised three times to 2.25%-2.50% by the end of this year. Two more rate hikes next year should take it up to 2.75%-3.00%. If that's it for a while and inflation remains subdued, as I expect, then the bond yield should peak at 3.50% over the next 12-18 months. Now let's review the bond yield models briefly and discuss which of them might be working best right now:

(1) *Bond Vigilantes Model.* The Bond Vigilantes Model simply compares the bond yield to the growth rate in nominal GDP on a year-over-year basis ([Fig. 3](#)). In my book, I observe, "My model shows that since 1953, the yield has fluctuated around the growth rate of nominal GDP. However, both the bond yield and nominal GDP growth tend to be volatile. While they usually are in the same ballpark, they rarely coincide. When their trajectories diverge, the model forces me to explain why this is happening. On occasions, doing so has sharpened my ability to see and understand important inflection points in the relationship."

Here's why I call it the "Bond Vigilantes Model": Bond investors failed to be vigilant about inflation during the 1950s through the 1970s. So the spread between the bond yield and nominal GDP was mostly negative during this period ([Fig. 4](#)). During the 1980s through the early 2000s, the Bond Vigilantes saddled up and fought off inflationary pressures by keeping the spread above zero most of the time and widening it whenever inflation showed signs of picking up. I count five such anti-inflationary widenings during this period that were soon followed by decelerating nominal GDP growth.

Since then, inflationary pressures have been mostly dissipating, and the spread has been mostly

negative. That's because there was less reason to be vigilant, i.e., to fear reflation. The negative spread during the mid-2000s was attributed by both Alan Greenspan and Ben Bernanke to a "global savings glut," which kept bond yields down even as the Fed raised the FFR. Since 2008, the major central banks feared deflation and purchased lots of bonds through their quantitative easing (QE) programs.

However, the Fed has been normalizing monetary policy since the end of October 2014, when QE was terminated ([Fig. 5](#)). During October 2017, the Fed started to taper its balance sheet. (See [Chronology of Fed's Quantitative Easing & Tightening](#).) The Fed started raising the FFR at the end of 2015 and waited until the end of 2016 to do so again. The bond yield bottomed at a record low of 1.37% on July 8 of that year. The Fed raised the FFR three times during 2017 and is expected to do so three or four times this year. The bond yield rose to 3.11% last Thursday, the highest since July 2011, reflecting the Fed's normalization of its balance sheet and interest rates.

(2) *Inflation Premium Model*. In my book, I observe: "The Inflation Premium Model posits that the nominal interest rate is equal to the real interest rate plus a premium reflecting inflation expectations. That sounds plausible in theory, but it's not particularly useful for predicting interest rates. It certainly doesn't make very much sense for short-term interest rates—particularly not for the overnight federal funds rate, since inflationary expectations over such a short period are irrelevant unless the economy is plagued by hyperinflation."

A few pages later, I explain that the model "assumed even greater importance in the fall of 2015. The minutes of the October Federal Open Market Committee (FOMC) meeting began with a very dense section titled 'Equilibrium Real Interest Rates.' It focused on the concept of r^* , which is the 'neutral' or 'natural' real interest rate. This was defined in the minutes as 'the level of the real short-term interest rate that, if obtained currently, would result in the economy operating at full employment or, in some simple models of the economy, at full employment and price stability.' ...

"Does r^* have any practical significance? In the past, there was a presumption that it is reasonably stable, I can't find a way to measure it that results in a reasonably stable metric. More importantly, Fed officials have acknowledged that it might have been lower than they expected following the Great Recession. ...

"Daily data are available for the yield on the 10-year US TIPS [i.e., Treasury Inflation-Protected Securities] since 2003" ([Fig. 6](#)). "Presumably, it should be a market-based measure of the real interest rate, and the yield spread between the nominal 10-year Treasury bond and its comparable TIPS should be a measure of inflationary expectations over the next 10 years at an annual rate. In the short period of available data, the nominal 10-year Treasury bond yield has been more highly correlated with the TIPS yield than with the yield spread between the two" ([Fig. 7](#)). "This suggests that the TIPS and Treasury yields share a common driver, and that it's not inflation but the other component of their yields—i.e., the real interest rate, which is hardly a stable fixture."

(3) *Yield Curve Model*. The Yield Curve Model posits that bond yields are determined by expectations for short-term interest rates over the maturity of the bond. These expectations are embedded in the "term structure of interest rates," as reflected in the shape of the yield curve. As I explain in the book, "The slope of the yield curve reflects the 'term structure' of interest rates. Think of the 10-year yield as reflecting the current one-year bill rate and expectations for that rate over the next nine years. ... An *ascending yield curve* indicates that investors expect short-term interest rates to rise over time. ... A *flat yield curve* suggests that investors expect short-term rates to remain stable for the future. ... An '*inverted*' yield curve has a downward slope, suggesting that investors are scrambling to lock in long-term yields before they fall."

