

Gold, Real Rates And The Yield Curve

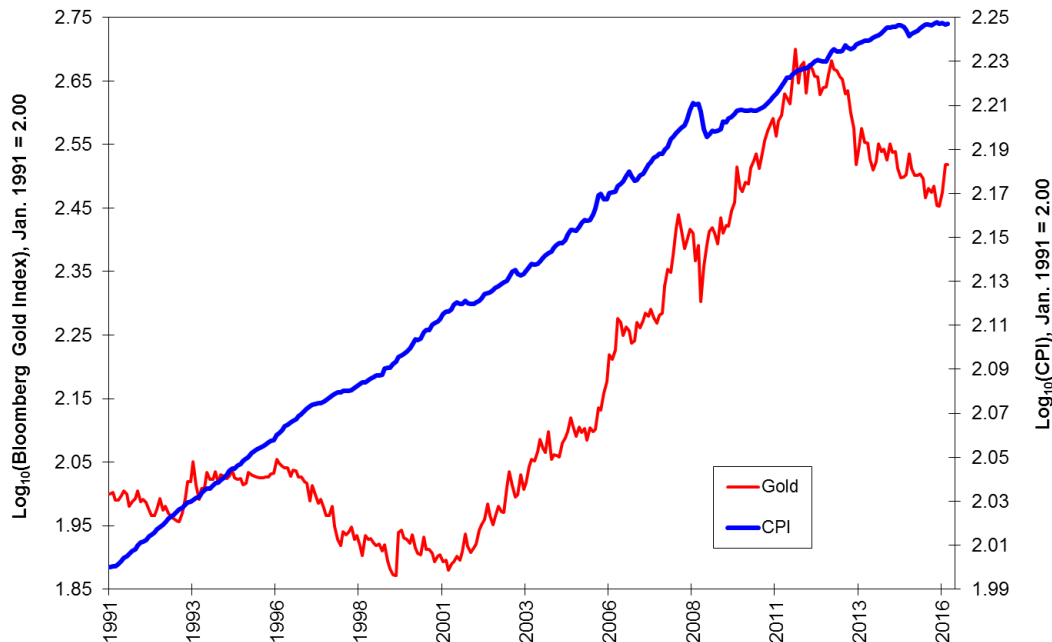
There are no sure bets in financial markets. For years we could stipulate traders associated higher gold prices with higher inflation, and with good reason. You can create more units of paper money almost instantaneously, which brings their capacity to represent a stable store of value into question, but you cannot do that with gold. That does not mean you cannot debase gold and silver coins as has been done throughout history, most famously under the Roman emperor Diocletian.

That was then; this is now, and now involves negative nominal short-term interest rates, quantitative easing and multiple competitive attempts at currency devaluation. Let's use the *Bloomberg* total return index for gold (formerly the Dow Jones-UBS index, formerly the Dow Jones-AIG index; commodity indices get passed around like hors d'oeuvres) as the measure of gold's returns to an investor as it approximates a continuously long position in gold futures. If we map it on a common logarithmic scale against the consumer price index, we see how gold has moved irrespective of the CPI. The relationship is a contemporaneous one, too; neither gold nor the CPI lead the other. Here's the kicker, though: If you want to describe the CPI's advance over time, just use a calendar time-series, the statistical equivalent of laying a ruler over a graph. Here are the comparable regression synopses:

$$\text{Log}_{10}(\text{CPI}) = 1.58 + 0.253 * \text{log}_{10}(\text{gold}), r^2 = 0.740$$

$$\text{Log}_{10}(\text{CPI}) = 1.060 + 0.000029 * \text{Time}, r^2 = .993$$

Gold's Returns Independent Of CPI



Source: Bloomberg

As an aside, the largest bullish move in gold from 1991 onwards occurred between 2001 and the 2008 financial crisis. Try though you might, you cannot model this successfully with expected inflation net of short-term interest rates or changes in the value of the dollar or any other currency. You need to account for the rising income levels in traditional gold-buying markets such as India, China and the Middle East.

