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# *Special Report*

September 2007

## TIPS, Treasuries And Insurance

By Howard L. Simons

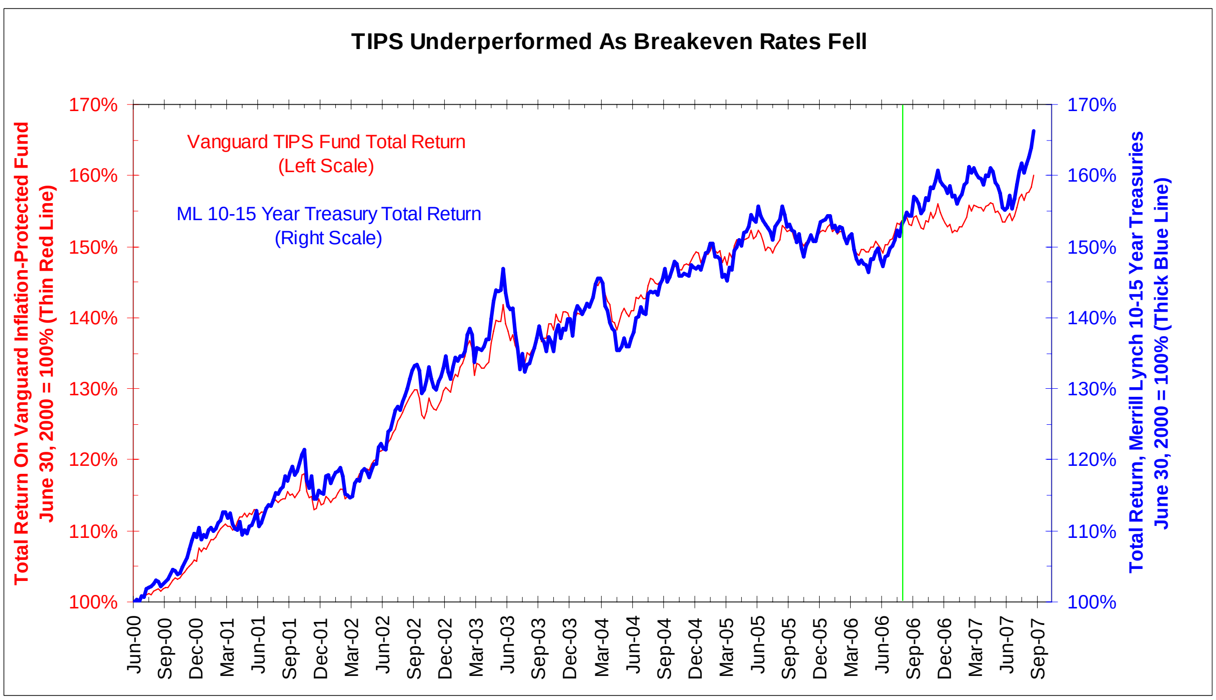
We concluded a May 2006 Commentary on TIPS:

> *The TIPS market has proven a boon to economists, and we are duly grateful. Its insights into the Federal Reserve's credibility alone make the market valuable. But TIPS are not the salvation for real-return investors as presumed; the very efficiency of the market prices protected returns back to conventional returns. Why anyone would have thought otherwise is unclear.*

The premise was simple. The TIPS market is selling insurance against inflation, and if the insurance market is efficient at all, the cost of insurance should equilibrate returns between TIPS and nominal Treasuries. **Viewed through this prism, TIPS reward investors ex-post only when future realized inflation is higher than current expected inflation.**

We compared the total returns for the Vanguard TIPS fund and the Merrill Lynch index for 10-15 year Treasuries (thin red and thick blue lines, respectively). These were so similar at the time we entitled the chart, "TIPS Market A Monument To Efficiency."

Shortly thereafter, TIPS began to underperform Treasuries as the ten-year breakeven rate of inflation slid from 2.6% toward 2.2%. **Either Treasuries are too expensive, TIPS are too cheap or some combination thereof.**

