

Hungary's Blue Danube Waltz

We looked at the Russian ruble and its dual orbit against the dollar and the euro last month (see “Trouble In The Ruble,” August 2009). The ruble, the Russian stock market and the relative performance of Russian equities have a large commodity component attached thereto, especially against crude oil.

What if we take a currency with a dual orbit against the dollar and the euro, but one without a prominent commodity connection, such as the Hungarian forint (HUF)? The question becomes even more interesting considering how many of Hungary's commodity-related imports are priced in dollars, while nearly all of its remaining trade, both import and export, is priced either directly in euros or in a country whose currency is pegged to the euro. In addition, the HUF is scheduled to disappear at some point – the exact date keeps shifting forward, but by 2013 seems to be a fair estimate – as Hungary becomes a full member of the European Monetary Union and adopts the euro.

This combination of factors should lead us to the prior belief the cross-rate between the HUF and the euro is more important than the HUF-USD rate. This does in fact appear to be the case; we will look at both exchange rates below, however.

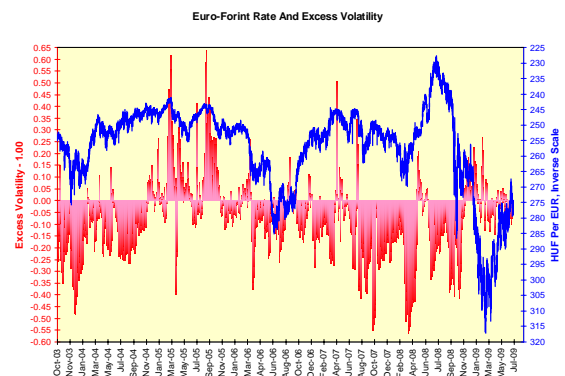
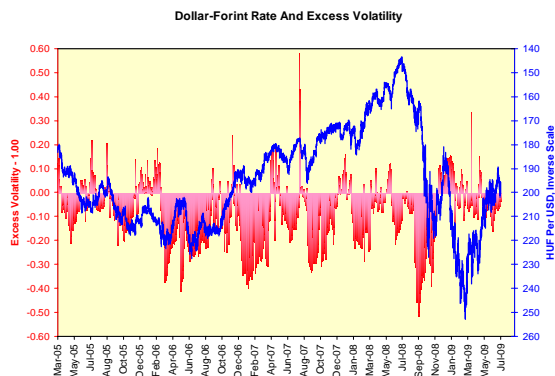
Pinpointing Anxieties

First, let's see if we can pinpoint the HUF market's directional source of anxiety. The measure used will be the ratio of implied volatility to high-low-close volatility, or excess volatility; this will be displayed on the charts below as the ratio minus 1.00. The implied volatility measure used is the rate for three-month HUF non-deliverable forwards for USD and EUR holders, respectively. The HLC volatility is defined as:

$$\sum_{i=1}^N \left[\frac{[.5 * (\ln(\frac{\max(H, C_{t-1})}{\min(L, C_{t-1})}))^2 - .39 * (\ln(\frac{C}{C_{t-1}}))^2] * 260}{N} \right]^{1/2}$$

Where N is the number of days between 4 and 29 that minimizes the function:

$$\frac{1}{N} * \sum_{i=1}^N \frac{N}{Vol^2} * |(P - MA)| * |\Delta MA|$$



In the case of the HUF-USD rate, excess volatility very seldom exceeds 1.00, which in itself is useful information as to which exchange rate is more important. A number of strong sub-1.00 readings occurred during mid-2006, early 2007 and again in late 2007 during periods of flat-to-neutral HUF-USD rates, but the same sub-1.00 readings occurred during the HUF's collapses in September-October 2008 and again in March-April 2009. It would be difficult to argue the market is directionally indifferent so much as the USD rate is just not as important as, perhaps, the HUF-EUR rate.

