Ready for Lift-Off?

Windhaven's Fixed Income Exposure as the Fed Prepares to Raise Interest Rates

WINDHAVEN INVESTMENT MANAGEMENT

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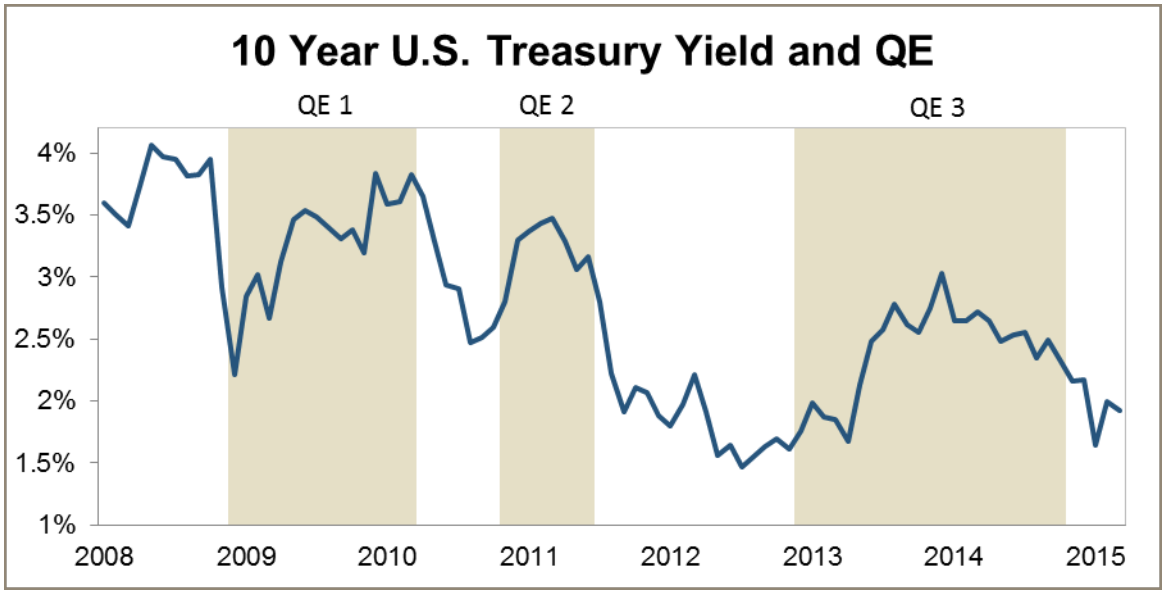
Key Points:

- Maintaining exposure to domestic fixed income can help investors reduce drawdown as U.S. Treasuries tend to be a safe haven in times of heightened risk aversion, global deflation and financial stress.
- As the U.S. Federal Reserve (Fed) approaches an interest rate hiking cycle, we study the impact of interest rate hikes on fixed income across different maturities: during most of the past 18 interest rate hike periods, short yields rose more than long yields. Furthermore, any rise in long yields happened mostly after the Fed pushed short yields high enough to flatten the yield curve. Given the analysis of past interest rate hike cycles and the flattening of the yield curve in nearly all of those episodes, maintaining a small exposure to both short-term maturities as well as a small sleeve of long-term maturities in a diversified portfolio that contains domestic fixed income can help reduce the downside as short term rates rise and the yield curve flattens.
- Windhaven recently adjusted the maturity profile of our strategies to gain exposure to longer maturity fixed income securities while maintaining lower interest rate sensitivity (duration) compared to our global benchmark.

2015 Might Be The Year

After five years of zero interest rate policy (ZIRP) and three rounds of quantitative easing (QE), 2015 might be the year in which the Fed will lift off from zero to begin a new interest rate hiking cycle, after ending QE in the fourth quarter of 2014.

While QE and ultra-low interest rates have been blamed for introducing distortions in bond markets and keeping yields low across the entire yield curve, including long maturities, one could argue that yields would have been even lower without the heavy interventionist hand of the Fed. In fact, during periods of QE, yields moved higher rather than lower on the prospect that QE would help achieve a better economic outlook. In those periods in which investors were worried about the U.S. and global growth outlook and falling inflation, the 10 year U.S. Treasury yield consistently dipped until the Fed would step in to reassure them with a new QE package; yields would then move up on improved outlook expectations and investor's relief that the Fed stepped in.