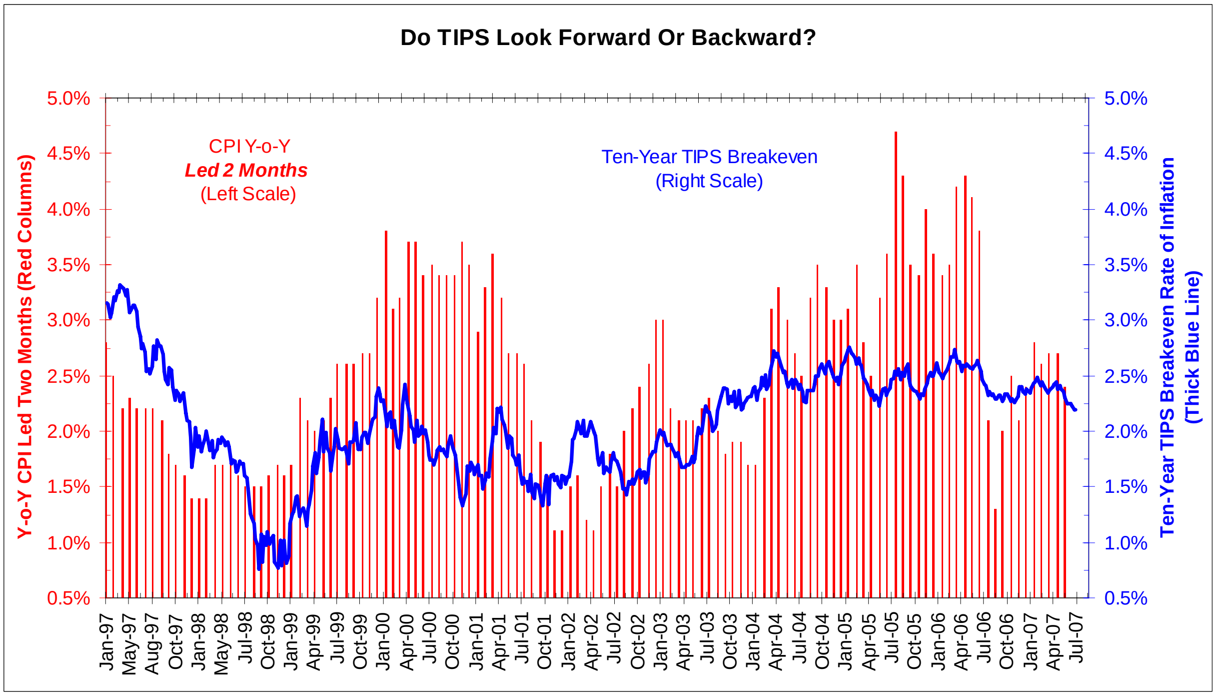



### Inflation Insurance

We entitled a July Commentary, "Does Anything Affect TIPS Breakevens?" The question bears repeating as ten-year breakeven rates of inflation hover just over 2.2%. Gold is over $700 per ounce, crude oil futures just settled at a new nominal high, the dollar has been weak, the world's central banks have been forced to abandon their fight against loose credit due to the consequences of their previous loose credit policies, the U.S. political landscape is not moving rightward and a simple visit to any retail establishment always is more expensive than anticipated.

Betting on lower realized inflation going forward sounds like reckless disregard of the facts.

Moreover, in an update of another chart from May 2006, the ability of the TIPS market (thick blue line) to anticipate changes in year-over-year changes in reported inflation led two months (red columns) is limited at best.




## A Second Insurance Market

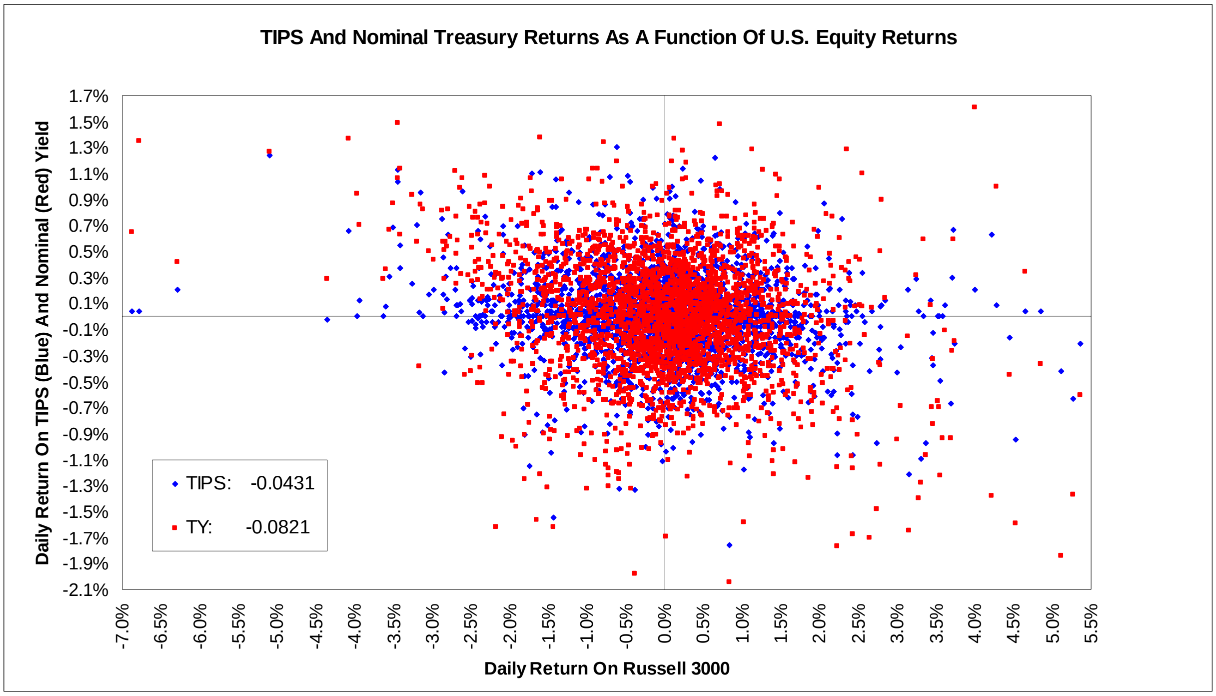
Unless we have reason to TIPS traders suddenly have been instilled with preternatural forecasting skills, should we conclude all other markets in toto are correct and the TIPS market has it all wrong? Or should we allow for the odd logical possibility the TIPS market is correct, but the Treasury market is overwhelming it and pushing the derived breakeven rate of inflation lower?

