HOW TO PLAY THE FLATTENING OF THE (US) YIELD CURVE

Cathy Powers, CFA, Global Head of Rates and Sector Strategy
Ric Thomas, CFA, Global Head of Strategy and Research, Investment Solutions Group

Despite the markets’ recent skepticism about the timing of rate hikes, says our fixed-income team, the US Federal Reserve’s next tightening cycle remains on schedule. Here’s your strategy for staying ahead of the curve.

One of the key stories in 2014 has been the flattening of the yield curve in the United States. As we began the year, investors expected rising yields amid the tapering of asset purchases and improving economic growth. However, due to a number of factors, longer-dated Treasury yields actually fell on higher demand, while the short end of the curve rose modestly. How then should investors position themselves going forward?

We think the year-to-date flattening is only the beginning. In our view, investors should brace for more flattening and position themselves to take advantage of it. In this piece, we outline why the curve will flatten more and suggest trading strategies that could help investors take advantage.

A Curve and a Twist

After six years of suppressing interest rates through near-zero target federal funds (FF) rates and large-scale purchases of government and mortgage-backed securities, the US Federal Reserve (the Fed) finally indicated last December that it was ready to phase out the asset purchases and at least
talk about a rate hike. Typically, as we approach Fed tightening, rates would be expected to rise across the board but more so at the short end, where the market, no longer anchored by loose monetary policy, would start reprice future increases in the FF rate. At the long end, yields would generally rise less, primarily on expectations that tightening will mitigate inflation risk. The yield differential (spread) between 2- and 5-year Treasuries would narrow relative to 30-year bonds and the yield curve would flatten, as they say. Fixed-income investors would be inclined to shift their exposure from shorter- to longer-term bonds and put on “flattener” trades that benefit from a convergence between short- and long-term rates.

In 2014, instead of a typical bearish flattening from a larger rise in short-term rates, what we saw was a bullish flattening.

But a strange thing happened in 2014. The yield curve started to flatten ahead of schedule, at a time when rates were still falling rather than rising. Not only that, instead of a typical “bearish flattening” from a larger rise in short-term rates (and a more bearish outlook for short-term bonds), what we saw was a “bullish flattening” driven by declining long-term rates. Year-to-date, 30-year Treasuries have fallen by 76 bps, while the 2- and 5-year Treasuries have risen by 18 bp and 2 bp, respectively (Figure 1).

In retrospect, there are logical reasons why this yield curve twist occurred. Reduced expectations for actual and potential GDP in the early part of the year prompted a strong bid for the long end of the curve, and a spike in geopolitical tensions created a safe-haven bid for Treasuries. The strong US dollar and the still-competitive edge enjoyed by Treasuries over yields elsewhere—particularly in Europe (Figure 2)—also played a role.

And we now think there may be secular factors at work, as well, involving fundamental shifts in the supply-demand dynamics of the bond markets. (See “The Not-So-Great Rotation and What It Means for the Markets,” page 7.) Even so, the bullish flattening this year did throw the market a curve.

So What Now?

Against the backdrop of this year’s unusual turn of the yield curve, the market seems to be questioning the Fed’s projections for future rate hikes. The future shape of the yield curve will largely depend on the Fed’s outlook for economic activity and its assessment of progress toward employment.
and inflation goals. But where the Fed has begun to acknowledge progress, the market seems skeptical that higher rates will actually follow. We believe the market is being too complacent, for a couple of reasons.

First, there is no longer any question that the Fed’s economic stimulus plans are working, especially with regards to the labor market. It’s true, as Fed Chair Janet Yellen continually reminds us, that it will be difficult to raise rates as long as slack still remains in the job market—one big reason the Federal Open Market Committee (FOMC) members continue to say that they expect “a considerable time” to elapse between the end of asset purchases and the first rate hike. Nonetheless, it is becoming increasingly difficult to dismiss the improvement in job conditions (Figure 3). At 5.9 percent in September, the US unemployment rate has declined over 400 bps from its peak in October 2009, and it is now within striking distance of the FOMC’s longer-run target of between 5.2 percent and 5.5 percent.

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The goalpost for inflation is slightly further away. The Fed has set a target for personal consumption expenditures (PCE) at 2 percent—the level it considers high enough to be consistent with stable inflation. The most recent PCE report came in at 1.5 percent year-over-year. Wage inflation, meanwhile, has trended sideways, which the Fed views as evidence of remaining labor market slack (Figure 4).