I conclude as follows (italicization added here for emphasis): “In this Yield Curve Model, inflation matters a great deal to markets because it matters to the central bank. Investors have learned to anticipate how the Fed’s inflationary expectations might drive short-term interest rates, and to determine yields on bonds accordingly. *So the measure of inflationary expectations deduced from the yield spread between the Treasury bond and the TIPS might very well reflect not only the expectations of borrowers and lenders but also their assessment of the expectations and the likely response of Fed officials!* The data are very supportive of these relationships among inflation, the Fed policy cycle, and the bond yield.”

Since the election of President Donald Trump on November 8, 2016 through last Friday, the FFR is up 125bps, the two-year Treasury note yield is up 168bps, and the 10-year Treasury bond yield is up 118bps. The spread between the two-year yield and the FFR is up 45bps over this period, while the spread between the 10-year yield and the FFR is down 7bps and the spread between the 10-year and two-year yields is down 50bps ([Fig. 8](#)).

My interpretation of these data: The bond market is anticipating that the Fed will raise the FFR, as widely expected and reflected in the two-year yield, but that inflation will remain subdued, as reflected in the narrowing of the spread between the 10-year and two-year yields.

(4) *Flow of Funds Model*. During the 1970s, Henry Kaufman, the chief economist of Salomon Brothers at the time, provided detailed analyses of the supply and demand for bonds. Although he had a great bearish call on bonds, I doubt it resulted from his flow-of-funds approach. More likely, he recognized that inflationary pressures were building. He was dubbed “Dr. Doom” by the press for his downbeat forecasts, accurate though they were for a while.

During the 1980s, there were plenty of doomsayers who focused on the mounting federal government budget ([Fig. 9](#) and [Fig. 10](#)). Many of them predicted higher inflation and bond yields. I predicted that the secular forces of disinflation would prevail, leading to lower deficits notwithstanding the federal budget problem.

The current outlook for the federal budget deficit has deteriorated significantly as a result of the Tax Cuts and Jobs Act passed late last year and a profligate congressional budget spending agreement between Democrats and Republicans early this year. Once again, we will have a test of whether the bond market is driven by supply/demand fundamentals. I currently expect that the increasing supply of US Treasury bonds will find enough demand at yields closer to 3.00% than to 4.00% as long as inflation remains subdued, as I expect.

Bond Market II: Global Savings Glut. The global savings glut theory postulated by Greenspan and Bernanke in the mid-2000s remains controversial. They claimed it explains why bond yields and mortgage rates remained low even though the Fed was raising the FFR. The theory’s critics say that the Fed raised the FFR too little, too late, and too predictably (in increments of 25bps per meeting from June 30, 2004 to June 29, 2006), thus setting the stage for the credit excesses that led to the mortgage meltdown of 2007 and 2008.

In any event, the US bond market has certainly become more globalized. This might partially explain why the 10-year US Treasury bond yield has been below the growth rate of US nominal GDP and should remain so. The comparable German and Japanese bond yields remain well below 1.00% ([Fig. 11](#)).

Both the ECB and BOJ recently were unpleasantly surprised to see their core CPI inflation rates fall during April to 0.7% from 1.0% in March in the Eurozone and to 0.2% from 0.3% in Japan ([Fig. 12](#)).

CALENDARS

US. Mon: None, Bostic. **Tues:** Richmond Fed Manufacturing Index 10. (*Wall Street Journal* estimates)

Global. Mon: None, Carney. **Tues:** None. (DailyFX estimates)