Here the reading is only slightly clearer. The large spikes in excess volatility during 2005 (a longer history of HUF volatility against the EUR is available than against the USD) occurred during local maxima of the HUF against the EUR. However, readings were quite low as well during the HUF's April-August 2008 and May-June 2009 rallies against the EUR. About the best we can conclude from these two excess volatility readings is the option market

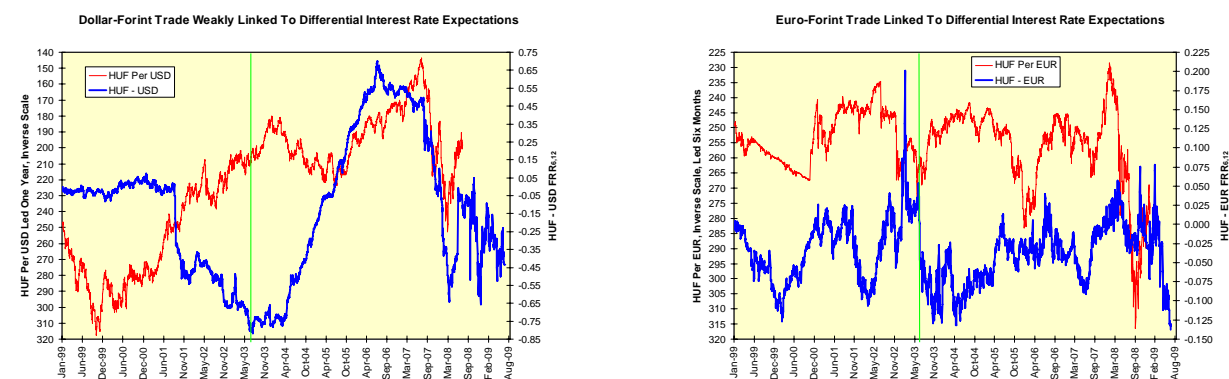
never buys protection against HUF strength; this is somewhat akin to the relationship between the Mexican peso and the USD (see “Mexican Peso: Who’s Your Padre?” February 2007).

A tipoff to this asymmetry of risk should be the [page](#) on the Hungarian Central Bank’s (Magyar Nemzeti Bank) Web page listing the official devaluations of the forint since 1990. The last date listed is June 4, 2003; this was a 2.26% shift in official parity of the forint with its $\pm 15\%$ intervention band remaining unchanged. This date is marked with a green vertical line on several of the charts below.

Interest Rate Drivers

The common metric for expected interest rate differentials used in this series has been the difference between forward rate ratios at the six-nine month horizon. However, the credit crunch of 2007-2008 rendered Hungary’s Budapest Bank Offer Rate (BUBOR) unusable; we will have to devolve to using sovereign Treasury rates at the six-twelve month horizon instead. These represent the rate at which we can lock in borrowing for six months starting six months from now divided by the twelve-month rate itself. The greater the differential between the HUF $FRR_{6,12}$ and those for the USD and EUR, the stronger the HUF should be, all else held equal.

We should not expect the USD differential to be significant, and it is not. In fact, it has a very unusual one-year leading relationship that is probably more of a statistical artifact than anything else. The $FRR_{6,12}$ differential between the HUF and the EUR leads the HUF-EUR exchange rate by the expected six months.

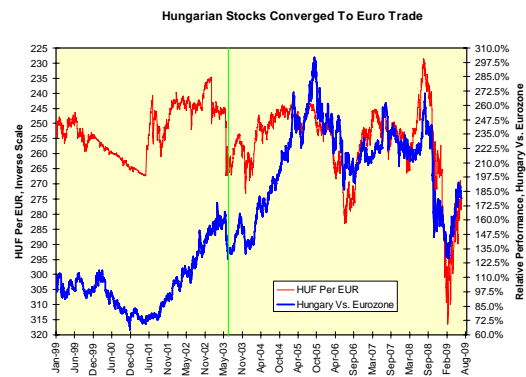
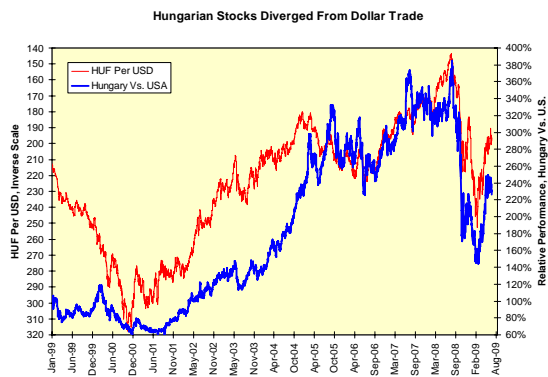


Stock Market Link

One of the primary drivers of currency movements in recent years has been relative returns on assets; this phenomenon has been so strong in so many instances as to render global diversification in equities pointless as differential returns all come down to a currency trade.