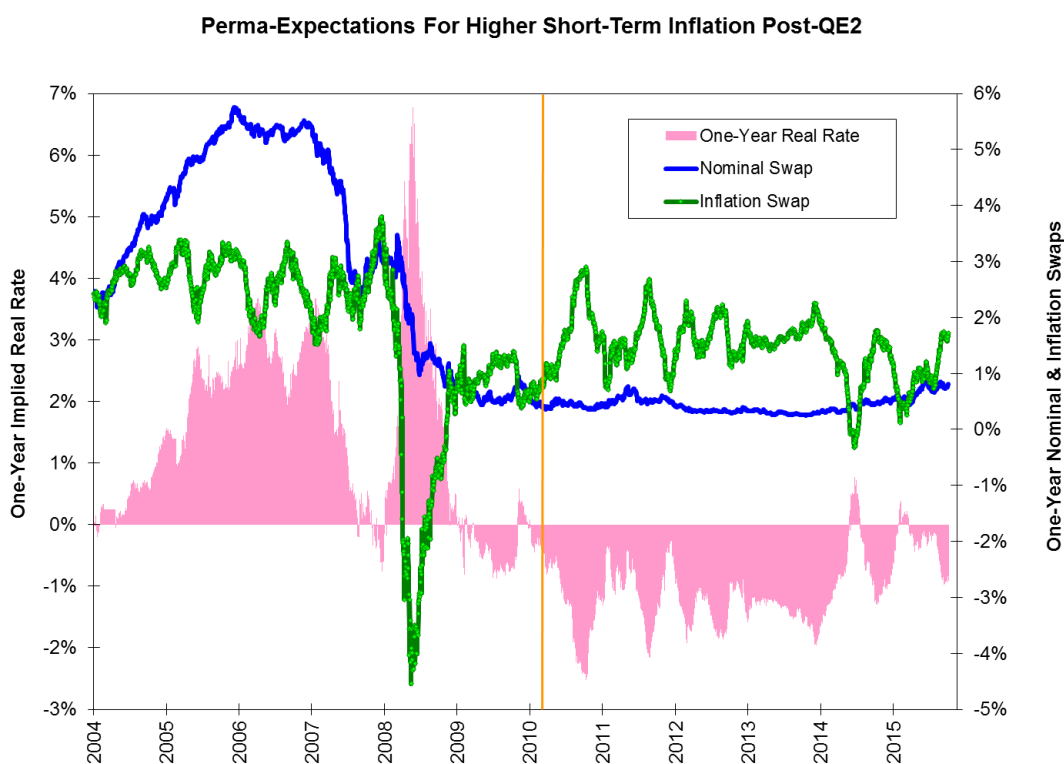
If Not Inflation, What?

What about the bull market between the end of the financial crisis in 2009 and gold's September 2011 peak? While many people, present company included, initially feared the Federal Reserve's drive to zero percent interest rates

(ZIRP) and various rounds of quantitative easing would trigger significantly higher inflation, this was not the case. Briefly, a massive decline in the velocity of money and the impairment of the commercial banking system kept most of that newly created cash bottled up in financial assets. Cash itself is a deflationary asset, especially if it is kept out of banking system to avoid negative interest rates.

The easing policies produced the first of two developments in the fixed-income market affecting gold, negative real short-term interest rates. One-year implied real rates as derived from the inflation-swap market peaked shortly before the adoption of ZIRP in December 2008. They reached negative levels in July 2009 and remained there with almost minor exception after the adoption of QE2 in August 2010, marked with a vertical line on the chart below.

One of the more interesting aspects of the inflation swap market after QE2 was how all of the volatility shifted from nominal swap rates to inflation swap rates. As real rates are the difference between nominal and inflation swap rates, the variance in implied real rates simply became a function of changes in inflation expectations. Those were biased higher.