STRATEGY INDICATORS

Global Stock Markets Performance ([link](#)): The US MSCI index fell 0.5% last week, ranking 15th out of the 49 markets in a week when eight countries rose in US dollar terms and the AC World ex-US index fell 1.0%. That compares to the index's 2.4% gain a week earlier, which ranked 15th as 35 markets rose and the AC World ex-US index gained 1.7%. All regions fell last week, but EAFE performed the best with a decline of 0.6%. The underperforming regions relative to the AC World ex-US were: EM Latin America (-5.9), EM Eastern Europe (-3.5), EMEA (-3.1), BRIC (-1.7), EMU (-1.3), and EM Asia (-1.3). Israel was the best-performing country as it rose 2.9%, followed by Portugal (2.6), Ireland (2.1), and Argentina (1.3). Of the 30 countries that underperformed the AC World ex-US MSCI last week, Greece fared the worst as it tumbled 9.2%, followed by Brazil (-6.8), Indonesia (-6.5), South Africa (-6.4), and Poland (-6.2). On a ytd basis, the US MSCI weakened w/w to a 1.7% gain from 2.2% a week ago, but improved four places in the ytd performance ranking to 17/49. The US MSCI is ahead of the AC World ex-US (-0.7) in the ytd period. Fewer regions and just 22/49 countries are in positive territory ytd. BRIC has risen 0.9% ytd and now leads EMU (0.6), EM Asia (-0.1), and EAFE (-0.2). EMEA (-6.1) is biggest laggard relative to the AC World ex-US's performance, followed by EM Latin America (-4.5) and EM Eastern Europe (-2.3). The best country performers ytd: Finland (10.9), Jordan (10.3), Peru (7.5), Colombia (6.8), Portugal (6.4), Italy (5.1), and China (4.7). The worst-performing countries ytd: Turkey (-25.9), Argentina (-24.8), Indonesia (-18.8), the Philippines (-15.1), and Poland (-13.2).

S&P 1500/500/400/600 Performance ([link](#)): Two of these three market-cap indexes rose last week as SmallCap performed best with a gain of 1.6%, ahead of MidCap (0.2%) and LargeCap (-0.5). SmallCap has returned to a record high during May for the first time since late January, but MidCap remains 2.6% below its record then and LargeCap is still down 5.6%. Eighteen of the 33 sectors rose in the latest week, down from 28 rising a week earlier. The best performers in the latest week: SmallCap Energy (5.6), MidCap Energy (5.2), SmallCap Health Care (3.1), SmallCap Materials (2.3), and SmallCap Consumer Discretionary (2.3). Real Estate and Utilities dominated the biggest underperformers for the week: LargeCap Real Estate (-3.2), LargeCap Utilities (-3.2), MidCap Real Estate (-2.9), MidCap Utilities (-2.5), SmallCap Real Estate (-1.9), and SmallCap Utilities (-1.8). LargeCap is now up 1.5% ytd, trailing the 2.3% gain for MidCap and SmallCap's ytd gain of 7.1%. Seventeen sectors are now positive to date in 2018, down from 18 a week earlier and up from just three in early February. The best-performing sectors ytd: SmallCap Health Care (26.8), SmallCap Energy (18.0), MidCap Energy (17.3), MidCap Health Care (14.3), and LargeCap Tech (9.1). The worst performers ytd: LargeCap Consumer Staples (-13.7), LargeCap Telecom (-12.8), SmallCap Real Estate (-10.5), LargeCap Real Estate (-7.7), and LargeCap Utilities (-7.6).

S&P 500 Sectors and Industries Performance ([link](#)): Four sectors rose last week as six outperformed the S&P 500's 0.5% decline. That compares to nine rising a week earlier, when five outperformed the S&P 500's 2.4% gain. Materials was the best-performing sector with a 1.6% gain, ahead of the performances of Energy (1.5), Industrials (0.7), Health Care (0.2), Consumer Staples (0.0), and Consumer Discretionary (-0.1). Real Estate and Utilities were the biggest underperformers with drops of 3.2%, followed by Tech (-1.5), Telecom (-1.3), and Financials (-1.1). Five sectors are in the plus column so far in 2018, unchanged from a week earlier and down from nine in early March. These three sectors are ahead of the S&P 500's 1.5% ytd gain: Tech (9.1), Energy (7.6), and Consumer Discretionary (6.2).

The eight ytd underperformers: Consumer Staples (-13.7), Telecom (-12.8), Real Estate (-7.7), Utilities (-7.6), Materials (-1.2), Industrials (-0.9), Financials (-0.2), and Health Care (0.6).

Commodities Performance ([link](#)): The S&P GSCI index rose 1.0% w/w as 14 of the 24 commodities we follow moved higher. That performance mirrored last week's 1.0% gain when 12/24 commodities also rose. Last week's strongest performers: Nickel (4.9%), Kansas Wheat (4.0), Sugar (3.9), and Wheat (3.9). Last week's biggest decliners: Live Cattle (-5.9), Cocoa (-4.5), Feeder Cattle (-4.4), Gold (-2.3), and Silver (-1.8). The S&P GSCI commodities index is up 10.6% ytd and near its highest level since December 2014. The top performer so far in 2018 is Cocoa (41.5), up nearly twice as much as the next-best performers, Kansas Wheat (26.1), Unleaded Gasoline (24.2), and Wheat (21.4). The biggest laggards of 2018 to date: Sugar (-23.1), Live Cattle (-19.2), Zinc (-6.8), Coffee (-6.5), and Lead (-6.3).

