

## Money And Those Pesky Food And Energy Prices

One of the more painful conversations any economist can have is on the topic of core inflation. Anyone whose household budget involves food and energy expenditures views their exclusion from any consumer price index (CPI) with understandable skepticism. The entire concept arose during the inflationary 1970s: A spike in the price of foodstuffs caused by a poor grain harvest in the former Soviet Union in 1972 and the failure of the Peruvian anchovetta catch was followed by the first oil price shock in 1973.

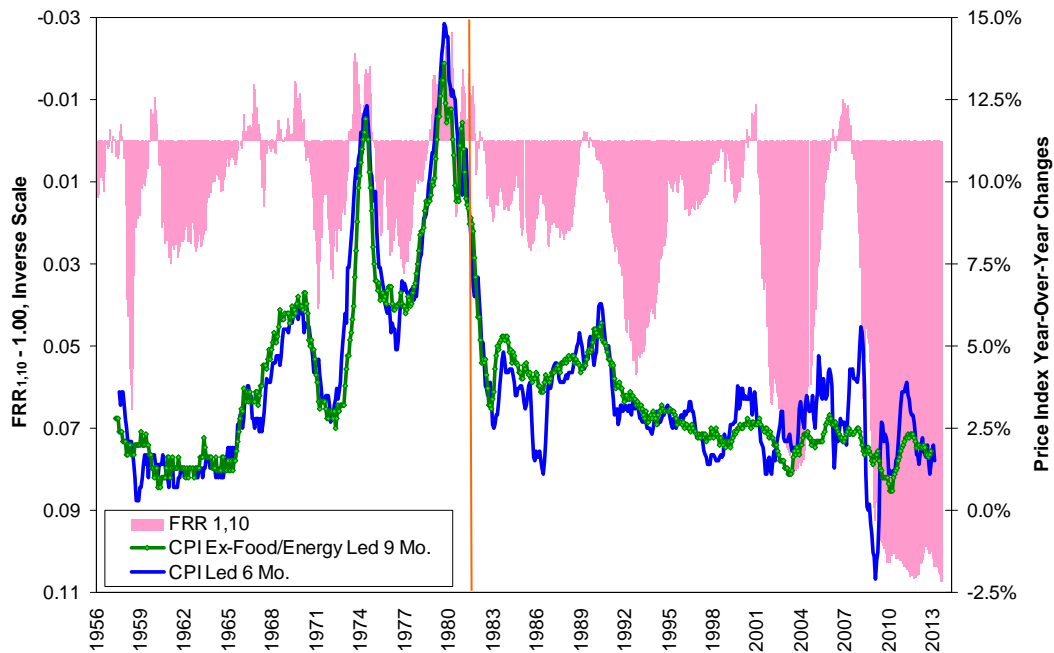
Keep those dates in mind and recall how the Nixon administration devalued the dollar and imposed wage and price controls in 1971. Inflation had been a problem for years and yet the later spikes in food and energy prices received the blame for something already extant. Time-travel is fun when you allow it to be.

The Federal Reserve, which must maintain its pretense to omniscience, protested food and energy prices were subject to supply shocks outside of the purview of monetary policy to affect. Even though they were correct in this assertion, a tough admission for any longtime critic of central banking practices to make, many traders retain a strong mental linkage between commodity prices and measures of inflation (see “TIPS Do Time-Travel With Commodities,” December 2012). Moreover, many traders adhere to a statement often attributed to Claud Cockburn, “Never believe anything until it has been officially denied.” Once official Washington started excluding food and energy prices from the headline CPI to create the core CPI, suspicion of manipulation became rife.

### Monetary Stimulus And CPI Measures

Part of the skeptics’ impulses arose from the strong linkage between monetary stimulus and CPI measures prior to the elimination of Federal Reserve Regulation Q interest rate ceilings following the Monetary Control Act of 1980, marked with an orange line in the chart below. These ceilings limited what banks could pay on time deposits; once they were hit, depositors withdrew money from the banking system, new loans dried up and interest-rate sensitive sectors such as housing and autos withered.

