

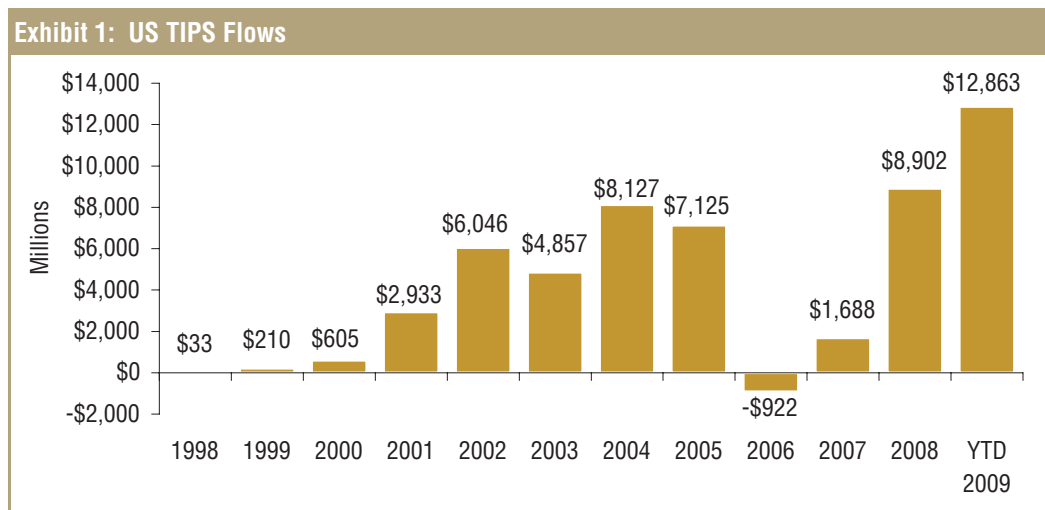


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Managing the Interest Rate Risk of TIPS

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As we discussed in “*Inflation vs. Deflation: The Standish Debate*” (September 2009), more than any other question, clients have been asking for our opinion on the prospects of inflation versus deflation. Not surprisingly, Treasury Inflation Protected Securities (TIPS) have received much attention this year. Investors concerned about higher inflation risks have poured money into TIPS mutual funds and Exchange-Traded Funds (ETFs) that closely track the Barclays US TIPS index (see Exhibit 1).



Source: Lipper as of October 31, 2009.

With real yields near historic lows, we believe that the investment strategy a client selects for its TIPS portfolios will be critical in determining the effectiveness of TIPS as an inflation hedge over the next several years.

Background

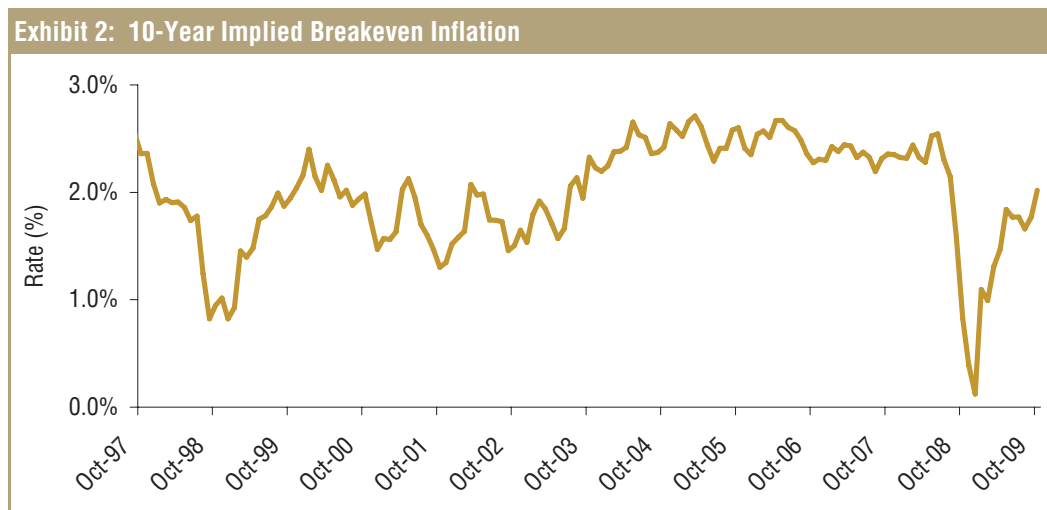
TIPS are fixed rate bonds issued by the US Treasury that pay, at maturity, the principal plus an amount that compensates the holder for any accumulated inflation since the time of issuance. Because TIPS compensate the holder for changes in inflation, the coupon payments provide a real rate of return to investors. The fixed coupon payments are set according to market rates for real yields of outstanding TIPS of similar maturity. Importantly, as a fixed rate bond, market prices for TIPS are inversely related to changes in real interest rates. The expected price change for TIPS for a given change in real interest rates can be estimated using traditional duration measures. To estimate the expected price change for TIPS for a given change in nominal interest rates, we must understand the relationship between real and nominal interest rates.