However, wage inflation should pick up as the labor market sustains its momentum and slack is reduced, suggesting that it is probably only a matter of time before inflation starts to inch closer to the Fed’s target. The FOMC is calling for both PCE and Core PCE to rise to a range of 1.9 percent to 2 percent in 2017. We are not quite there yet, in other words, but as the Fed’s employment and inflation targets are increasingly close to being met, we expect the Fed will take the next step in rate normalization.

Importantly, it is also what the Fed’s own projections suggest. The Fed “dot plot” (Figure 5) charts the FOMC members’ expectations for the trajectory of the FF rate. The dot plot is released every quarter when the Fed provides its Summary of Economic Projections, which updates the FOMC’s forecasts for GDP, inflation, unemployment and the FF rate. Based on the projections from the September 17, 2014, dot plot, FOMC members are projecting the median FF rate will reach 1.375 percent, 2.875 percent and 3.75 percent by year-end 2015, 2016 and 2017, respectively. The FOMC also provides a forecast for longer-run FF, which represents the level of rates that it considers to be consistent with its employment and inflation goals. From March to June of this year, the median estimate for longer-run FF fell from 4 percent to 3.75 percent, but it has held steady at that level since. And the newly released 2017 median projections have closed the gap between 2016 and the longer run, suggesting a tightening cycle that would span no more than about three years.

But the Fed and the market don’t seem to be on the same page. A quick look at the Eurodollar futures curve, a proxy of future pricing for the money-market curve, bears this out. In Figure 6, we see that the Eurodollar futures’ projected rate path is below that of the Fed’s, and the divergence increases over time. The Eurodollar futures curve is indicating that rate hikes in 2017 will be roughly a percentage point below the Fed’s median forecast. Furthermore, based on market pricing, it would take more than five years to reach the equilibrium longer-run 3.75 percent FF rate. That is almost twice as long as the Fed’s current projections and many times longer than past tightening cycles, which have averaged a mere 12 months. The latest rate hike cycle (June 2004 to June 2006), relatively lengthy by historical standards, lasted just 24 months.

Why is the market dragging its feet? Perhaps it has simply grown inured to the prospect of higher short-term rates. On several occasions over the last five years, investors have been surprised by weak growth. Additionally, the lack of inflationary pressures has lessened the need to tighten the policy earlier, perhaps contributing to skepticism that the Fed will actually raise rates as much as it indicates it will when the time comes. However, we think history provides an important reality check here. As seen in Figure 7, once the Fed starts to tighten, the curve tends to flatten—and flatten pretty demonstrably.
How to Play It

The key challenge in this environment will be Fed communication. With the data-dependent nature of policy decisions, the potential for conflicting interpretations of new economic data is high. Combined with the market’s complacency about the rate hike cycle, it’s a perfect recipe for volatility—and a good argument for strategies designed to capitalize on rising short-term rates. The yield curve flattener known as a “barbell” and short duration positions are two common approaches used in such an environment.

Currently, we prefer the barbell, given that the short duration is only profitable when rates rise and we believe that we are still about six to nine months away from the first hike. The barbell, in contrast, provides the potential for positive payouts in a variety of scenarios, including the less likely event that rates go down.

Here, we conduct a side-by-side comparison of the two strategies. In our scenario, we assume that the 5- and 30-year yield curve slope will flatten to zero in three years’ time (Figure 8), since the average slope at the end of the last five rate hike cycles was -1 bps. This is 43 bps lower than what the market’s forward pricing is projecting, creating our window of opportunity, as it were.

Using this perspective, we compare the return profile of a short duration position in the 10-year Treasury and barbell (Figure 9). In our preferred barbell positioning, investors underweight 2- to 5-year Treasuries and overweight 30-year Treasuries while keeping the duration neutral. Profitability of these strategies is based on an equal duration of one year. Investors can do this, for example, by selling 20 percent in 5-year bonds (0.20 x 4.9 = 1 year duration) and buying 5 percent in 30-year bonds (0.05 x 19.8) also equivalent to one-year duration.

While both strategies appear generally profitable, the uncertain timing of rate hikes and the potential ways in which the yield curve may shift currently favor the barbell strategy in each of the two scenarios we tested (Figure 9). Of course, the success of both strategies, though, is heavily dependent on the timing of rate hikes and the projected levels relative to forward pricing.