Monetary Stimulus Has Not Led Inflation For Three Decades



If we use the shape of the yield curve as measure by the forward rate ratio between one and ten years ( $FRR_{1,10}$ ) minus 1.00 as a proxy for monetary tightness or ease, we can see a leading relationships between it and the headline CPI and the CPI ex-food and energy of 6 and 9 months, respectively. The  $FRR_{1,10}$  is the rate at which we can lock in borrowing for nine years starting one year from now, divided by the ten-year rate itself. The more this number exceeds 1.00, the steeper the yield curve is; an inverted yield curve has a  $FRR_{1,10}$  less than 1.00.

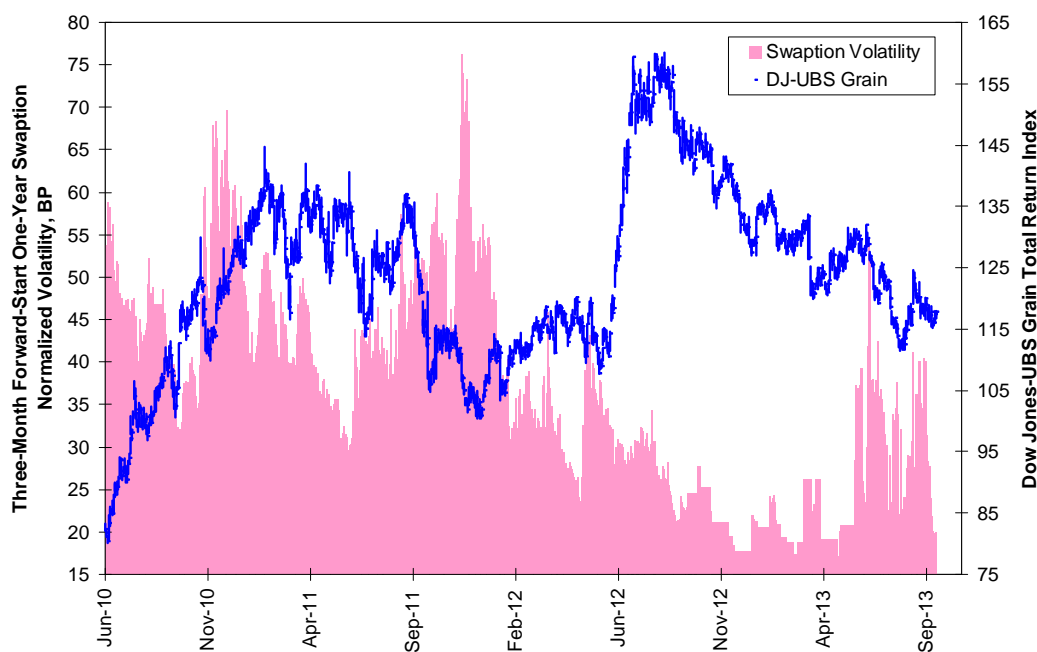
This relationship was far more direct during the 1970s than it has been any time before or since. Once Regulation Q ceilings were eliminated, the massive waves of monetary ease in 1992-1993, 2002-2004 and 2008 onwards had but a minor effect on the headline CPI and almost no effect at all on the CPI ex-food and energy.

### Commodity Returns

Bad ideas die hard, if at all. While the U.S. and others engaged in massive monetary stimulus in the aftermath of the 2008 financial crisis, inflation remained quiescent due to impairment of the commercial banking system, slack capacity and public sector misallocation of capital into low-multiplier transfer payments amongst other reasons. Still, when events such as a drought in the former Soviet Union in 2010 and in the U.S. in 2012 pushed up grain prices or political disruptions and refining system outages pushed up energy prices in both in early 2011 and in early 2012, many blamed higher prices not on these supply shocks and their effects but rather on monetary ease and expectations thereof.

These critics were engaging in time-travel again. Let's use something called a three-month forward-start one-year swaption as a measure of monetary expectation. This is the normalized volatility of an option to pay the fixed-price leg of a swap; think of it as a put option on a bond future for a frame of reference. The higher this volatility is the more willing floating-rate payors are to fix the rates on their loans. Declining volatility reflects expectations for lower interest rates and, in general, for future monetary eases.

