

Inflation Protected Bonds: How TIPS can drive you “TIPSy” in your search for inflation protection

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Inflation has been a concern to investors for centuries. In 1780, Massachusetts issued a bond indexed to the market price of corn, beef, wool, and shoe leather. Today, investors seeking to protect against inflation, often seek shelter in United States Treasury Inflation-Protected Securities (TIPS). These bonds attempt to keep pace with inflation by adjusting their face value upwards in line with the Consumer Price Index (CPI). While TIPS have some attractive attributes, our research shows their inflation hedging capabilities can be misleading. Indeed, over long time horizons, TIPS have exhibited virtually no correlation to inflation. Our internal research highlights several considerations and risks you should consider in your own bond portfolio when looking for inflation protection.

HISTORY OF REAL YIELDS

TIPS returns are driven by two primary factors: first, the inflation component, which tracks realized changes in the CPI through time, and second, the real yield component. Real yields measure the rate of return to TIPS after adjusting for inflation. At purchase, an investor in essence locks in the real yield component for the life of the bond. Much as for a fixed rate bond, a TIPS price is sensitive to future movements in the real yield. It is important to note that real yields have fallen to historical lows. Real yields have steadily followed the secular decline in overall interest rates over the past 20 years (as shown in Chart 1). Real yields are so low today that a buy-and-hold investor effectively guarantees himself a negative real

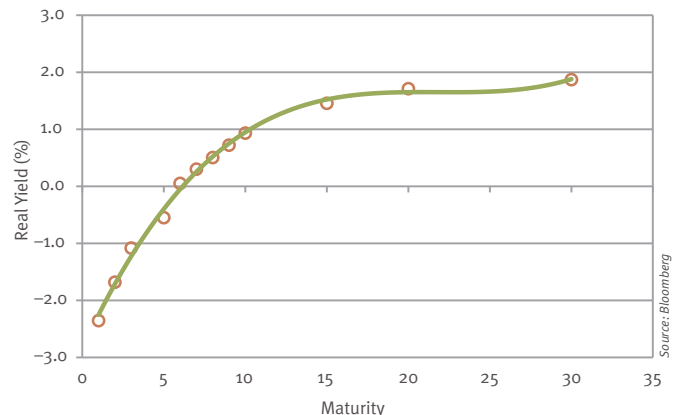
yield over 5 years; an unattractive bargain if one believes that real yields should track GDP growth over the long term (which has historically averaged 2-3 percent). Imagine paying Uncle Sam for the privilege of hedging the inflation risk on your cash. Furthermore, if real yields revert back to their historical norm of 2.5 percent (which is the average real yield on 10-year maturity TIPS since inception of the TIPS market in 1997), then a buyer of a 10-year TIPS today yielding a 0.9 percent real yield with a real rate duration of around 8 years would lose approximately 13 percent in price return. Consequently, it would take over 6 years of 2 percent inflation just to get back his original purchase price.

High nominal rates drive higher risk premia for invested assets. If inflation and nominal interest rates rise, driven by a recovering global economy, easy monetary policy, and large fiscal deficits (as we here at Cutwater expect), real yields should move off today’s historic lows. This reverses the secular declining trend witnessed during the past 20 years. Treasuries and TIPS are significantly exposed to this risk. Indeed, history has shown similar disconnects between TIPS returns and inflation, precisely because of the readjustment of real yield risk premium. One historical period that would have been especially damaging is 1980-1981 when interest rates rose from 10 percent to 15 percent while inflation fell by 4 percent. TIPS would have lost 20 percent despite a robust inflation environment.

Chart 1 – TIPS: Historical Real Yield



Chart 2 – TIPS Yield Curve (as of March 2011)



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THE SUPPLY AND DEMAND DISCONNECT

Although the TIPS market is large, external forces of supply and demand unrelated to inflation can cause unusual price pressure. Let’s consider the supply side. There is approximately \$550 billion of TIPS notional outstanding which sounds large, but it is less than one-tenth of the total outstanding Treasury bond issuance. TIPS are currently more sensitive to macroeconomic policy initiatives due to the large relative inventory owned by the Federal Reserve (\$46 billion as of July 2010). In March 2009, the Federal Reserve was seen to influence the relative pricing of TIPS disproportionately through its FOMC purchase program. Arguably, the Fed has artificially pushed real yields down as part of monetary easing, but those quantitative easing policies are nearing an end in our view.