Source: Bloomberg as of 3/31/2015

Whether ultra-easy monetary policy worked or not will likely be a contentious topic for years to come.

As the U.S. economy continues on a self-sustained growth path and the Fed lifts policy rates, the support provided by QE for asset prices and for the economy should be replaced by economic growth (real and nominal). The end of QE and the beginning of an interest rate hike cycle, accompanied by improvement in the economic outlook could likely be associated with a yield curve that shifts upward across the entire maturity spectrum. In such an environment, we believe investors may become concerned with their exposure to fixed income securities given that higher interest rates and yields translate to lower bond prices.

As we look ahead, we analyze the implication of raising policy rates for fixed income portfolio positioning. By analyzing the drivers that cause the U.S. yield curve to move we look at 18 episodes of interest rate hiking cycles since the 1950s and their effect on interest rates across the maturity spectrum. Finally, we discuss how Windhaven has positioned its strategies in anticipation of the next interest rate hiking cycle.

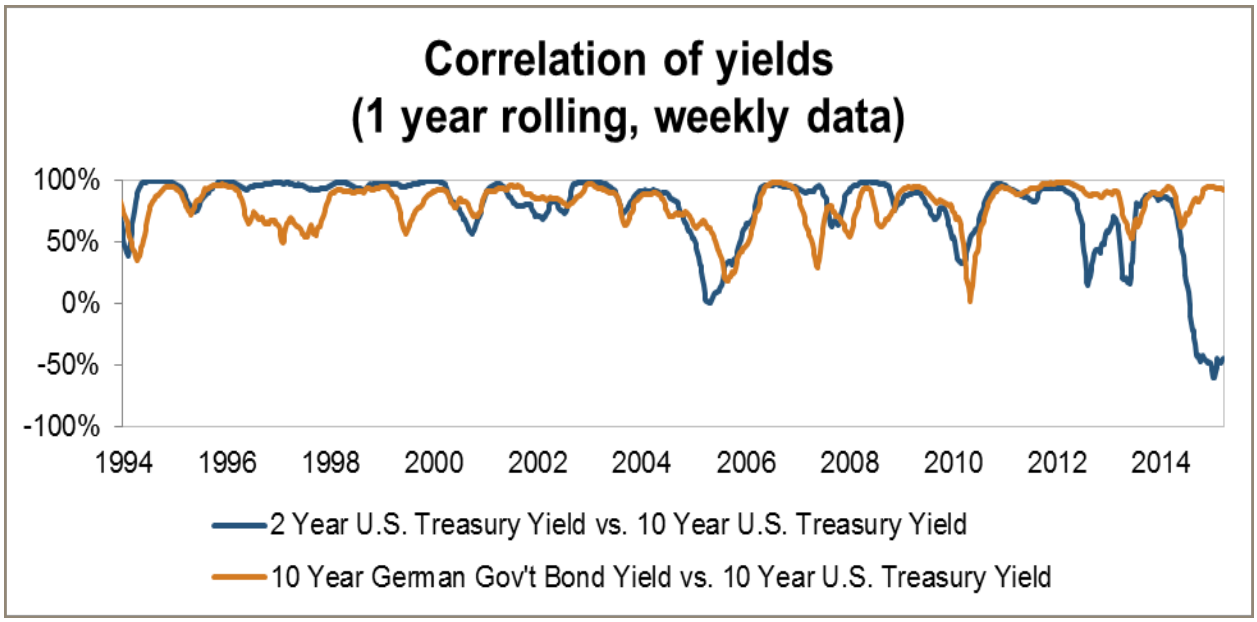
What Drives the U.S. Yield Curve?

The U.S. Treasury market is often referred to as a safe haven, a destination for flows of capital fleeing volatility in global markets. That makes long term U.S. Treasuries subject to global factors as well as market expectations of future U.S. short term interest rates. As a consequence it is not obvious that raising short term interest rates will have equal repercussions across the entire spectrum of maturities.

The long and short ends of the yield curve respond to different factors, so that when the yield curve changes, the new yield curve does not generally parallel the old yield curve. Short yields are generally driven by Fed policy and interest rate hike expectations in the near future. Creditworthiness of the U.S. government has also been an important factor over the last few years as Congress debated government funding and the debt ceiling. Long yields are generally driven by inflation and economic activity expectations (real yields), and to a lesser extent Fed interest rate hike expectations. Long yields are generally impacted by flight to safety flows especially when there is a sell-off in the equity markets.

