Investing in a Rising Interest Rate Environment

Executive summary
With interest rates at record low levels over the past few years, it was only a matter of time before rates would move higher—and all rising rate environments are not created equal. We’re in a market with a historically steep yield curve—a graph that plots the interest rates of like-quality bonds against their maturities. The way investors consider fixed income investing during an environment where only the intermediate part (often referred to as “the belly”) and long end of the bond yield curve are on the rise is completely different from investing if only the short end of the curve is on the rise. This makes it important to understand the relationship between interest rates and fixed income returns.

Bond prices typically fall when interest rates rise, and this environment can create challenges for the bond market. As we monitor the many factors affecting interest rates and how fixed income investments may respond as rates rise, we have developed the following views and beliefs:

- The Federal Open Market Committee (FOMC) will likely raise the monetary policy rate earlier than the market is currently anticipating
- Rates will rise gradually, not sharply, throughout the remainder of the year
- Fixed income assets continue to play an important role in portfolios
- High yield is likely to be the most resilient fixed income sector in a rising rate environment

Additional perspectives around each of these dynamics are provided in this paper. We have included a detailed summary of our short- and long-term expectations for the FOMC and rates. Additionally, we offer reasons why we believe allocations to bonds should be maintained and provide recommendations for fixed income portfolios given our current outlook.

FOMC and interest rate outlook
Janet Yellen assumed the Federal Open Market Committee (FOMC) chairman role vacated by Ben Bernanke in February 2014 and appears to maintain a very similar monetary policy philosophy. However, as a result of the rotating voting members, the 2014 composition of the Committee will become less dovish. Doves typically favor looser policy. Hawks typically favor tighter policy. The bank presidents who rotated out of the FOMC have traditionally favored more easing, while those that joined have typically favored less easing. Thus, the overall composition of FOMC voting members is likely to shift away from the highly accommodative doves who were members in 2013 to a more neutral voting membership in 2014. This change could impact the directional path of the fed funds rate. It is possible the new composition could accelerate the timing of the first policy rate increase to the first half of 2015 versus the expectation of late 2015 via the previous Committee composition.
Forecasts for the fed funds rate

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S. Bank projections</th>
<th>Market consensus expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>2.5%</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>2.0%</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>1.5%</td>
<td></td>
</tr>
</tbody>
</table>

Market consensus expectations

Source: U.S. Bank Wealth Management; data compiled 4/15/14

In addition, the new voting membership’s polling of where they believe the fed funds rate should be at year-end 2015 and 2016 has shifted upward. This indicates a potential higher path of the policy rate going forward. Despite these expectations, policymakers have strongly signaled that once the fed funds rate is raised, the pace of increases is likely to be much slower than in past tightening cycles.

FOMC participant forecasts of appropriate pace of policy firming

Source: FOMC; data as of 3/2014

Notes: Each circle indicates the value (rounded to the nearest ¼ percentage point) of an individual FOMC participant’s judgment of the appropriate level of the target federal funds rate at the end of the specified calendar year or over the longer run.

The Fed’s extraordinary policy measures, such as quantitative easing (QE), essentially narrow the range of potential yields, which compresses potential yield outcomes on the upside, as well as the downside.

Potential yield outcomes for 10-year Treasury

As QE is reduced, the range of possible yield outcomes becomes larger, which should lead to increased interest rate volatility. A good measure of interest rate volatility is the MOVE index. Volatility has been suppressed for several years, running far below normal levels. We anticipate increased interest rate volatility throughout 2014 as outspoken FOMC hawks, such as Fisher and Plosser, may offer criticism of the extended period of the Zero Interest Rate Policy (ZIRP). Over the longer term, we expect volatility to continue to normalize as the Fed tapers their purchase program and the market begins to anticipate the first increase in the policy rate.