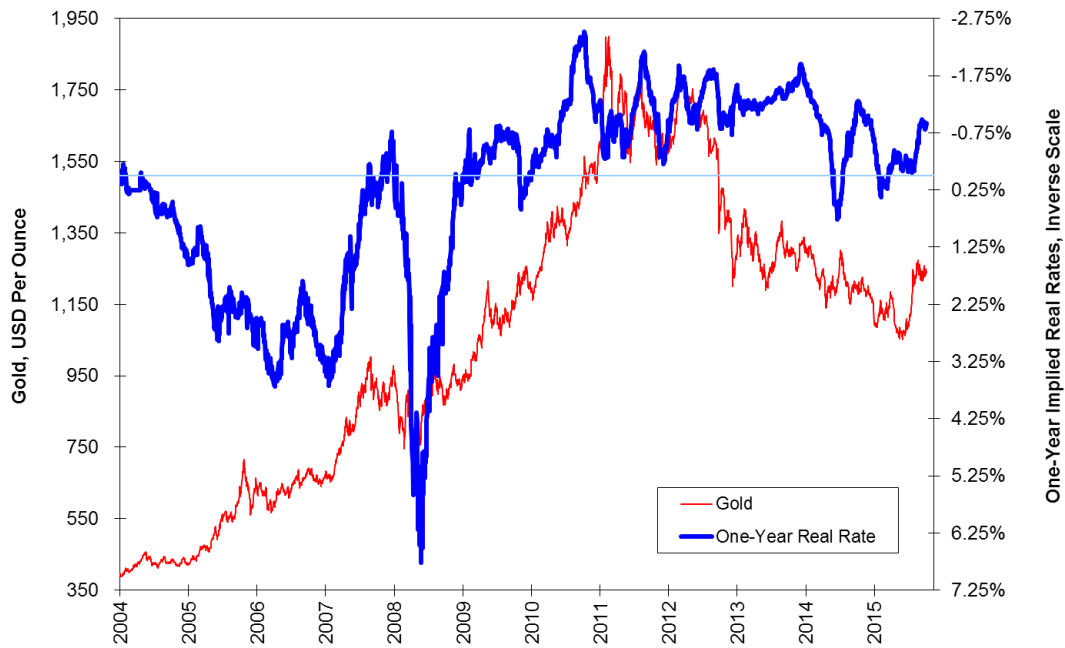


Source: Bloomberg

Now let's isolate those one-year real rates. They declined from 1.40 percent to -2.47 percent by May 2011 while gold rose 79 percent over the same period. The logic behind this strongly inverse relationship is extraordinarily simple. You could borrow at negative real rates, own an inert asset such as gold and expect to make those negative rates, subject to the very substantial risk of price depreciation. If inflation accelerated, a commonly held opinion as evidenced by the history of inflation swaps you made that, too, and if income-sensitive demand rose, start ringing the register.

The same trade has operated since December 2015 with negative short-term interest rates in the Eurozone, Switzerland, Sweden and Japan taking the place of negative short-term interest rates in the U.S. At the late-April 2016 time of this writing, three-month Swiss francs and euros are trading at -71.5 and -34.9 basis points, respectively, and Sweden is considering eliminating cash kronor entirely to prevent the populace from exiting the banking system and stuffing cash in mattresses. Gold can look attractive in the face of such depredations.

