

The Yuan And U.S. Inflation

Holding truths to be self-evident may work in political documents, but it will do nothing for you as a market analyst or trader. How many notions are more readily accepted without question than a weakening currency placing upward pressure on inflation, both expected and reported?

The logic, as is so often the case in these situations, is impeccable. An exporter to the U.S. gets paid in dollars and either must convert these dollars to his own currency or buy dollar-denominated assets therewith. If the dollar is declining in exchange value, the theory goes, the exporter is going to want more of them in exchange for goods and services. The higher prices charged provide a higher ceiling for a domestic producer in competition with the exporter, and the result is a higher overall price level.

This neat little explanation actually subsumes a large number of assumptions, the most important of which is the willingness of the exporter to sacrifice profit margin in return for market share. The temptation to do so is at the core of most unfair trade practice claims; many domestic competitors believe exporters are willing to buy market share by selling at a low price. And indeed there often is some truth in these complaints...even though more often than not the complainant really is seeking protection more from his own bad business practices than from predatory exporters.

Another huge assumption is inflation is something other than a monetary phenomenon and reflects higher prices for selected goods. In the absence of monetary accommodation, higher prices for imported goods will divert purchasing power away from domestic goods with no change in the overall price level. The opposite is true, too: To the extent official monetary lassitude can expand the money supply, the overall price level can expand regardless. As we saw last month (see "Japanese Inflation and the Yen," November 2007), creating inflation can be tricky when the banking system becomes dysfunctional.

Other assumptions include price elasticity of demand and substitution. If the prices of imports rise, we should expect to see both a decline in demand and a substitution effect to the extent both are technologically possible. One of the great frustrations in the political economy of energy markets is the limited extent to which both of these forces operate. Americans feel quite literally trapped over a barrel.

Finally, exporters get to respond in this game as well. They can hedge the risk of a weaker dollar, source materials in components in lower-cost regions of the global marketplace, improve their own production efficiencies and, yes, accept a lower profit margin to maintain or expand market share.

Overall, the apparently logical connection between a weaker currency and higher inflation is anything but a strong one in practice. Let's turn now to the topic of how the heavily managed revaluation of the Chinese yuan (CNY) against the dollar has affected expected and reported inflation in the U.S.

Expected Inflation

We can assess the effect of the stronger CNY on inflation expectations by mapping the currency against TIPS (Treasury Inflation Protected Securities) breakeven rates of inflation at the five, ten and thirty-year horizons.

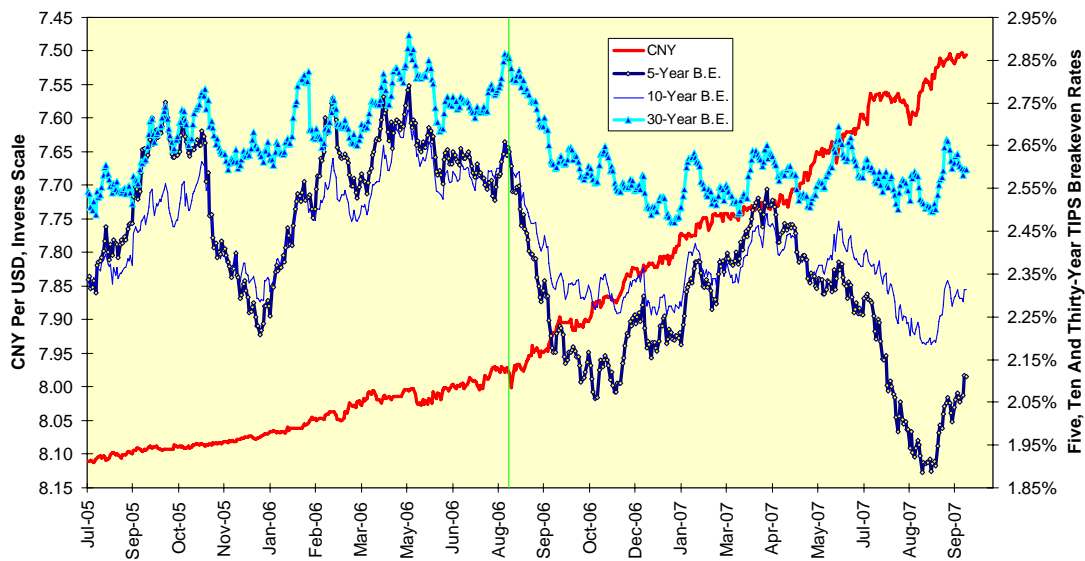
First, why pay attention to the TIPS breakevens? Why not concentrate on the much longer and more complete history of reported inflation, such as the Consumer and Producer Price indices? The answer is simple: Economic decisions are made in prospect, not in arrears. A ten-year breakeven rate of inflation, for example, gives us the market's best assessment of what the average annual rate of inflation for the All-Urban CPI, not seasonally adjusted, will be.