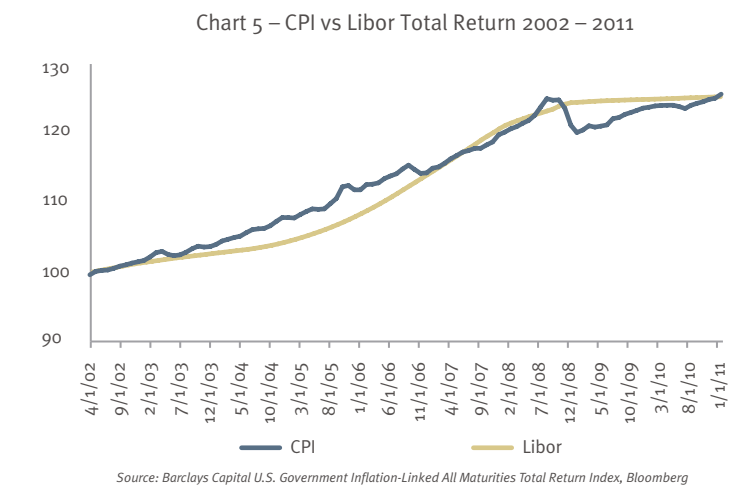
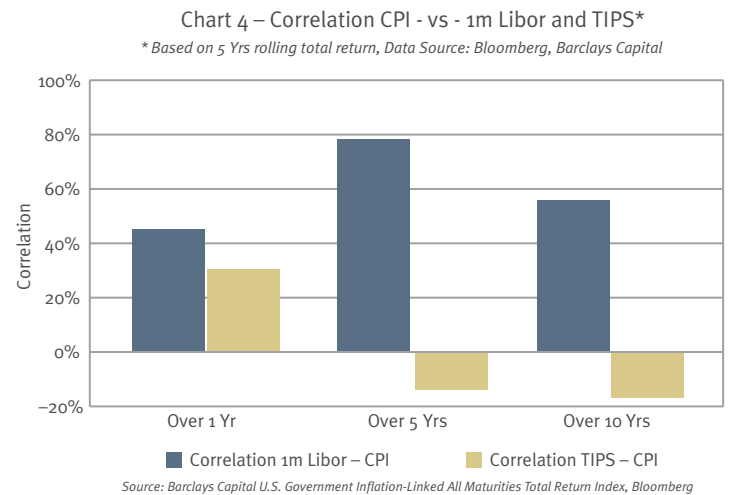
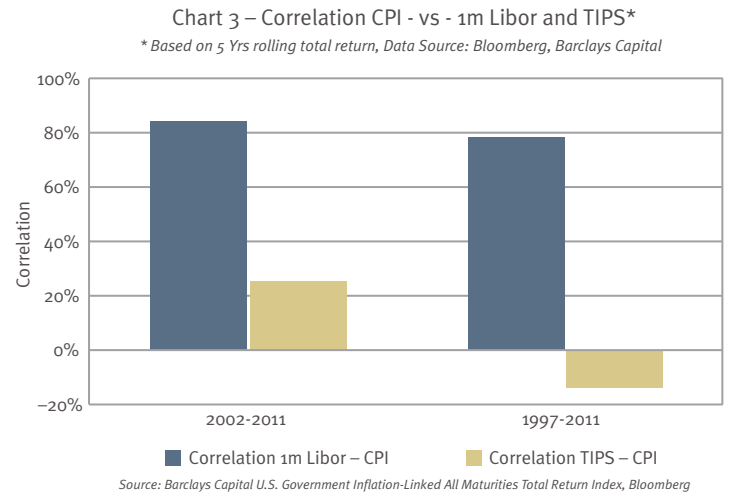
Now, let’s consider the demand side and investor sentiment. The recent financial crisis has driven many investors, who are seeking to preserve their principal, out of stocks. Short maturity treasuries and TIPS have been a traditional place to park money as a safe haven from both credit risk as well as the looming specter of inflation. This has added demand pressure. Additional evidence of the TIPS supply issue comes from the street; while 15 dealers provide competitive quotes on Treasuries, only 5 dealers provide comparable liquidity in TIPS. These factors aggravate price movements when demand outweighs supply and vice versa.

TIPS: HEDGE, ANTI HEDGE, OR NO HEDGE?

We looked at the historical ability of TIPS to hedge CPI inflation across the entire history of the TIPS market. We argue that floating rate corporate paper of high credit quality would have performed well as an inflation hedge and with a higher and steadier correlation than TIPS. Comparing the total returns of TIPS to nominal inflation over rolling 1, 5, and 10-year periods shows startling results. While TIPS lock in a real yield and hedge inflation if held to maturity in an asset-liability matching context, the average beta of TIPS returns to CPI inflation was negative when looking over both 5-year and 10-year periods. The 1 month LIBOR index tracked CPI inflation closer and more consistently than TIPS. (See Charts 3-5 for illustrations of these results.)

BONDS, JAMES BONDS

The desire for Inflation protection is well established in both theory and practice. The theory shows that in the presence of



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time-varying real rates, inflation-indexed bonds and floating rate instruments, and not cash, are the less risky strategies. In *Strategic Asset Allocation*, Campbell and Viceira point out that “long term investors need to understand that short-term investments carry the risk of having to reinvest at low real rates in the future.”

The practice suggests that an alternative way to implement inflation protection is to use an actively managed portfolio of floating rate debt. That is because in practice, macroeconomic policy, real yield levels, CPI tracking issues and investor sentiment all play a role in muting the benefits of TIPS. However, if one must own TIPS, consider the portfolio investment objective and time horizon carefully. Cutwater generally recommends a more diverse asset mix including floating rate instruments such as corporate bonds and high quality asset-backed securities. For total return portfolios, shortening the maturities of TIPS reduces the real rate duration risk while keeping inflation protection.

At Cutwater, we keep a mindful balance between the theory and practice, thus giving clients the best of both.

For more information on Cutwater’s inflation protection strategies contact Jason Cameron (tel: 914-765-3506; email: jason.cameron@cutwater.com).

SOURCES

For our analysis, TIPS returns were sourced from Barclays Capital’s U.S. Government Inflation-Linked All Maturities Total Return Index and 1 month LIBOR rates and changes in CPI were sourced from Bloomberg.

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