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QE2 – Not Just Another QE1:
First Negative 5 Year TIPS Auction Yield in U.S. History

An update on the topic of inflation is warranted given the Fed's announcement of QE2 and the recent auction of 5 year TIPS conducted on October 25th, 2010 that resulted in the first ever negative yield issuance (-0.55%). In this short update to our recent series on inflation (*please contact us for a copy*), we will address the current outlook for inflation, outline the issues which resulted in the first ever negative yield TIPS issuance, and discuss what the future impact of government actions may be. We conclude with comments on the implication of these events for institutional investors.

Impact of QE2

The Fed announced QE1 in the fall of 2008 in a period of financial panic to counter the extreme lack of liquidity in capital markets and perceived mis-pricing of certain real estate and other debt instruments. Responding to the crisis, the Fed purchased over $1.75 trillion in various securities which ultimately helped increase liquidity and stabilize the capital markets. QE2 was announced during a period of relative calm in the financial markets with the explicit objective of reducing long-term interest rates and is thus quite different from QE1 in both goals and implementation.

The QE2 program aims to purchase $600B of government bonds with an additional reinvestment of approximately $250B to $300B from agency debt and agency mortgage-backed security principal payments. This policy clearly has the potential to be inflationary should the Fed not withdraw excess liquidity at a later point in time when inflation reaches more normal levels. Fear of large scale debt monetization and resulting currency debasement has been the key driver of a recent increase in investor concern over a future spike in inflation. Indeed, the fact that the Fed resorted to QE2 as a policy tool absent a need to fight a short-term financial fire-sale suggests the degree to which Chairman Bernanke, and other members of the FOMC, are motivated to increase inflation expectations. It is conceivable that the Fed may choose to err on the side of tolerating higher than targeted inflation rather than risk premature tightening, especially if employment is below what they perceive as the natural rate.