Those assessments account for the various options embedded in the TIPS market, including what the tax rate will be on the accrual of the bonds' principal and how the government chooses to report inflation (yes, you are short a call option on government honesty). More critically, some key financial variables such as currency rates and the shape of the yield curve are affected by expected, not reported, inflation.

The CNY began its managed revaluation in July 2005. The move higher accelerated in August 2006, marked on the chart with a green vertical line. TIPS breakeven rates of inflation began to turn lower simultaneously. While the five- and ten-year breakeven rates rebounded somewhat between November 2006 and March 2007, the thirty-year breakeven rate remains under pressure and all three breakeven rates remain lower than they were in August. If a

stronger CNY is inflationary, it is certainly doing a good job of disguising itself in the data. Let's repeat for emphasis: The rise of the CNY coincided with a decline, not an increase, in expected inflation. This is 180° opposite of what the standard theory would predict.

The Yuan And Inflation Expectations

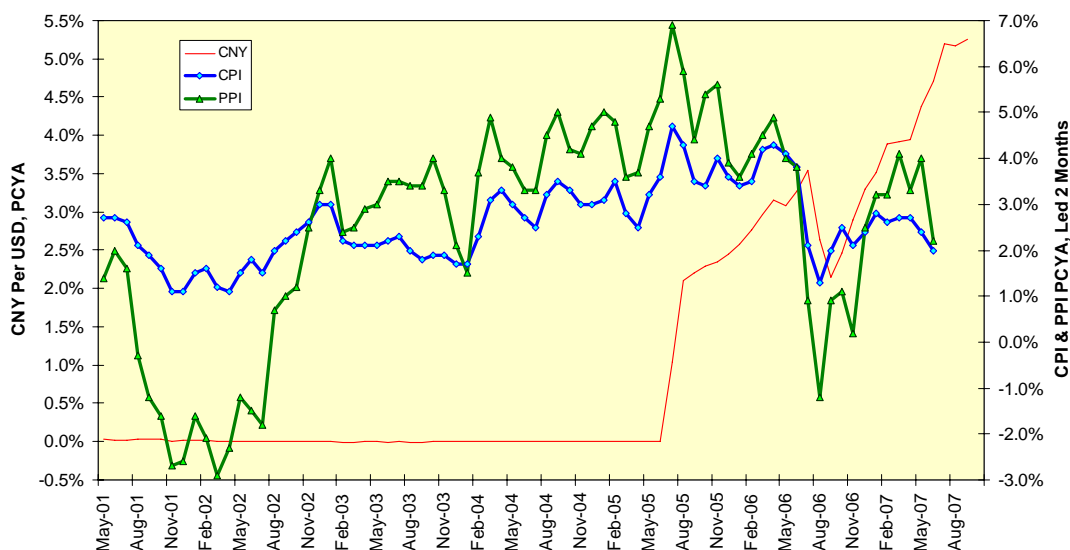


Reported Inflation

After discoursing on the importance of expected inflation and TIPS breakeven rates, let's turn back to reported inflation and see whether actual behavior behaved similarly. It is not at all unusual for a market to rise in the present while its expectations for the future fall; this happens regularly in backwardated physical markets.

The behavior of reported inflation is consistent with that of expected inflation. If we map the year-over-year changes in the monthly average of the CNY against the year-over-year changes for both the CPI and the PPI, we find an inverse leading relationship. As the CNY moves higher, the rates of change for the two price indices fall two months later.