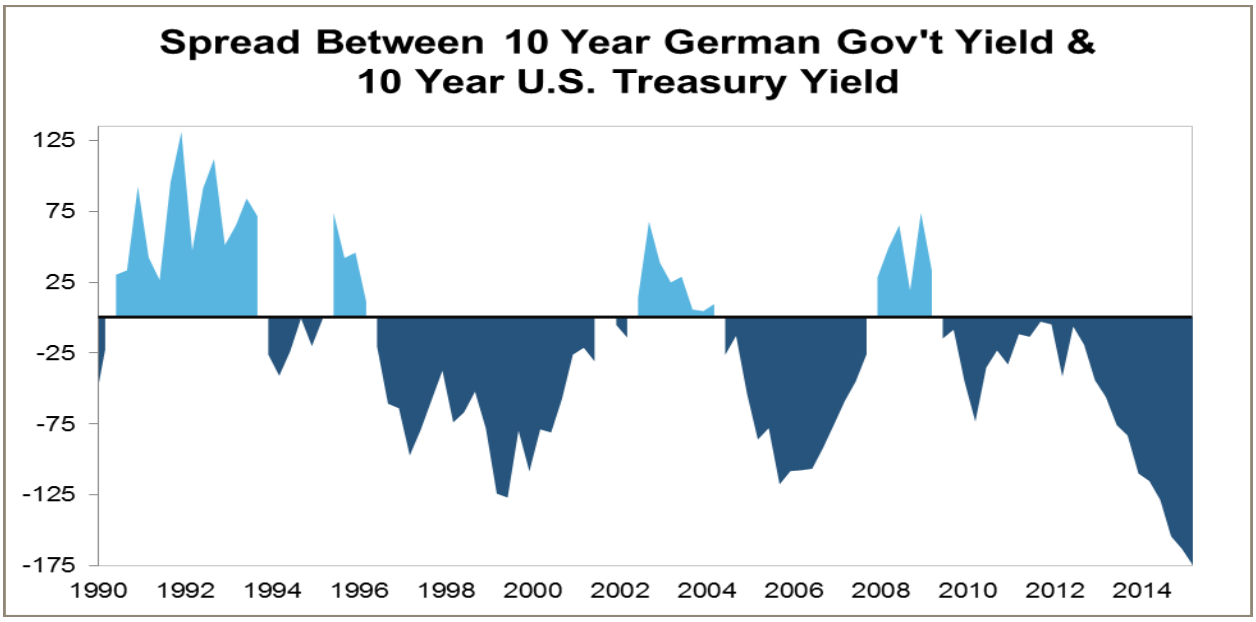
Like any asset traded in the open market, Treasuries are subject to supply and demand dynamics. If the Treasury supplies too much bond principal at a specific maturity, the yield for that maturity might rise as the bond prices fall. On the demand side, the Fed has been an important player with its QE program, by buying bonds since 2008 which could have been one of the reasons for higher bond prices.

The long interest rates of other countries can also impact the long interest rates of a given country from a supply-demand perspective. Investors and investment firms may seek better returns abroad if their home country is not yielding high enough returns, and doing so tends to create convergence in the international interest rates market. Short interest rates may also be correlated internationally to the extent that central banks may mimic each other's actions. As the chart below shows, over the last year U.S. long interest rates have been more correlated with international long interest rates than with U.S. short rates.