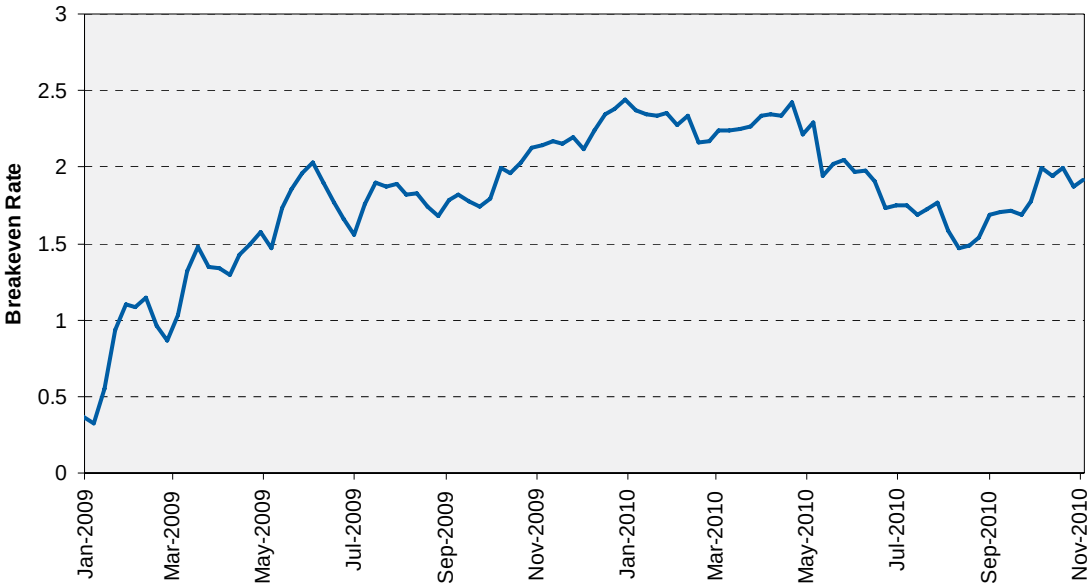
Transmission Mechanisms

QE2 may have a positive impact on the economy by stimulating growth and consumption. By purchasing government debt directly, the Fed is attempting to "cap" long-term nominal yields, which effectively lowers real yields as inflation expectations increase (real yield = nominal – inflation). Therefore, the combination of short-term stimulative monetary policy which serves to increase inflation and the purchase of long-term debt to cap nominal yields allows the Fed to control real yields, albeit indirectly. Lower real and nominal yields on government debt can encourage investors to seek higher returns in risky assets or simply to consume more because saving or investing in government debt is less attractive. In addition, lower yields may incentivize banks to lend capital to risky projects. Lower nominal yields also work through the wealth effect; lower discount rates provide upward pressure on asset prices, increasing the overall nominal wealth in the economy which may have real positive impacts on consumption if consumers "feel" better off. Whether QE2 is successful in increasing aggregate demand and incentivizing banks to lend will also depend on the magnitude and duration of the still-present deleveraging trends in the economy. This deleveraging effect is perhaps most pronounced in the real estate sector, and continues to serve as a significant contractionary force in the U.S. economy.

One additional aspect of QE2, and possibly the main channel through which the policy will affect real markets, is the value of the U.S. Dollar. If QE2 leads to a measured decline in the value of the U.S. Dollar, without instilling a crisis of confidence in U.S. financial assets, the result may be simulative as U.S. exporters and local producers are relatively more competitive. The extent of any positive impact on the overall economy from a weaker dollar will in part depend on whether we see a significant increase in demand for U.S. goods and services. If other countries engage in competitive devaluation to limit U.S. gains from trade due to a cheaper Dollar, or if QE2 leads to a crisis of confidence and a spike in inflation expectations, the Fed's goals may be at least partially undermined.

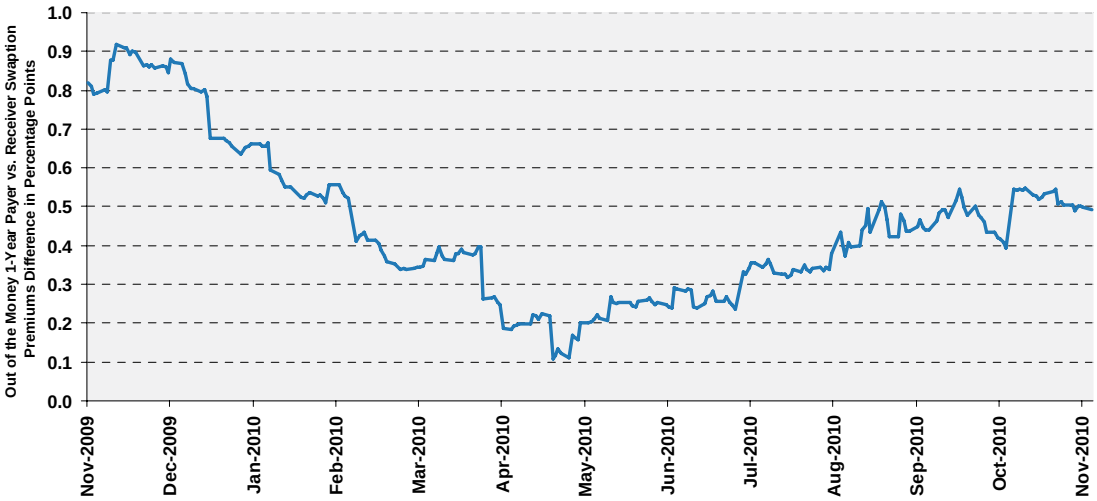
At this point it appears that investors believe the Fed will be successful in raising inflation as breakeven inflation rates have been on the rise since August (see Figure 1). Moreover, participants in the interest rate options market are willing to pay approximately 5x as much today to hedge against rising vs. declining yields versus April, reflecting a significant increase in concerns over future inflation and decreasing concern about deflation (see Figure 2). The potential impact of QE2 was also likely in the front of investors' minds as they bid the Treasury's recent TIPS issuance down to negative yields.