Assets Sorted by Spread w/ 200-dmas ([link](#)): Spreads between prices and 200-day moving averages (200-dmas) rose last week for 12/24 commodities, 5/9 global stock indexes, and 17/33 US stock indexes, compared to 13/24 commodities, 9/9 global stock indexes, and 27/33 US stock indexes rising a week earlier. Commodities' average spread rose w/w to 6.8% from 6.6%. Fourteen commodities trade above their 200-dmas, down from 16 a week earlier. Brent Crude now leads all commodities at 22.8% above its 200-dma, but Nickel (17.6%) rose 4.6ppts w/w for the best performance among commodities. Live Cattle trades at 15.0% below its 200-dma, which is now the lowest of all assets. Cocoa (22.6) tumbled 6.9ppts for the worst w/w performance among all assets. The global indexes trade at an average of 2.0% above their 200-dmas, down from 2.5% in the prior week. Seven of the nine global indexes trade above their 200-dmas, unchanged from a week earlier. Brazil (5.4) still leads the global indexes, but dropped 3.3ppts for the worst performance among global assets. Indonesia (-6.0) is the biggest laggard among global indexes, Canada (2.9) improved 1.0ppt for the biggest gain among global assets. The US indexes trade at an average of 3.8% above their 200-dmas, with 23 of the 33 sectors above, up from 3.7% a week earlier, when 25 sectors were above. MidCap Energy (25.6) now leads the US stock indexes and all assets, and is closely followed by SmallCap Energy (24.0), which rose 5.4ppts for the biggest gain among US stock indexes and all assets last week. LargeCap Consumer Staples (-9.2) trades the lowest among all US stock indexes, but LargeCap Real Estate (-4.6) fell 3.0ppts for the worst performance among US stock indexes.

S&P 500 Technical Indicators ([link](#)): The S&P 500 price index fell 0.5% last week and weakened relative to its short-term 50-dma trend line and long-term 200-dma. The index remained in a Golden Cross (50-dma higher than 200-dma) for a 107th straight week (after 17 weeks in a Death Cross), yet the index's 50-day moving average (50-dma) relative to its 200-dma dropped for a 15th week to a 24-month low of 1.5% from 1.9%, and is down from a 55-month high of 7.2% in early February. This Golden Cross reading compares to a four-year low of -4.5% in March 2016. The S&P 500's 50-dma fell for the seventh time in nine weeks. It had fallen for four weeks through mid-April for its worst performance since before the 2016 election. The index dropped to 1.4% above its now-falling 50-dma from a 14-week high of 1.9% above its rising 50-dma a week earlier. That compares to a 25-month low of 5.6% below its falling 50-dma near the end of March and a two-year high of 6.2% above its rising 50-dma on January 29. The 200-dma continued to rise, as it has done since May 2016, but near the slowest pace since October 2011. The S&P 500 appears to have successfully tested its 200-dma again recently, but weakened to 3.0% above its rising 200-dma from a seven-week high of 3.8% a week earlier and from 0.6% below on April 3 (the lowest reading since June 2016). That compares to a seven-year high of 13.5% on January 29 and a four-year low of -10.1% in August 2015.

S&P 500 Sectors Technical Indicators ([link](#)): Last week saw five of the 11 sectors improve relative to their 50-dmas and 200-dmas: Consumer Staples, Energy, Health Care, Industrials, and Materials. However, two sectors moved below their 50-dmas in the latest week, as Real Estate and Utilities joined

Consumer Staples and Telecom. All 11 sectors had been below their 50-dmas at the end of March, which was the first time that has occurred since February 2016. Telecom has been the worst performer recently with 15 weeks below its 50-dma. Utilities was above for an eighth week last week, Energy for a sixth week, Consumer Discretionary for a fourth week, and Tech for a third. The longer-term picture—i.e., relative to 200-dmas—shows 7/11 sectors trading above, unchanged from a week earlier. That's up from just four sectors trading above their 200-dma in early May, which matched the lowest count since January 2016. Telecom remained below its 200-dma in the latest week, where it has been in most of the weeks since April 2017. Sectors trading the longest above their 200-dmas: Tech (above 200-dma for 98 straight weeks), Consumer Discretionary (80 straight weeks), Financials (36 weeks), and Energy (six weeks). On the other hand, Consumer Staples was below for a 13th week, Real Estate below for a 20th week, and Utilities below for a 22nd week. All 11 sectors had been above both their 50-dmas and 200-dmas briefly in mid-December for the first time since July 2016. Five sectors are in a Golden Cross (50-dmas higher than 200-dmas), unchanged from a week earlier. All 11 had been in a Golden Cross in mid-January for the first time since a 26-week streak ended in October 2016. Telecom was out for a seventh week, Consumer Staples for a ninth, Real Estate for a 15th, and Utilities for a 17th. Health Care was out for only a second week, but for the first time since February 2017. Energy is the only sector with a rising 50-dma now, down from six sectors rising a week earlier. That compares to all 11 sectors with falling 50-dmas during early April in the worst count since before the election in November 2016. Consumer Staples' 50-dma fell for a 15th straight week and Telecom's for a 13th week. Seven sectors have rising 200-dmas, unchanged from a week earlier. That's up from six in early February, which was the lowest since May 2017. The 200-dmas for Real Estate and Utilities fell for a 19th week, and Consumer Staples' dropped for a 13th week.