Source: Bloomberg as of 3/13/2015

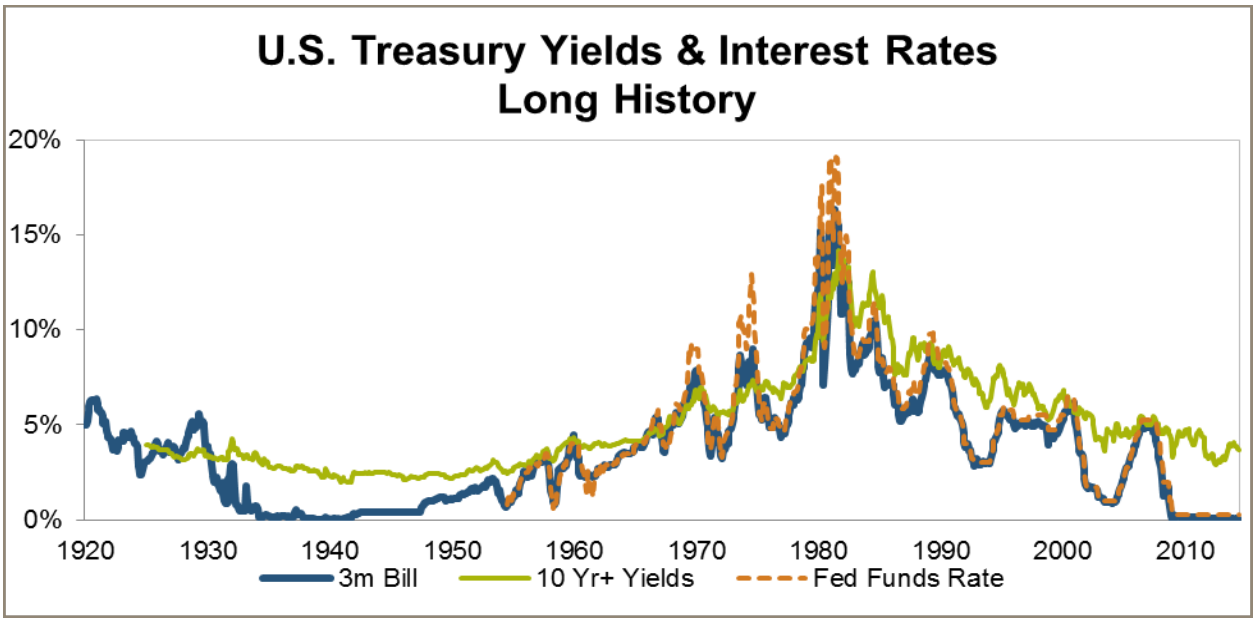
The strong correlation of 10 year U.S. interest rates to 10 year German interest rates is important at a time in which monetary policy divergences are in full swing. The European Central Bank (ECB) has unleashed a QE program that could put downward pressure on German interest rates for some time. As long as the high correlation between German and U.S. long term interest rates persist German interest rates could drag down U.S. interest rates. As the chart below shows, the spread between the 10 year U.S. Treasury yield and the German government bond yield has almost reached an all-time high.



Source: Bloomberg as of 3/31/2015

Analyzing the Past 18 Rate Hike Cycles

Investors often wonder how yields for the U.S. Treasuries with various maturities might move as a result of changes in Fed monetary policy which is mainly conducted through the Fed funds rate. While it is important to understand how yields may react to changes in Fed monetary policy, the yield curve does not necessarily move in parallel. The following chart shows a long history of 3 month U.S. Treasury yields, 10 year U.S. Treasury yield and the Fed funds rate.



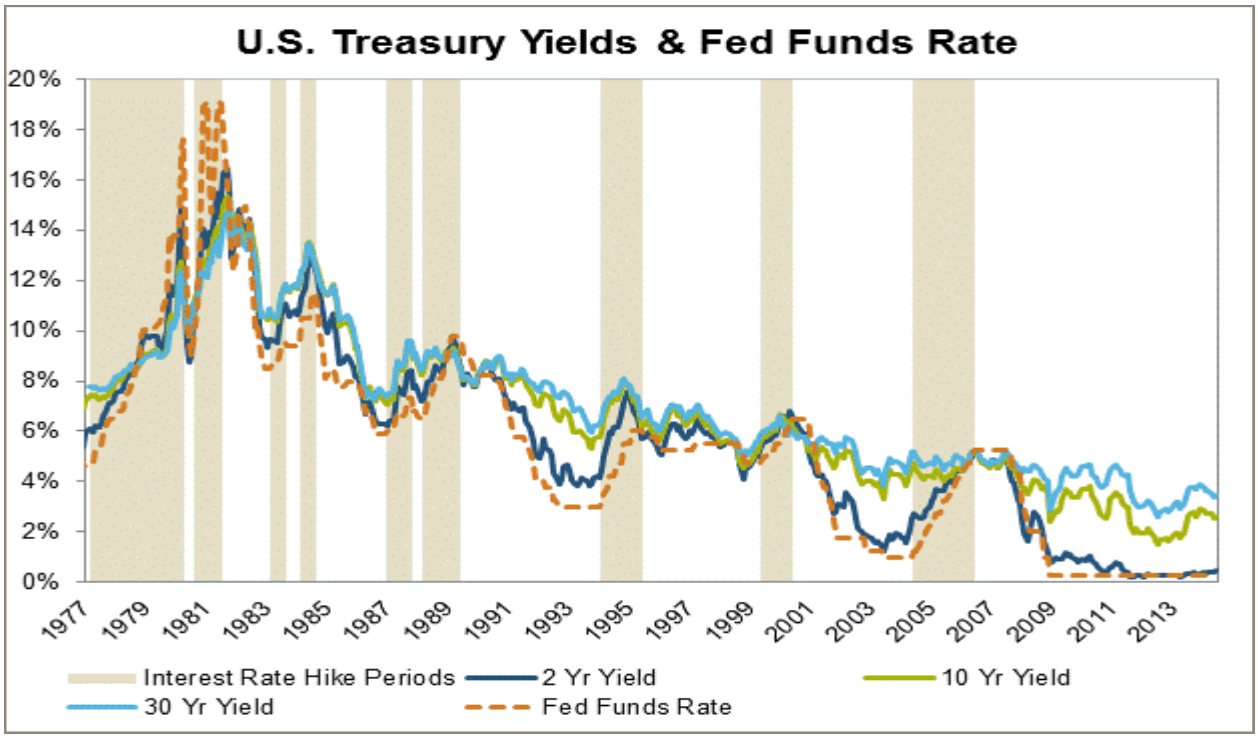
Source: Bloomberg & U.S. Federal Reserve as of 6/30/2014