Treasury yield volatility remains well below its historical average

Source: Bloomberg, BofA Merrill Lynch; data as of 3/31/14; MOVE Index = Merrill Option Volatility Estimate

Over the next several months, we believe the yield curve will remain steep and interest rates will continue to rise gradually as sustainable economic growth resumes. We maintain our belief that Treasuries will not sell off aggressively from here. Rates already moved up significantly last year in anticipation of tapering, reducing...
the likelihood of a spike in rates going forward. The Fed’s balance sheet will remain substantial in size with no indications of intent to begin liquidating those assets, which suppresses potential upside to Treasury yields. Thus, the scope for interest rates to rise significantly from here appears limited. The Fed’s easing bias in regard to the policy rate is likely to keep short-dated Treasury yields anchored for the next several months with the yield curve remaining historically steep. Once we get closer to the first hike in the policy rate, the yield curve will likely flatten with shorter-dated yields rising faster than longer-dated yields.

The role of fixed income

Despite our outlook for a rising rate environment, investors may want to maintain exposure to this important asset class. The role of fixed income in a diversified portfolio is typically to generate income, but it is also to narrow the dispersion of return outcomes, potentially reducing the risk profile of the entire portfolio. Over longer time periods, equities are the primary driver of risk and return. Within a diversified portfolio, as investors increase their allocation to high quality bonds, the risk of loss potentially decreases over a 10-year time horizon. It must also be noted that while increasing allocations to high quality bonds may reduce the probability of losses, it may also limit the upside to potential returns over the same 10-year time period. Generally, the equity component of a diversified portfolio can increase the likelihood of both losses and returns.

We have not seen a bond bear market in a number of years and that makes investors concerned about what may occur to the bonds in their portfolios. Bonds can lose value in a rising rate environment. However, the losses bond investors have generally experienced have been historically smaller relative to the losses experienced in equities.

If we compare the performance of the various fixed income sectors relative to domestic and international equities during the financial crisis, we will see that bonds experienced substantially fewer losses than equities with Treasuries posting a positive return. Even high yield did not post nearly the losses incurred by equities, yet recovered from the financial crisis on par with domestic equity performance.

Comparing performance of bonds versus stocks before and after the recent global financial crisis

Although a rising rate environment is not especially bond friendly, we expect the rise in rates to be a gradual one, not forcing sharp losses over short periods of time. Also, as rates rise and maturities occur, investors have the ability to roll those maturities into new bonds with potentially higher coupons. Bonds have traditionally been used to potentially counterbalance volatile periods in the equity market. It is our view that bonds serve as a complement to the more risk-based assets in the portfolio, such as equities, and would encourage investors to maintain an allocation to fixed income within a fully diversified bond portfolio.

Portfolio positioning

In a rising interest rate environment, investors that are sensitive to potential losses may feel more comfortable holding a portfolio of individual securities as they will have a set date at which they should receive the par value of the bond. Investors that are more concerned with total return would be better served by a mutual fund or separately managed account strategy as the manager will be actively buying and selling securities as the interest rate picture evolves and additional opportunities arise.
We remain cautious of mortgage-backed securities (MBS) going forward given their sensitivity to rises in interest rates. Higher longer-term rates will likely dampen refinancing, which extends the duration and accelerates the price declines of MBS. Also, as the Fed concludes their purchase program, a large buyer of MBS will leave the market, which is likely to put upward pressure on spreads.

**Estimated price changes assuming Treasury yield increases**

<table>
<thead>
<tr>
<th>Estimated price changes</th>
<th>50 basis points increase</th>
<th>100 basis points increase</th>
<th>200 basis points increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emerging markets</td>
<td>-1%</td>
<td>-2%</td>
<td>-3%</td>
</tr>
<tr>
<td>Foreign developed</td>
<td>-2%</td>
<td>-3%</td>
<td>-4%</td>
</tr>
<tr>
<td>High yield</td>
<td>-3%</td>
<td>-4%</td>
<td>-5%</td>
</tr>
<tr>
<td>Intermediate Treasury</td>
<td>-4%</td>
<td>-5%</td>
<td>-6%</td>
</tr>
<tr>
<td>Inflation-Protected Notes (TIPS)</td>
<td>-5%</td>
<td>-6%</td>
<td>-7%</td>
</tr>
<tr>
<td>Intermediate municipal bonds</td>
<td>-6%</td>
<td>-7%</td>
<td>-8%</td>
</tr>
<tr>
<td>Intermediate investment grade</td>
<td>-7%</td>
<td>-8%</td>
<td>-9%</td>
</tr>
<tr>
<td>Treasuries</td>
<td>-8%</td>
<td>-9%</td>
<td>-10%</td>
</tr>
<tr>
<td>Mortgage-backed securities (MBS)</td>
<td>-9%</td>
<td>-10%</td>
<td>-10%</td>
</tr>
</tbody>
</table>