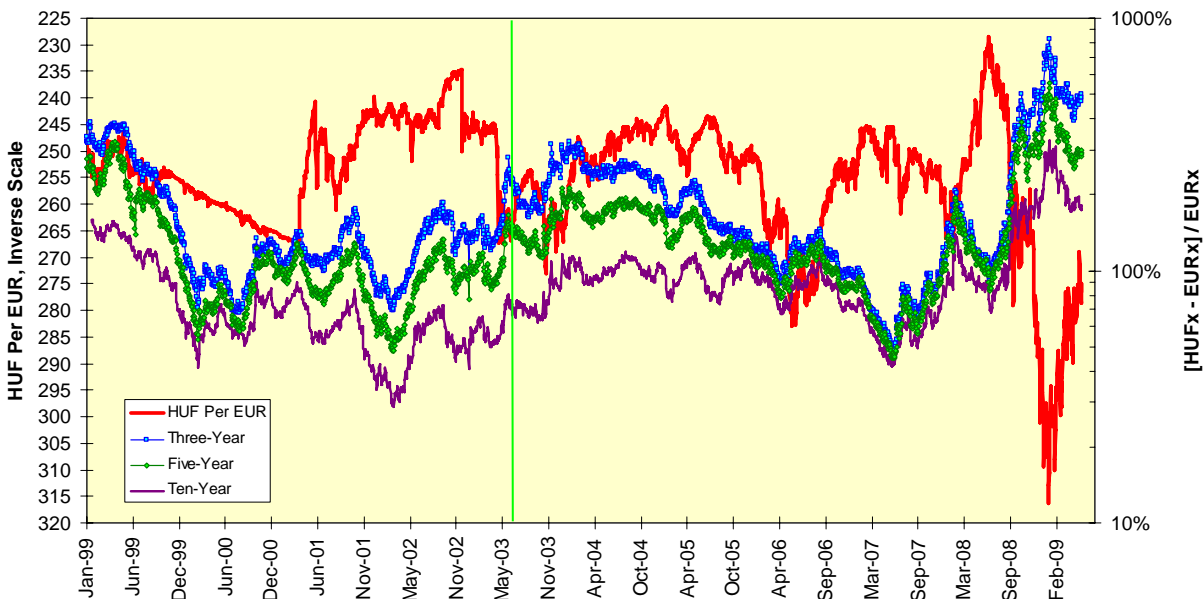
Interestingly, the pattern has diverged slightly between the total return of the Hungarian equity market in USD terms as calculated by Morgan Stanley Capital International and the total returns in USD terms for both the U.S. and the Eurozone. In the case of the U.S. comparison, Hungarian stocks’ performance relative to the U.S. began to converge to the HUF-USD exchange rate from mid-2001 to late 2006. Then the two series matched each other closely until October 2008, at which point the Hungarian stock market diverged to the downside and has yet to achieve convergence again.

The comparison is very different in the Eurozone instance. Here the relative performance of Hungarian stocks to their Eurozone counterparts became and then remained a currency trade after the June 2003 shift in forint parity. This is the stocks-as-a-currency trade we have come to expect.



This strong stock market linkage is not duplicated in the government bond arena. Hungarian bond yields have been inverted almost continuously since the euro came into existence, and the normalized rate gap, Hungarian minus Eurozone yields divided by Eurozone yields, often has been more than 100% of the Eurozone yield. We might expect some directional pull from these normalized rate gaps on the HUF-EUR rate, but no relationship is apparent either contemporaneously or at a lag.

High And Inverted Hungarian Bond Yields Unrelated To Forint



The net result is the forint is an extraordinarily difficult currency to trade. It has no significant lead/lag relationships with differential interest rate expectations, with equity valuations, with its volatility structure or with normalized rate gaps at the bond horizon. And unlike the ruble, which has the strong external links to commodity markets, the forint has no such guideposts available.

This is oddly fitting given Hungary's history and geography. Its name literally derives from the word "Hun," as in "Attila the Hun." Its language is distantly related not to that of its neighbors but rather to Finnish and to, yes, Mongolian. It alone was accorded dual sovereign status within the Hapsburg Empire to form Austria-Hungary. The capital, Budapest, is really the twin cities of Buda and Pest on the western and eastern banks of the Danube, respectively. It stood up to Soviet domination longer and more violently during its 1956 uprising than did similar rebellions in Eastern Europe. A unique and rich history and culture, yes. A currency you can trade systematically, no. It is too bad all of this will disappear into the euro within a few short years.