US ECONOMIC INDICATORS

Leading Indicators ([link](#)): The Leading Economic Index (LEI) continued to hit new record highs in April, advancing for the seventh consecutive month; it hasn't posted a decline in 24 months. April's 0.4% gain matched March's, though was below the 0.7% advances posted the first two months of the year. "April's increase and continued uptrend in the U.S. LEI suggest solid growth should continue in the second half of 2018. However, the LEI's six-month growth rate has recently moderated somewhat, suggesting growth is unlikely to strongly accelerate," said Ataman Ozyildirim, director of business cycles and growth research at The Conference Board. Of the 10 components, only two contributed negatively last month—stock prices (-0.07ppt) and building permits (-0.05). The two biggest negative contributors to March's LEI—the average workweek (0.13) and jobless claims (0.10)—were among the biggest positive contributors to April's, joined by the interest-rate spread (0.13), new orders diffusion index (0.12), and consumer expectations (0.09); the remaining three components contributed modestly—from 0.01 to 0.02ppt.

Coincident Indicators ([link](#)): Coincident Economic Index (CEI) also hit another new high in April; it has posted only one decline since January 2014. The CEI advanced for the seventh time in eight months, climbing 0.3% in April and 1.7% over the period; it's up 8.8% since January 2014. All four components contributed positively again last month, and all hit new record highs: 1) Industrial production was the biggest positive contributor for the third consecutive month, climbing for the sixth time in seven months, by 0.7% in April and 4.0% over the seven-month period. 2) Nonfarm payroll employment continued to head straight up to new record highs, averaging gains of 200,000 per month the first four months of the year 3) Real personal income—excluding transfer payments—rose for the eighth time in 10 months, by a total of 1.8% over those months, to another new high. 4) Real manufacturing & trade sales increased for the 11th time in 12 months, by 0.2% m/m and a total of 3.3% y/y, setting new record highs along the way.

Regional M-PMIs ([link](#)): Two Fed districts have reported on manufacturing activity for May—New York

and Philadelphia—and they show growth accelerated sharply, particularly in the Philly region. We average the composite, orders, and employment measures as data become available. The composite index (to 27.3 from 19.5) was just shy of its recent high of 28.5 recorded in October—which was the best reading since July 2004. The Philadelphia (34.4 from 23.2) region expanded at the fastest pace in a year, while New York's (20.1 from 15.8) also increased at a robust clip. The new orders gauge (28.3 from 13.7) accelerated at its fastest pace since July 2004, as orders growth in both the Philly (40.6 from 18.4) and New York (16.0 from 9.0) regions picked up—though Philly orders left New York's in the dust, expanding at the fastest pace in 45 years! The employment measure (19.5 from 16.6) showed jobs growth continued at a steady pace, as manufacturers in the Philly (30.2 from 27.1) region continued to hire at a robust rate. New York (8.7 from 6.0) factories, however, added to payrolls at less than half the pace at year-end.

GLOBAL ECONOMIC INDICATORS

European Car Sales ([link](#)): In April, EU passenger car registrations (a proxy for sales) returned to growth, rising 9.6% y/y, after declining 5.3% in March—which the ACEA noted reflected a “high basis of comparison” from record March sales in 2017. In April, all of the five major markets saw substantial increases: Spain (12.3% y/y) and the UK (10.4) posted the strongest growth, followed by France (9.0), Germany (8.0), and Italy (6.5). Car sales in the four months through April rose 2.5% y/y, led by a double-digit gain in Spain (11.0% y/y), followed by Germany (5.0) and France (4.4); Italian sales were flat with a year ago, while the UK's (-8.8) contracted. According to the report, the new EU member states have performed very well this year to date, expanding 12.5% y/y.

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