It is possible to make two observations from the above chart:

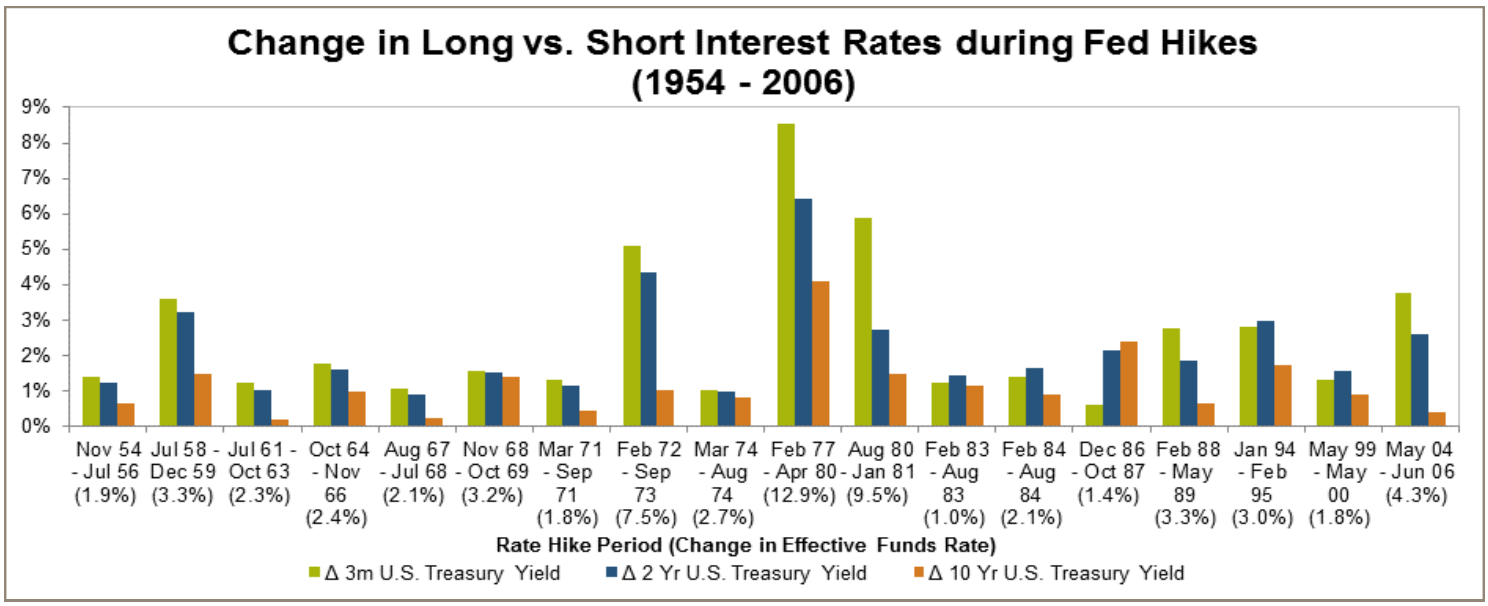
1. While the levels of long and short terms yields are somewhat correlated, short term yields tend to fluctuate more than long term yields.
2. Large upward shifts in short yields are generally accompanied by either smaller or no upward shifts in long term Treasury yields.