Measured Inflation Moderated As Yuan Revalued



Sub-Index Detail

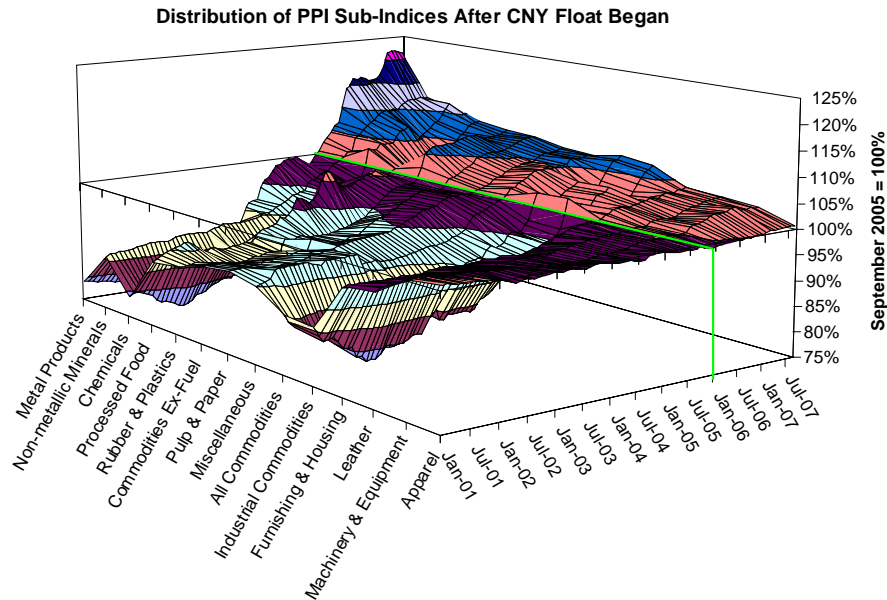
The government as a rule has little use for market analysts and economic commentators, and the sentiment often is reciprocated. But one welcome artifact of the constant parsing of inflation data to prove that inflation is not as bad

as your daily experience indicates is a plethora of inflation sub-indices. That way the government can say, “Yes, the price of gasoline is killing you, but look at how well-behaved the prices of stainless steel fasteners has been.”

If we index the PPI sub-indices to September 2005 (bright green lines here and subsequently), two months after the CNY began to revalue, we find the most rapid price acceleration in metals, minerals, chemicals and commodities ex-fuel. These are raw materials markets wherein China is a key and large-scale buyer.

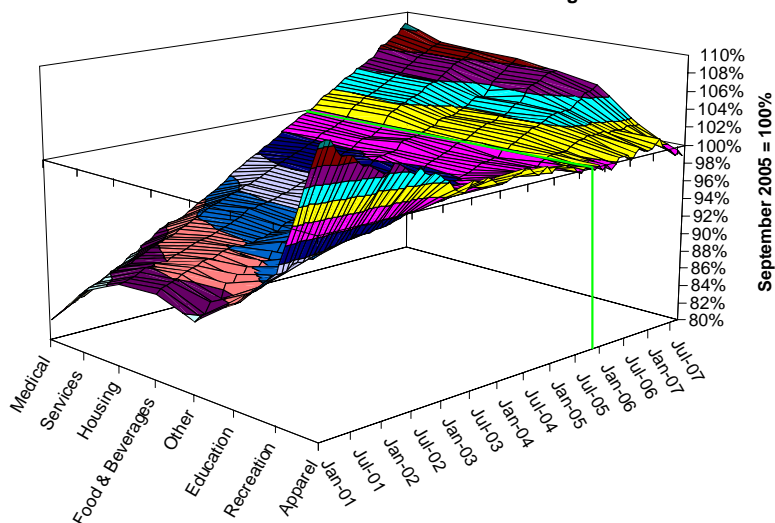
In contrast, sub-indices involving finished and manufactured products such as apparel, machinery, leather and furnishings, have seen only mild price increases.

It appears the greatest effects China has within the producer price world are the result not of a stronger CNY but rather of sheer physical demand for materials. In fairness, a stronger yuan strengthens China’s claim on these materials, but the very same stronger yuan has no visible impact on the prices of finished producer goods.



We should expect uneven behavior within CPI sub-indices as well. Here the most rapid price increases since September 2005 have occurred in medical expenditures, services and housing, none of which are particularly exposed – yet – to import competition. Apparel, heavily exported from China, scarcely has moved higher in price. Once again, the higher prices expected to result from a stronger yuan are overwhelmed by other factors. If you want to see prices rise in a consumer price sub-index, disrupt the market via government controls and insurance intermediaries and you will duplicate the American experience with medical expenses very quickly.