Source: FactSet; data compiled 4/15/14

Notes: Past performance is no guarantee of future results. Returns are represented by Barclays EM Hard Currency Aggregate Index, Barclays Global Treasury ex-U.S. Index, BofA Merrill Lynch U.S. High Yield Master II Index, BofA Merrill Lynch U.S. Inflation-Linked Treasury Index, Barclays 1-10 year Municipal Bond Blend Index, Barclays Intermediate U.S. Corporate Bond Index, BofA Merrill Lynch 1-10 years Treasury Index, Barclays Mortgage-Backed Securities Index.

Treasury Inflation-Protected Securities (TIPS) are also likely to be vulnerable to a reduction in accommodation. QE attempts to lower interest rates to encourage investment in riskier assets and reduce the cost of capital. As stimulus is lessened, the downward pressure on real interest rates will likely be alleviated, leaving TIPS exposed to price declines.

In the investment grade space, the typically higher-duration Utilities sector is likely to lag over the next few months as longer-dated Treasury yields move higher. Financials are likely to outperform Industrials and Utilities as Financials have a lower duration. Banks may also benefit from a steep yield curve, where they can essentially pay low interest rates on deposits and collect a much higher interest rate on loans. Once we get closer to the first hike in the fed funds rate, the yield curve will likely flatten. As a result, we believe the longer duration Utilities sector should begin to outperform Financials and Industrials.

The fundamentals of municipal bonds are modestly more attractive in 2014. Detroit and Puerto Rico’s negative headlines in 2013 put downward price pressure on the sector. Also, we do not expect a major tax code overhaul in 2014, thus the probability of any legislation modifying the tax-exempt status of municipal bonds has waned substantially. One additional technical measure supporting the sector is the reduction in supply. As municipalities deleverage, they reduce their amount of outstanding debt. This generates a positive dynamic whereby more investors are seeking a smaller number of issues, creating upward price pressure on municipal debt.

Outside of the domestic bond space, we expect further noise in the foreign exchange markets as the dollar will likely continue appreciating as the Fed removes stimulus and sustainable domestic economic strength is confirmed. This creates a headwind to non-dollar denominated debt. We remain wary of developed market international bonds. Yield levels are very low in most advanced economies, thus valuations are not overly compelling. In the emerging markets, we would encourage investors to focus on the U.S. dollar or hard currency options in lieu of the local currency managers. Despite January’s currency market stress, emerging debt remains an attractive sector. Most emerging markets are in a much healthier fiscal position than they were in the late 1990s. Current account deficits and currency reserves have improved substantially, credit quality has been on the incline and there is much greater liquidity in these issues. As a result, these economies are much more resilient to market stress than they were 10 years ago.

As shown in the following chart, high yield has historically been the least sensitive sector to interest rate rises as the sector is typically correlated with riskier assets, such as equities. Additionally, the higher coupons offered by high yield often offset the capital losses sustained when interest rates move higher. Although the spread on high yield remains tight relative to the long-term average, this average includes time periods where default rates had sky rocketed to the teens.

Important disclosures provided on page 6.
If we look strictly at time periods where default rates were at these historic lows, it is apparent that there is room for further spread compression. We believe the environment of steady economic growth, continued low default rates and the perpetual hunt for more attractive yield levels should support credit strength, albeit with some increased volatility.