The relationship between nominal and real interest rates is described by the Fisher equation*, which posits that nominal interest rates are a function of real interest rates and inflation expectations. With the

* $i = r + \pi$; where i = nominal interest rate; r = real interest rate; π = inflation

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development of the TIPS market, we are able to use market-derived values for real and nominal interest rates to infer the market expectation for inflation over various time horizons (i.e., 10 years). This is commonly known as the breakeven inflation rate and is the difference between nominal and real interest rates for the same maturity (See Exhibit 2).



Source: Standish, Bloomberg as of October 31, 2009.

Since the inception of the TIPS market in 1997, correlations of historical changes of nominal and real interest rates have ranged from 0% to 100%. Over the last 5 years, the range has been between roughly 30% and 100%, with an average of approximately 75%.

The Case for Higher Real Interest Rates

Real interest rates are largely driven by expectations for real growth in the US economy and expectations for monetary policy by the Federal Reserve. Since December 2008, the Federal Reserve has held policy rates near zero. In addition, the Fed has more than doubled the size of their balance sheet as they pursued a variety of programs designed to ease the pace of private credit contraction in the US economy. The combination of easy monetary policy, aggressive fiscal spending and unprecedented support of the financial system has largely been successful in limiting the downside risks to the economy. Financial conditions have improved markedly and consensus forecasts now call for above-trend economic growth for the next several quarters. As the economy has recovered, so have inflation expectations. While near-term inflation expectations remain under 1%, longer-dated inflation expectations have risen from a low of 0.15% last fall to near 2.5% currently as measured using 5 year breakeven inflation, 5 years forward.** Although the exact timing is the subject of much debate, we are confident that the next move out of the Fed will be to remove accommodation in response to a recovering economy, thus driving real interest rates upward and containing inflation pressures.

Impact of Rising Rates on TIPS

A rise in real interest rates decreases the effectiveness of TIPS as an inflation hedge. Returns on TIPS consist of real coupon payments, inflation accrual, and price changes. As mentioned earlier, TIPS prices are inversely related to changes in real interest rates. In an environment where we expect the economy to grow moderately above trend and monetary policy to tighten, real interest rates are likely to rise, and consequently TIPS prices are likely to fall. As seen in Exhibit 1, depending on the magnitude of the increase in real yields, a TIPS portfolio benchmarked against the Barclays US TIPS Index may experience negative total return.

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The negative total return impact from higher real interest rates during a period where inflation risks are rising decreases the effectiveness of TIPS as an inflation hedge (see Exhibit 3).

Exhibit 3: Duration Hedged Approach			
Interest Rate Scenario	TIPS Portfolio	Duration Hedged TIPS	Difference
-50 bps	6.04%	-0.80%	-6.83%
+0 bps	3.67%	0.08%	-3.59%
+50 bps	1.38%	1.03%	-0.36%
Reach Forwards	1.08%	1.65%	0.57%
+100 bps	-0.83%	1.91%	2.74%
+150 bps	-2.96%	2.74%	5.70%
+300 bps	-8.91%	4.94%	13.85%

Assumptions:
 Yield shifts expressed in nominal terms
 0.70 Yield beta for TIPS versus nominals
 12 Month horizon
 1.5% Inflation accrual for TIPS

Source: Standish, Yield Book.

Strategies to Improve Effectiveness of TIPS

To minimize the impact of rising real interest rates on their TIPS portfolios, investors should consider shortening the interest rate exposure of their TIPS portfolio by shifting to a benchmark with a shorter duration such as the Barclays US TIPS 1-10 Year Index. An added benefit of shortening the duration to an index focusing on 1-10 year maturities is that it doubles the correlation to inflation (see Exhibit 4).

Exhibit 4: Returns Correlation For Last 10 Years	
	US CPI
S&P 500	7%
Goldman Sachs Commodity Index (GSCI)	38%
Treasury	-26%
TIPS	9%
TIPS 1-10	18%
TIPS Breakeven Return	45%

Source: Barclays as of September 30, 2009.

Another alternative is to construct a portfolio of breakeven inflation rates. As defined above, the breakeven inflation rate is the yield spread between nominal treasuries and TIPS of the same maturity. A breakeven portfolio would consist of long positions in TIPS and offsetting short positions in interest rate futures. The net exposure provides the inflation accrual of the TIPS as well as exposure to changes in inflation expectations, or break even inflation rates. As Exhibit 3 shows, a breakeven portfolio generally outperforms a standard TIPS portfolio for rate increases that are higher than implied in forward rates. More important, as Exhibit 4 shows, a breakeven portfolio has a correlation with inflation that is five times higher than a standard TIPS portfolio.

In either of the alternative strategies, the governing principle is to maintain exposure to the inflation protection embedded in TIPS, while minimizing the exposure to higher real interest rates. We believe these are prudent strategies for those seeking an efficient inflation hedge in today's environment.



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