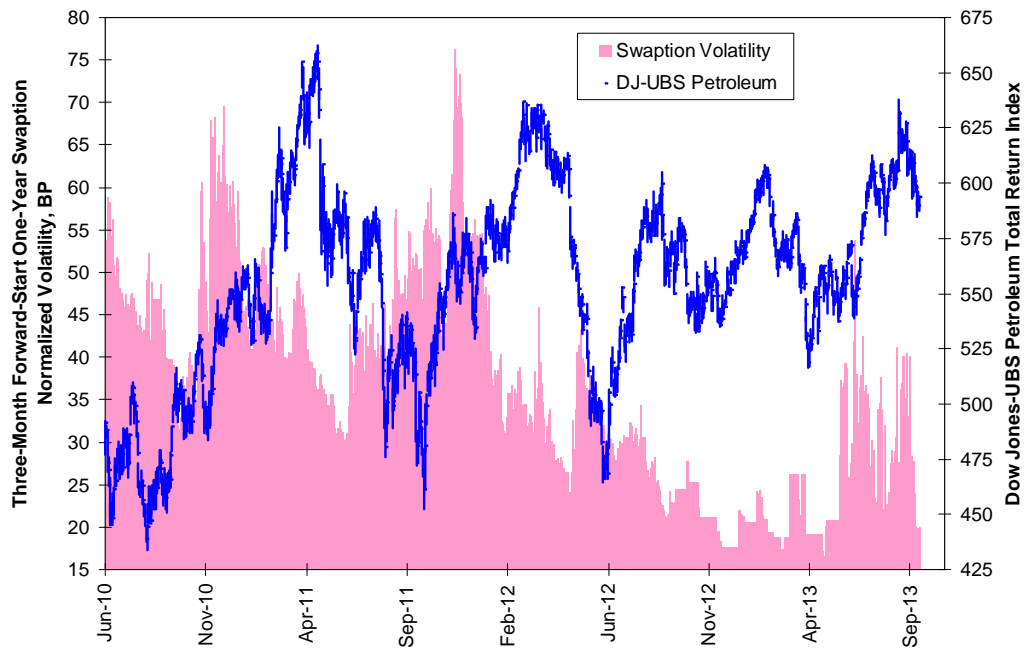
**Grain Returns Unrelated To Monetary Expectations**



This volatility peaked in November 2011 and began declining rapidly through May 2012. The total return on the Dow Jones-UBS grain index fell as well during this period; if expectations for monetary ease were sufficient to induce higher grain prices, they would have done so before the June-August 2012 rally. In addition, the total return on agricultural commodities fell after August 2012 in the face of continued declines in swaption volatility. Moreover, please note how total returns for the grain index increased in the second half of 2010 while swaption volatility was stable or rising. Finally, a jump in swaption volatility over the June-September 2013 period in expectation of a tapering of the Federal Reserve's quantitative easing program had no direct effect on grain returns.

The same argument applies for the Dow Jones-UBS petroleum total return index. This index rose with higher swaption volatility in late 2010 and with declining swaption volatility in the first half of 2011. It then plunged as swaption volatility rose in the second half of 2011...and as swaption volatility fell into May 2012. It rose again both in the summer of 2012 in the face of declining swaption volatility and in the summer of 2013 in the face of rising swaption volatility. Once again, the connection between expectations for monetary easing and taking long positions in commodity futures "as a hedge against inflation" is non-existent.

### Petroleum Returns Unrelated To Monetary Expectations



None of this should be surprising to anyone who moves back the initial knee-jerk reaction of easy money leading to higher inflation, to higher inflation manifesting itself in higher commodity prices and to those higher commodity prices leading in turn to increases in both backward-looking reported inflation and forward-looking inflation expectations. A more precise chain is, perforce, more complex: Easy money will lead to increases in the money supply only if multiplied through the commercial banking system into greater credit; more rapid money supply growth will propel commodity prices higher if and only if supplies do not increase relative to demand and higher commodity prices will feed into inflation in turn if and only if demand is not reduced via substitution and technological change.

The experience of the entire post-World War II era has been for falling real commodity prices with some modest exceptions for extractive resources that cannot be recycled, such as crude oil, or for extremely rare materials with inelastic demand curves such as platinum. To believe otherwise is to believe commodity users will not act in their own interests to minimize the cost of their process inputs. Trading and investing in the hope someone else makes a mistake on your behalf is not a winning strategy over time.