While the Fed funds rate data is available since 1954, between 1954 and 1994, the Fed did not announce a target for the fed funds rate. Instead, the Fed controlled the effective funds rate through open market operations. Since 1994, the Fed has been pursuing a more transparent approach by announcing the target fed funds rate.[1]

Following is a closer look at interest rates since 1977. Shaded regions indicate Fed interest rate hike periods.



Source: Bloomberg & U.S. Federal Reserve as of 6/30/2014

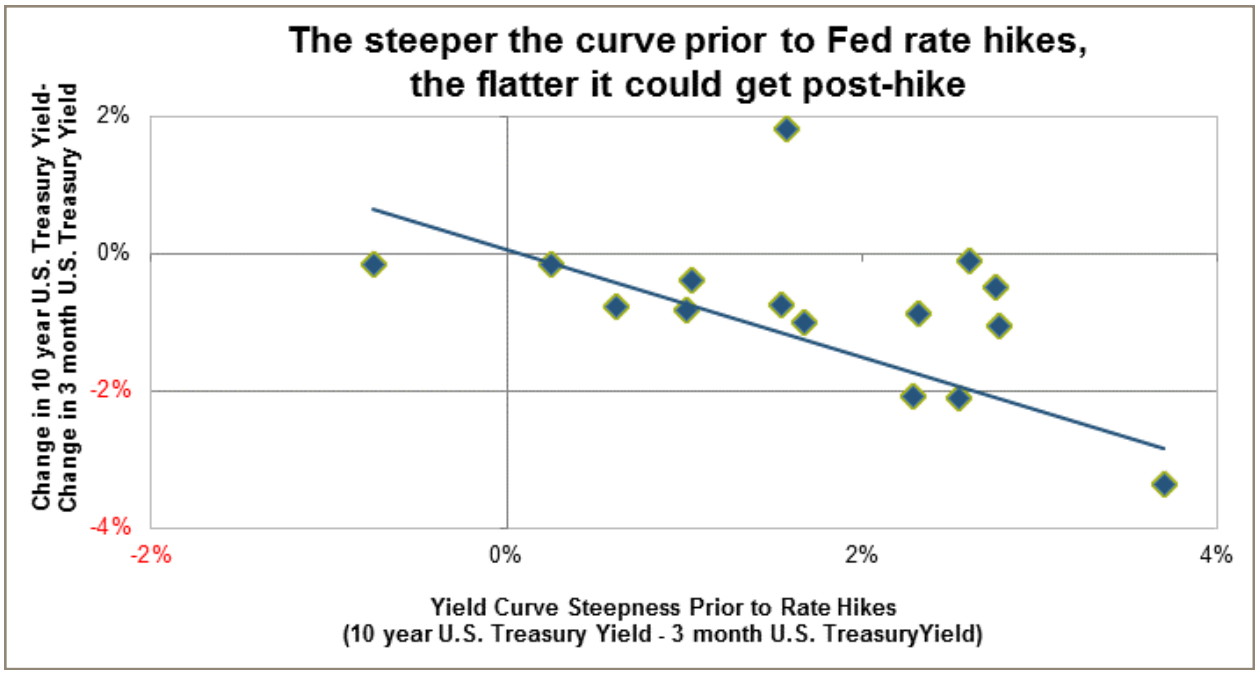


Source: Bloomberg & U.S. Federal Reserve

There are 18 interest rate hike periods identified in the chart above from 1954-2006. Taking a closer look at these 18 interest rate hike periods, one can observe a pattern. During most interest rate hike periods, short yields rose more than long yields. On average, the 2 year bond yields rose by 2.2% during the nine interest rate hike periods since 1977, whereas the U.S. 10 year Treasury yields rose by 1.2%.

Generally, if the yield curve is steep prior to the start of interest rate hikes, then short interest rates start moving upwards first while the long yields remain somewhat stable for a while. In the case of the 1977 interest rate hikes, the Fed pushed the short interest rates to a point where short yields caught up with long yields, after which, long rates started moving up in tandem with short interest rates. If the yield curve is relatively flat prior to the start of the rate hike cycle, as in the 1999 rate hikes, we may be able to expect both the long and short yields to rise.