Gold And Real Short-Term Interest Rates



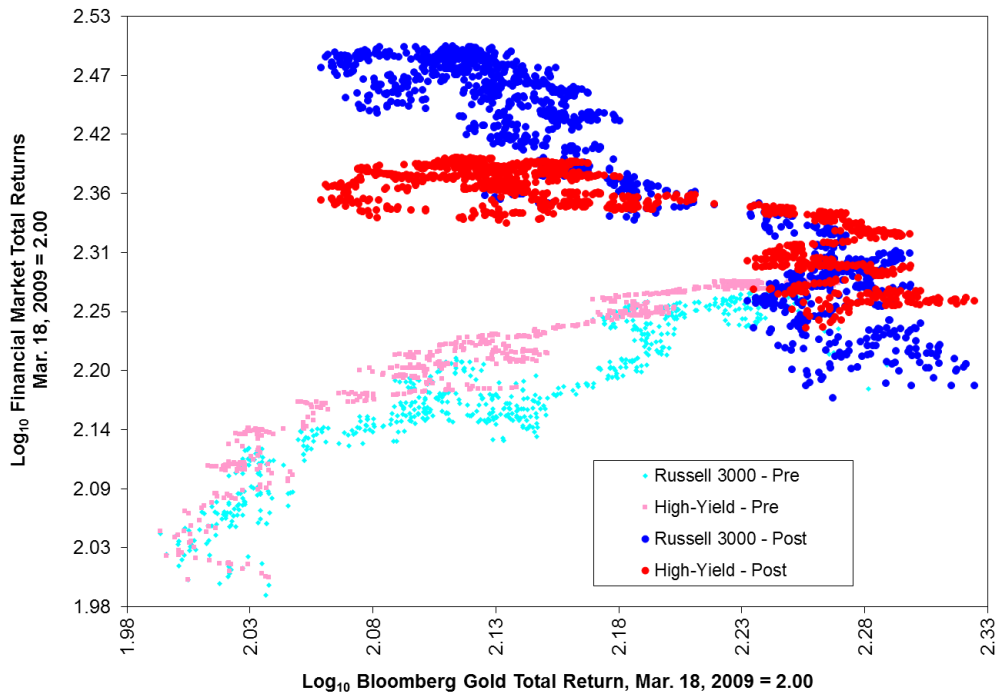
Source: Bloomberg

The Twist

If monetary policy remained easy after September 2011 and implied real short-term rates remained negative, then why did gold peak then? Here the answer involves the emergence of better investment alternatives. The Federal Reserve started what became known as Operation Twist in August 2011. This involved selling short-term Treasury securities and buying longer-term securities in an effort to flatten the yield curve. It was wildly successful in this regard, and as both stocks and corporate bonds are priced off of long-term and not short-term interest rates, the Twist triggered an acceleration of the bull market underway since 2009.

The total returns for gold, stocks and high-yield bonds had been correlated positively between the start of QE1 in March 2009 and the initiation of the Twist in August 2011. The common explanation at the time was the flood of money supported both risky financial assets and gold. A similar confluence of returns had prevailed between 2005 and 2007. After the Twist the relationship turned negative as investors decided to take the opportunities afforded corporate bonds and stocks as opposed to those afforded by gold.

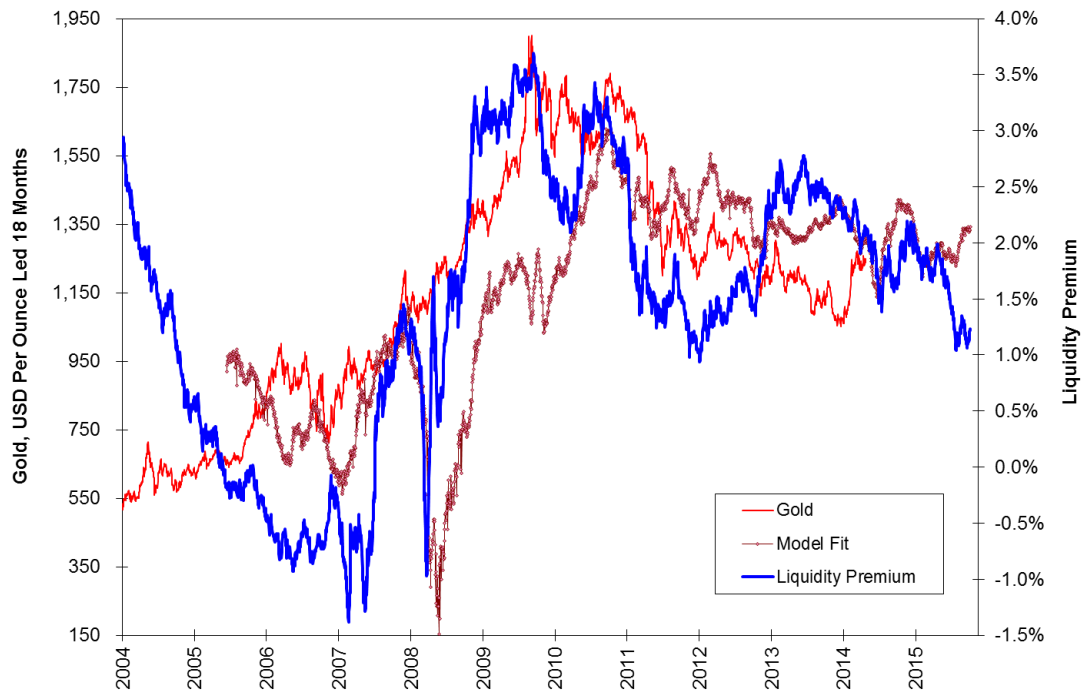
The Twist Mattered For Gold
Positive Correlation Turned Negative



Source: Bloomberg

We can measure the flattening of the yield curve in many ways, but one of the simplest is the so-called liquidity premium between ten-year Treasuries and three-month LIBOR. While the relationship between short-term real rates and gold is a contemporaneous one, the liquidity premium leads gold prices both higher and lower with an 18-month lead-time. If we incorporate these two financial variables into a simple model and map that model's fitted values against the liquidity premium, we see how actual gold prices rise and fall along with the model's expectations. The model is implying higher gold prices through the end of 2017.

Gold Should Benefit From Earlier Increases In Liquidity Premium



Source: Bloomberg, Rosewood Trading

While this may seem like a large number of moving parts, it is really very simple:

1. Negative implied real short-term rates are bullish for gold and vice-versa; and
2. A steeper yield curve favors gold over financial assets and vice-versa