Distribution of CPI Sub-Indices After CNY Float Began

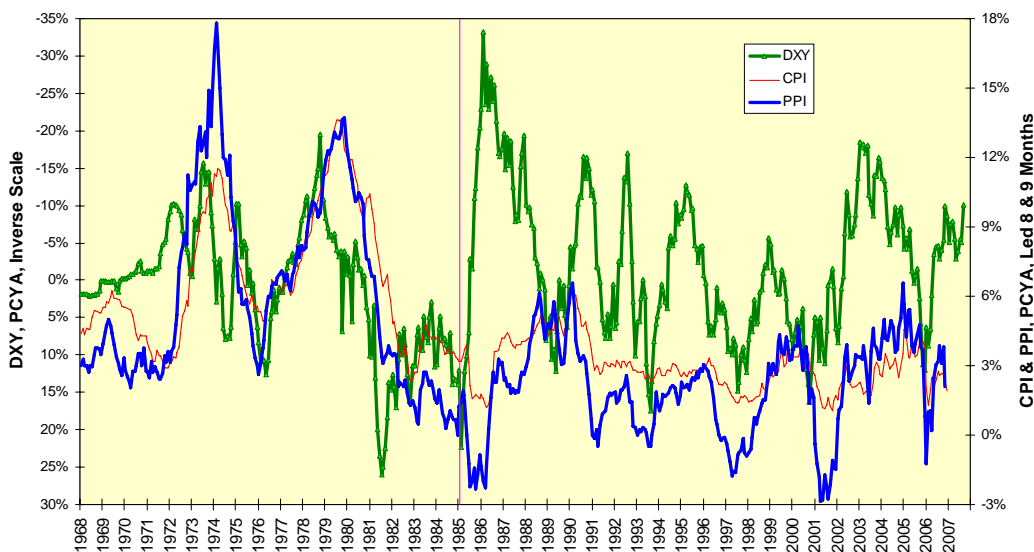


The Long-Term View

Can the conclusion that a stronger CNY does not exert upward pressure on reported inflation in the U.S. be confirmed over a longer period of time and across a wider spectrum of currencies? After all, the revaluation of the CNY is not to be confused with the movements of a freely floating currency, and the process has been underway only since July 2005.

If we map the year-over-year changes in the dollar index on an inverse scale against the year-over-year changes for the CPI and PPI, we find only a weak leading relationship. A weaker dollar leads changes in the CPI by 8 months and changes in the PPI by 9 months on average. However, the respective r^2 values of .003 and .035 are statistically insignificant. No link between the dollar index and reported inflation can be asserted over the long-term.

The Dollar Index And Reported Inflation



However, this statement would not have been made prior to the turning point in the dollar's early-1980s strong period. The dollar index' rally started to reverse in February 1985, as marked with a magenta vertical line in the chart above. Prior to this reversal, the r^2 values for the rates of change of the PPI and CPI, respectively, against the rate of change for the dollar index were .226 in both cases. After February 1985, the respective r^2 values fell to .0002 and .0368. An F-test of these regressions to determine whether they were statistically different before and after February 1985 confirmed they were at near-100% confidence.

What changed? This was the beginning of central bank coordination of monetary policy and efforts to drive the dollar both lower, the September 1985 Plaza Accord, and higher, the February 1987 Louvre Accord. Once central banks realized independent monetary policies could not affect short-term interest rates and currency rates simultaneously, they turned away from direct currency management and toward national monetary policies. To the extent these policies matched – and they often did – currency rates could stay relatively static while inflation rates diverged. The opposite could obtain as well; consider the Federal Reserve's willingness to accept greater inflation in 2003-2004 while the dollar fell.

Restated, a central bank can fix its short-term interest rates or it can manage its currency, but it cannot do both simultaneously.

Those who continue to believe in the inflationary consequences of currency changes are viewing the world through the pre-1985 prism of non-coordinated central bank policies. Until and unless the era of central bank coordination ends, we should expect the disconnection between currencies and inflation – and between the CNY and American inflation, both expected and reported – to continue.