While every interest rate hike period is defined by different economic drivers, there is relationship that tends to hold true. During the past 18 interest rate hike periods there has been a statistical relationship between the steepness of the yield curve prior to the start of the interest rate hike periods and the amount of steepening in the yield curve during the interest rate hike periods. For every 1% difference between the 10 year U.S. Treasury Yield and 3 month U.S. Treasury Yield prior to the start of the interest rate hikes, the yield curve flattened by 0.78%. Looking closely at the data, we recognize that during those periods, the short interest rates rose more than the long interest rates until the yield curve flattened. In cases where the Fed chose to hike interest rates further, as is the case for the tail end of the 2004 interest rate hikes, long yields rose along with the short yields. Likewise, if before the next hiking cycle the yield curve was relatively flat when the interest rate hikes began, as was the case in the 1999 interest rate hikes, then the long yields could also rise as the Fed proceeds to hike the funds rate.



Source: Bloomberg & U.S. Federal Reserve as of 6/30/2006

Seizing Global Opportunities While Navigating Uncertain Markets

At Windhaven, our investment philosophy is predicated on being diversified, being ready for different economic and market scenarios, and attempting to minimize drawdowns. As a result the strategies are invested in a wide range of asset classes and may include exposure to U.S. and international stocks, fixed income securities, real estate, currencies and commodities.

We believe maintaining exposure to U.S. fixed income is important in our attempt to minimize drawdown given that the U.S. economy in general and U.S. treasuries in particular, tend to be viewed as a safe haven in times of heightened risk aversion and financial stress.

- In a interest rate hiking cycle it might be beneficial to hold a fixed income sleeve that is less rate sensitive than the one in the global benchmark (ie. shorter duration).
- Within that fixed income sleeve, it might be beneficial to adopt a bar-bell approach by taking a small exposure to longer maturities combined with a larger exposure to shorter maturity securities.

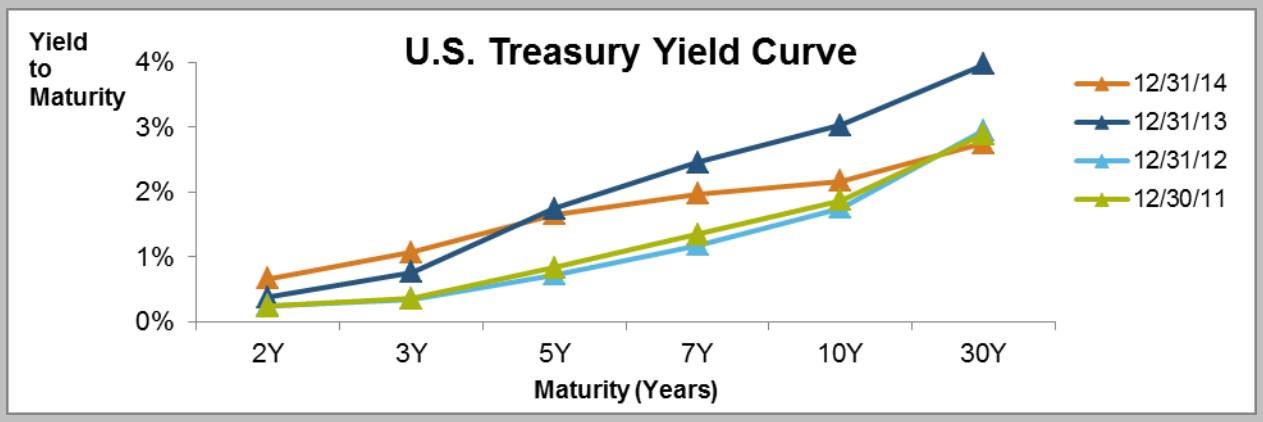
We have recently adjusted the maturity profile of our strategies by adding some exposure to longer maturity fixed income securities while maintaining an overall underweight to interest rate sensitivity (duration) compared to our global benchmark. It might appear counterintuitive to increase the average maturity in the portfolio when the Fed is on the verge of hiking interest rates. However, given the analysis of past interest rate hiking cycles and the flattening of the yield curve in many of those episodes, maintaining a small exposure to longer-term maturities in a diversified portfolio could help contain the downside risk of an increase in short term interest rates.