**Conclusion**

In our view, tapering of QE will likely be completed by September and the FOMC may raise the fed funds rate earlier than the market is currently anticipating. Despite recent flattening, the Treasury curve is likely to remain steep for a good portion of the year as interest rates rise gradually throughout the remainder of the year. However, the capital markets’ interpretation of Fed comments and actions may support a continued increase in volatility.

Given the ability to potentially reduce risk and interim volatility, we believe investors should consider including fixed income investments as part of a broadly diversified portfolio mix. These long-term allocations should remain intact even with concerns about today’s interest rate environment.

We encourage our clients to avoid adding to positions in interest rate-sensitive fixed income sectors such as Treasuries and mortgage-backed securities. In our opinion, clients would be better served taking credit risk over interest rate risk, focusing on high yield, emerging debt, municipals and investment grade corporate bonds.
Contributed by:

Jennifer Vail
Head of Fixed Income Research
U.S. Bank Wealth Management

Roosevelt D. Bowman
Senior Fixed Income Analyst
U.S. Bank Wealth Management

Investments are:

<table>
<thead>
<tr>
<th>NOT A DEPOSIT</th>
<th>NOT FDIC INSURED</th>
<th>MAY LOSE VALUE</th>
<th>NOT BANK GUARANTEED</th>
<th>NOT INSURED BY ANY FEDERAL GOVERNMENT AGENCY</th>
</tr>
</thead>
</table>

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Past performance is no guarantee of future results. All performance data, while deemed obtained from reliable sources, are not guaranteed for accuracy. Indexes shown are unmanaged and are not available for investment. The Barclays 1-10 year Municipal Bond Index tracks the performance of U.S. Treasury securities with maturities of one to 9.99 years. High yield bonds are represented by the BofA Merrill Lynch High Yield Master II Index, a broad-based index consisting of all U.S. dollar-denominated high yield bonds with a minimum outstanding amount of $100 million and maturing over one year. JPMorgan Global Emerging Markets Bond Index tracks total returns for external foreign currency denominated debt instruments in the emerging markets. The MOVE (Merrill Lynch Option Volatility Estimate) Index measures the implied volatility of U.S. Treasury markets and is also a useful indicator for investors in assessing the psyche of the market. The index measures bond market volatility by gauging options contracts on one-month Treasury issues. The MSCI U.S. Broad Market Index represents the universe of companies in the U.S. equity market, including large, mid, small and micro-cap companies. The MSCI All Country World Index ex-U.S. measures the performance of global equity markets, excluding the United States.

Investing in fixed income securities are subject to various risks, including changes in interest rates, credit quality, market valuations, liquidity, prepayments, early redemption, corporate events, tax ramifications, and other factors. Investment in debt securities typically decrease in value when interest rates rise. The risk is usually greater for longer-term debt securities. Investments in lower rated and nonrated securities present a greater risk of loss to principal and interest than higher rated securities. Investments in high yield bonds offer the potential for high current income and attractive total return, but involve certain risks. Changes in economic conditions or other circumstances may adversely affect a bond issuer’s ability to make principal and interest payments. The municipal bond market is volatile and can be significantly affected by adverse tax, legislative or political changes and the financial condition of the issuers of municipal securities. Interest rate increases can cause the price of a bond to decrease. Changes in tax policy are free from federal taxes, but may be subject to the federal alternative minimum tax (AMT), state and local taxes. The guarantee provided by the U.S. government to Treasury Inflation-Protected Securities (TIPS) relates only to the prompt payment of principal and interest and does not remove the market risks of investing in these types of securities. Investments in mortgage-backed securities include additional risks that investors should be aware of such as credit risk, prepayment risk, possible illiquidity and default, as well as increased susceptibility to adverse economic developments. Equity securities are subject to stock market fluctuations that occur in response to economic and business developments. International investing involves special risks, including foreign taxation, currency risks, risks associated with possible differences in financial standards and other risks associated with future political and economic developments.