Reallocating in 3-D

Still, fixed-income portfolios rarely exist in isolation. So, when reducing interest-rate risk at a time like this, it begs the question of where else to spend one’s risk budget to maximize risk-adjusted returns.

Our solutions team recently looked at this question as it relates to some of its multi-asset-class portfolios. Consider an investor allocating 40 percent of a portfolio to the Barcap Aggregate Bond Index (Barcap Agg) and 60 percent to the cap-weighted MSCI World Equity Index (the Initial Portfolio in Figure 10). The Barcap Agg has a 5.5-year duration as of June 30. Given a 40 percent allocation, this translates into a portfolio dollar duration of 2.2 (40 percent x 5.5 = 2.2). As in our barbell strategy, we can now think about changing our allocations to give a bigger weight to longer-duration bonds, provided we also trim the dollar amount of our allocations to keep the duration constant. For example, by shifting about half of the 40 percent Barcap Agg allocation into fixed income investments with an 11-year duration.
we can maintain a dollar duration of 2.2 (20 percent x 11 = 2.2) by halving the fixed income allocation. This frees up 20 percent of capital for use in more growth-oriented asset classes, such as equities, high-yield bonds, infrastructure or private equity.

But, almost by definition, more growth means more risk. A new increased allocation to riskier assets would increase the total beta of the portfolio, subjecting it to greater propensity for drawdowns during periods of financial distress. Fortunately, there are simple methods for maintaining beta neutrality while simultaneously adding to equity or other risk-asset allocations.

In order to keep the effective equity beta constant, in our example, equities are converted from a cap-weighted equity strategy into a minimum-volatility equity strategy. During the past few years, indexers and asset managers have designed many versions of equity strategies that overweight low-volatility stocks. While such strategies generally underperform in risk-on environments, these strategies tend to more than compensate with a lower equity beta and higher dividend yield than standard cap-weighted strategies.

There are simple methods for maintaining beta neutrality while simultaneously adding to equity or other risk-asset allocations.

In Figure 10, we show the mechanics of how all this works together. As can be seen, we have increased our equity allocation from 60 percent to 80 percent, but the entire portfolio is now moved to a low-volatility portfolio, carrying a beta of 0.7. This keeps the overall portfolio beta at 0.56, slightly below the original portfolio beta of 0.6, reducing the potential for drawdowns. At the same time, we have achieved an additional 80 bp in overall portfolio equity yield versus the initial portfolio, while maintaining the same dollar duration.

US Treasury yields are some of the most heavily scrutinized economic indicators in the world, providing insight into inflation expectations, interest rate outlooks and growth trends. As we think about the future path of the US yield curve, particularly once rates begin to normalize, fortunately we have historical trends to guide us. History, along with economic forces, suggests to us that more yield curve flattening is on the way. Investors can look to take advantage through flattener trades, such as barbells or multi-asset-class trading strategies. The key to profiting from our expected trajectory is focusing on the strategies that are best equipped to take advantage of the market volatility that is likely to accompany the next rate hike cycle.

1 The September 17, 2014, Fed press release includes the following language: “The Committee continues to anticipate, based on its assessment of these factors, that it likely will be appropriate to maintain the current target range for the federal funds rate for a considerable time after the asset-purchase program ends, especially if projected inflation...”
client assets but were achieved by means of the retroactive application of a model that was designed with the benefit of hindsight. The simulated performance was compiled after the end of the period depicted and does not represent the actual investment decisions of the advisor. These results do not reflect the effect of material economic and market factors on decision-making.

The simulated performance data is reported on a gross of fees basis, but net of administrative costs. Additional fees, such as the advisory fee, would reduce the return. For example, if an annualized gross return of 10% was achieved over a 5-year period and a management fee of 1% per year was charged and deducted annually, then the resulting return would be reduced from 63% to 54%. The performance includes the reinvestment of dividends and other corporate earnings and is calculated in US dollars.

The simulated performance shown is not necessarily indicative of future performance, which could differ substantially.

Risk associated with equity investing include stock values which may fluctuate in response to the activities of individual companies and general market and economic conditions.