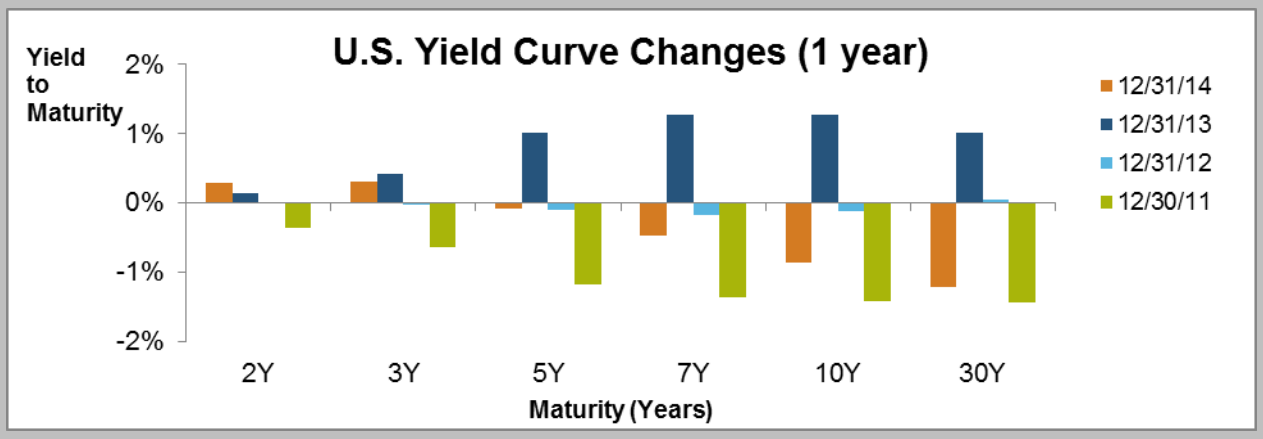
Appendix: Useful Definitions

What is the yield curve?

A yield curve shows the relationship between the yield and time to maturity for bonds of the same asset class and credit quality. The "normal" shape of the yield curve is upward sloping, with longer maturity bonds yielding more. This phenomenon is typically explained by higher probability of default over long periods of time and liquidity preferences of market participants.

The charts below show the U.S. Treasury yield curve for the past 4 years, and the changes in the yield curves on an annual basis. As evident from the second chart, the yield curve hardly moves in parallel. Over the last four years, most of the movements were in the long end of the yield curve, since the short end was anchored due to the Fed's zero interest rate policy.





Source: Bloomberg as of 12/31/2014

Steepness of the yield curve

Steepness of the yield curve is the difference between the long and short interest rates. Under normal conditions, the long yields would be slightly higher than short yields, which is an indication of the liquidity preference of investors. Natural steepness occurs as investors prefer to be compensated a little extra for allowing the bond issuer to lock their capital in for longer. The yield curve tends to steepen when: 1)the Fed eases monetary policy by cutting its policy rate, 2) higher inflation expectations are pushing up long interest rates, or 3) stronger economic growth is pushing up the long interest rates. A steep yield curve is generally indicative of stimulative central bank policy.

Contrarily, the yield curve is said to be flattening when the spread between the long and short interest rates tightens. The yield curve may tighten when the Fed hikes interest rates or when the growth or inflation expectations are falling.

Sources:
[1]For history of Fed transparency, visit: (Retrieved February 2015)
http://www.frbsf.org/education/publications/doctor-econ/2012/august/transparency-lessons-financial-crisis

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The information provided herein is for general informational purposes only and should not be considered an individualized recommendation or personalized investment advice. The investment strategies mentioned here may not be suitable for everyone. Each investor needs to review an investment strategy for his or her own particular situation before making any investment decision.

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Past performance is no guarantee of future results.

Fixed income securities are subject to increased loss of principal during periods of rising interest rates. Fixed income investments are subject to various other risks including changes in credit quality, market valuations, liquidity, prepayments, early redemption, corporate events, tax ramifications and other factors.

Windhaven's risk management process includes an effort to monitor and manage risk, but should not be confused with and does not imply low risk or the ability to control risk.

Diversification strategies do not ensure a profit and do not protect against losses in declining markets. Investments in managed accounts should be considered in view of a larger, more diversified investment portfolio.

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