Everyone reading this has heard and probably used the phrase “flight-to-quality.” Much of the Treasury market’s rally since global equities peaked in July is attributable to a flight from risky assets into Treasuries. This is not a recent development; if we map the daily returns on two synthetic constant maturity bonds, a ten-year Treasury yielding 6.0% and a ten-year TIPS (red and blue markers, following page, respectively) yielding 3.5% against the daily returns on the Russell 3000 index since the January 1997 advent of TIPS, we find two patterns. First, the regression beta of returns is negative, -.0821 for Treasuries and -.0431 for TIPS. Second, while the variance of Treasury returns relative to TIPS returns is much larger when stocks rally, it is even larger when stocks falter.

**A flight-to-TIPS, even though they bear the full faith and credit of the U.S. Treasury, simply does not occur.** When stocks slide, three things can happen. First, inflation expectations can diminish. Second, the short call option on government honesty embedded in the TIPS payoff function can increase and diminish the prospective return on TIPS. Third, the short call option on future tax rates embedded in the TIPS payoff function can increase and diminish the prospective return.

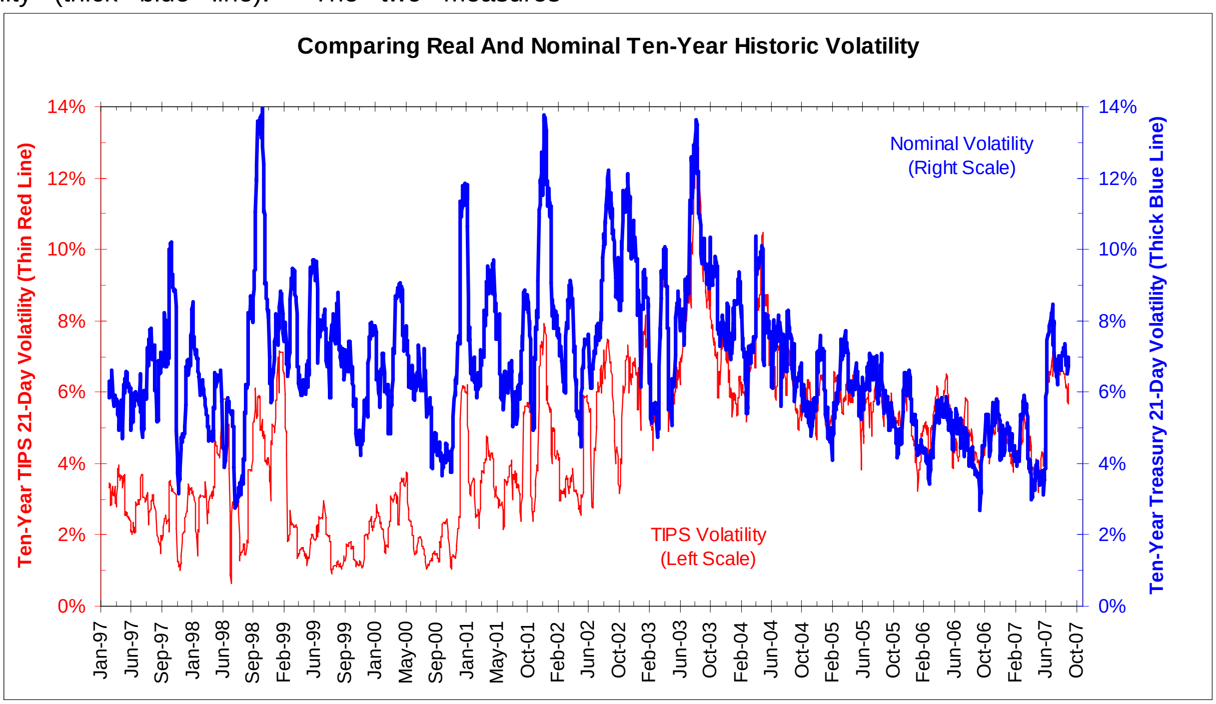
**If we conceive of the flight-to-Treasuries as a purchase of insurance against adverse systemic risk, this insurance purchase can dominate that offered by the TIPS market.** Which is the more powerful impulse, to buy insurance against a disaster or to buy insurance against the All-Urban Consumer Price Index, Not Seasonally Adjusted, over a forward ten-year averaging period?