Figure 1. 10 Year Inflation Breakeven Rates in the US



Source: Barclays Capital. Data through 11/15/2010

Figure 2. The Difference in Cost of Protecting Againt Increases vs. Decreases in 10 Year Yields



Source: J.P. Morgan. Data through 11/15/2010

Investors Drive TIPS Auction to First Ever Negative Yield

Though TIPS have traded with negative real yields at times, such as during the global financial crisis in 2008, October's five-year auction was the first time investors purchased TIPS at a negative initial yield. In simple terms, investors were willing to pay the Treasury for transferring purchasing power to the future. To many investors this result seems counterintuitive. However while the outcome may be unusual in the short history of TIPS in the U.S., it can be a rational investor response to current monetary policy, inflation expectations and inflation uncertainty.

Explanations for a Negative TIPS (Real) Yield

TIPS are bonds issued by the U.S. Treasury that generate a stream of future cash flows in the form of coupons and final payment of the principal. In contrast to nominal treasury bonds, the principle borrowed by the government is tied to inflation and as such compensates investors for changes in the U.S. CPI. An investor who holds TIPS to maturity will earn a real yield that is free of inflation risk (in terms of U.S. CPI). However, it is important to note that U.S. TIPS also have a deflationary floor. Therefore, if inflation is negative over the term of a specific TIPS issue, the investor will still receive par at maturity. The deflationary floor transforms TIPS payoff from being purely linear in relation to CPI to a non-linear call option on the rate of inflation. Normally, this option has a negligible effect on TIPS valuation, but given the current market environment where there remains a non-trivial risk of deflation, this call option payoff has a significant impact on recently issued TIPS yields.

There are several primary factors that may explain the negative issuance yield on TIPS:

QE2 affecting inflation expectations

By purchasing U.S. debt the Fed is effectively moving from targeting short term interest rates only to managing both short and long term yields, both of which it is seeking to keep low. As we have discussed previously, the result of short-term stimulus is higher inflation expectations while the purchase of government debt keeps long term real yields low. Higher inflation expectations in and of itself can theoretically lead TIPS to trade at a negative yield. A hypothetical example may help to illustrate: an investor who expects 4% inflation may rationally choose a certain -1% real return if nominal rates are hypothetically 2%, since investing in a non-inflation protected treasury would yield a -2% real return.

Inflation uncertainty

Higher uncertainty may drive the inflation risk premium – the compensation investors require for taking on inflation risk – to increase. An increase in the inflation risk premium widens the gap in yields between nominal and real bonds. If the nominal yield is held fixed, as appears to be the Fed's intention with QE2, an increase in the inflation risk premium will directly lead to a lower real yield.

Non-trivial probability of deflation

As discussed previously, an increased inflation uncertainty with a non-trivial probability of deflation can create further downward pressure on TIPS yields. Everything else held equal, a higher probability of deflation increases the value of the embedded deflation floor option in TIPS, putting downward pressure on yields.

Lower expected long-term growth

Long-term real yields incorporate expectations of economic growth. If growth is high and future income is expected to increase at a higher rate, investors will demand higher real returns to postpone consumption and save. If, on the other hand, growth is expected to be low, real yields will compress.

Impact on Institutional Portfolios

Current data showing increasing expectations for future inflation and the negative TIPS auction suggest that investors are beginning to price in potentially higher future inflation and higher inflation uncertainty. While many investors share this concern of future inflation, they often disagree over when this inflation spike may occur. In our series on inflation we argue that long-term investors are likely better served in building a portfolio that is well-suited for either a low or high inflationary environment rather than seeking to time one specific outcome. Most institutional

portfolios that are concentrated in equities and nominal bonds are exposed to significant inflation risk as both of these asset classes tend to underperform in inflationary environments relative to low inflation periods. Timing investments for one specific economic environment is challenging since prices often move far in advance of the actual realization of economic conditions. In practice, it is possible that an investor who correctly predicts the timing of a potential inflation spike may forfeit the ability to hedge or profit from it if other market participants have already bid up assets in anticipation of the correctly-forecasted inflation spike. It is our view that long term investors would be better served if they focused on developing robust portfolios that can withstand potential inflation shocks far in advance of the time in which they may occur, and preferably during a period of relatively low inflation when the costs of putting such a program into place may be lower than average. We believe now is an example of such a time and affords investors a window of opportunity to build a portfolio better protected against inflation, precisely because it is still not clear when that protection may be needed.