Investing in futures is highly risky. Futures positions are considered highly leveraged because the initial margins are significantly smaller than the cash value of the contracts. The smaller the value of the margin in comparison to the cash value of the futures contract, the higher the leverage. There are a number of risks associated with futures investing including but not limited to counterparty credit risk, currency risk, derivatives risk, foreign issuer exposure risk, sector concentration risk, leveraging and liquidity risks.

Derivative investments may involve risks such as potential illiquidity of the markets and additional risk of loss of principal. Bonds generally present less short-term risk and volatility than stocks, but contain interest rate risk (as interest rates rise bond values and yields usually fall), issuer default risk, issuer credit risk, liquidity risk, and inflation risk. These effects are usually pronounced for longer-term securities. Any fixed income security sold or redeemed prior to maturity may be subject to a substantial gain or loss.

Investing in foreign domiciled securities may involve risk of capital loss from unfavorable fluctuation in currency values, withholding taxes, from differences in generally accepted accounting principles or from economic or political instability in other nations.

Investments in emerging or developing markets may be more volatile and less liquid than investing in developed markets and may involve exposure to economic structures that are generally less diverse and mature and to political systems which have less stability than those of more developed countries.

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Investing in high yield fixed income securities, otherwise known as “junk bonds”, is considered speculative and involves greater risk of loss of principal and interest than investing in investment grade fixed income securities. These Lower-quality debt securities involve greater risk of default or price changes due to potential changes in the credit quality of the issuer.

Asset Allocation is a method of diversification which positions assets among major investment categories. Asset Allocation may be used in an effort to manage risk and enhance returns. It does not, however, guarantee a profit or protect against loss. Currency Risk is a form of risk that arises from the change in exchange value of one currency against another. Whenever investors or companies have assets or business operations across national borders, they face currency risk if their positions are not hedged.

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### Figure 9: Hypothetical Projected Profitability

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Duration (years)</th>
<th>Current 10-Year Rate &amp; 5–30Y Spread</th>
<th>Future FF Rate Scenarios</th>
<th>Forward Pricing</th>
<th>Profit vs Forwards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short 10Y UST</td>
<td>1.00</td>
<td>2.17</td>
<td>3.50</td>
<td>2.85</td>
<td>0.65</td>
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<tr>
<td>Short 10Y UST</td>
<td>1.00</td>
<td>2.17</td>
<td>3.10</td>
<td>2.85</td>
<td>0.25</td>
</tr>
<tr>
<td>5–30Y Flattener</td>
<td>1.00</td>
<td>1.55</td>
<td>0.00</td>
<td>0.58</td>
<td>0.58</td>
</tr>
<tr>
<td>5–30Y Flattener</td>
<td>1.00</td>
<td>1.55</td>
<td>-0.15</td>
<td>0.58</td>
<td>0.73</td>
</tr>
</tbody>
</table>

Source: Bloomberg as of October 20, 2014.

### Figure 10: Simulated Portfolio*

<table>
<thead>
<tr>
<th>Asset Class &amp; Characteristics</th>
<th>Initial Portfolio</th>
<th>New Portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Min Volatility Equity</td>
<td>—</td>
<td>80%</td>
</tr>
<tr>
<td>Global Cap-Weighted Equity</td>
<td>60%</td>
<td>—</td>
</tr>
<tr>
<td>Total Equity</td>
<td>60%</td>
<td>80%</td>
</tr>
<tr>
<td>Cap-Weighted Fixed Income</td>
<td>40%</td>
<td>—</td>
</tr>
<tr>
<td>Long Duration Fixed Income</td>
<td>—</td>
<td>20%</td>
</tr>
<tr>
<td>Total Fixed Income</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>Total Portfolio</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Equity Beta</td>
<td>1.00</td>
<td>0.7</td>
</tr>
<tr>
<td>Total Asset Beta</td>
<td>0.6</td>
<td>0.56</td>
</tr>
<tr>
<td>Equity Yield</td>
<td>2.4%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Total Portfolio Equity Yield</td>
<td>1.4%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Fixed Duration</td>
<td>5.5</td>
<td>11</td>
</tr>
<tr>
<td>Total Asset Duration</td>
<td>2.2</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Source: Barclays, MSCI, State Street Global Advisors as of August 31, 2014.

Allocations are as of the date indicated, are subject to change, and should not be relied upon as current thereafter. Please see appendix for additional information.

* This is a hypothetical asset allocation shown for illustrative purposes only. Characteristics shown are actual data, based on the hypothetical portfolio.