**Panic buying of Treasuries lowers their yield to maturity relative to that for TIPS and thus drives the derived breakeven rate of inflation lower regardless of what TIPS traders really think about inflation.**




## Volatility And Distributions

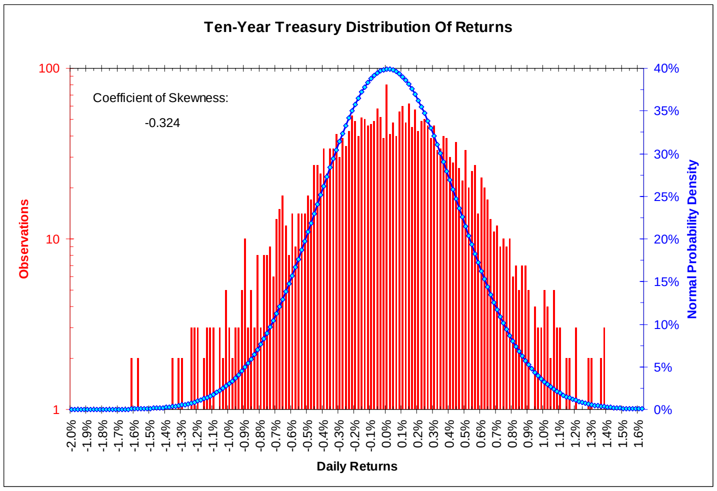
The synthetic history of 21-day close-to-close volatility for the two constant-maturity bonds confirms this in part. Prior to February 2003, TIPS volatility (thin red line) often was well under Treasury volatility (thick blue line). The two measures converged into July 2007, whereupon Treasury volatility jumped relative to TIPS volatility. **The anxiety of disaster-insurance buyers has remained greater than that of inflation-insurance buyers for the past two months.**

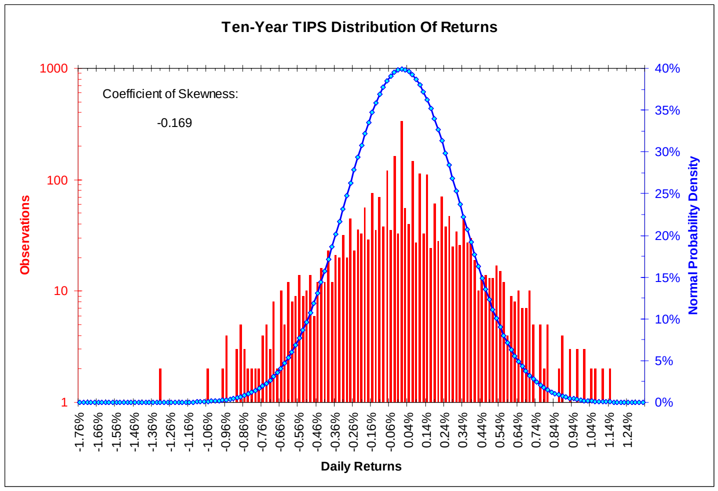



The actual distribution of returns tells a slightly different story. If we construct histograms of the returns for the synthetic constant-maturity Treasuries and TIPS (left-and right-hand charts, following page), we see a much more negative skew for Treasuries, -0.324, than for TIPS, -0.169. The Treasury distribution is flatter as well.

While traders are willing to panic into Treasuries for disaster protection, they also are willing to sell them with far greater enthusiasm than they sell TIPS.

**This suggests the TIPS market has a greater percentage of long-term investors than does the Treasury market.**




## Conclusion

Labels create expectations. We have come to expect the federal funds futures market to tell us what the Federal Reserve will do, and the Federal Reserve itself gauges the effectiveness of its communications by observing this market. Similarly, we expect a market for inflation expectations to tell us about expected inflation. It is all very reasonable, is it not?

The odd behavior of the TIPS breakeven rate of inflation, falling when everyone's own two eyes tell them the direction of inflation is higher, required explanation.

The one answer possible without saying any given market is "wrong" – a market is what it is – is the TIPS market is correct but is being overwhelmed by the signal from the Treasury market. Crisis insurance, once claimed by the holder, is far more valuable than inflation insurance.

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