

Turkish Lira And The Eternal Crossroads

As the world approaches the centennial of what was then known as The Great War, many will stop to consider the history of the modern Middle East and North Africa after the demise of the Ottoman Empire. While Turkey today has receded to middle-tier status, the long history of the Ottoman Empire defined the national struggles of an astonishing range of countries in the region.

The threat of Ottoman invasion defined both the Habsburgs in Austria and the Romanovs in Russia. Twice, in 1529 and again in 1683, Turkish armies stood at the gates of Vienna after storming through Hungary and much of modern Romania. Serbia, Bosnia, Bulgaria, Macedonia, Albania and Greece define their histories as part of the struggle to liberate themselves from the Turks. Anyone who thinks modern warfare is brutal should read an account of the siege of Malta. The Romanovs fought no fewer than sixteen wars to claim areas around the Black Sea and Caucasus. Iraq, Syria, Lebanon, Israel, Jordan, Saudi Arabia and all of the states on the western side of the Persian Gulf were part of the Ottoman Empire at some point. The fall of Constantinople in 1453 threatened overland trade routes to the Indies and China and prompted a search for a maritime route. While the Americas would have been integrated – can we really say “discovered?” – into the Old World anyway, there is a definite Ottoman connection here, too.

In many ways, this struggle has yet to end. Turkey has applied several times to join the European Union and has been rejected on every ground but the stingingly obvious ones of Turkey’s different cultural history and its dominant Islamic religion. Neither kept Turkey out of NATO; for years, the Turkish army stood second only to the U.S. in troop strength within the North Atlantic alliance and it faced both Soviet armies on its land border with Georgia and the Black Sea fleet.

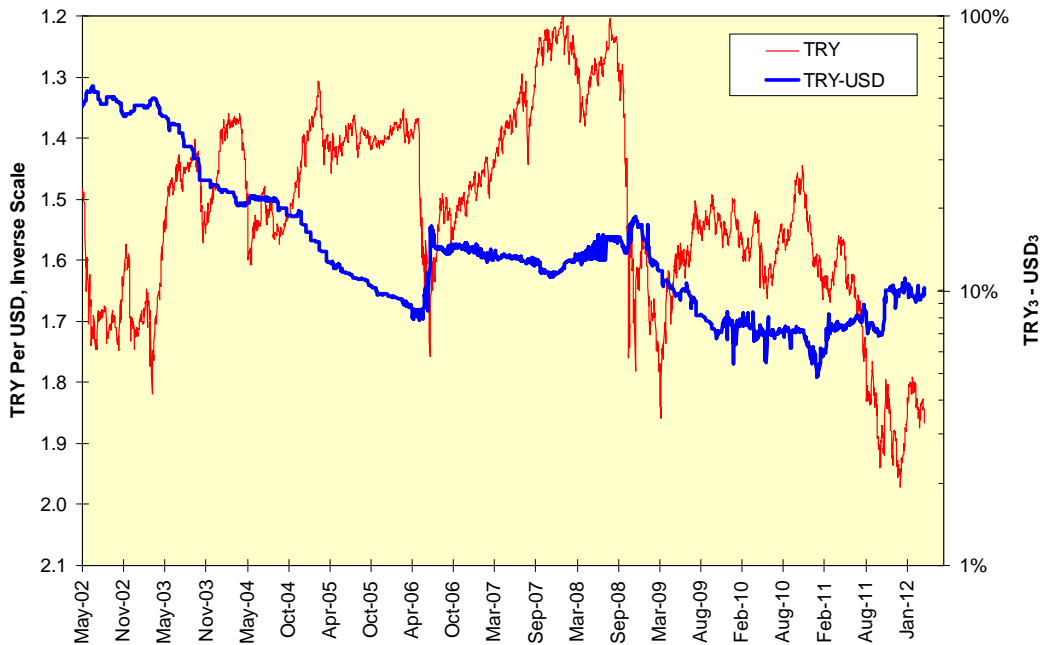
Turkey definitely needs the European Union as a trading and investment partner and many EU states, Germany in particular, have relied on Turkish immigrant labor. For this reason, the analysis below will focus on the cross-rate between the euro and the Turkish lira (TRY) as much as on the TRY’s exchange rate against the USD.

High Interest Rate Currency

The TRY has been one of the world’s great, if that is the proper description, high-yielding currencies for years. This is one reason why carries into the TRY, along with the Argentine peso, have been outliers in most analyses of global carry trades (see “The Long, Awful Life of the Dollar Carry Trade” and “Requiem For A Carry Trade,” January-February 2012). Even if the spot rate on the TRY weakened, it yielded so much and was so expensive to borrow it could attract and retain global capital flows. How high were some of these rates? The data history of this article begins with the advent of the euro in 1999; three- and six-month interbank deposits were in the neighborhood of 100%. The act of borrowing the TRY to short it must have prompted moments of, “What am I doing?”

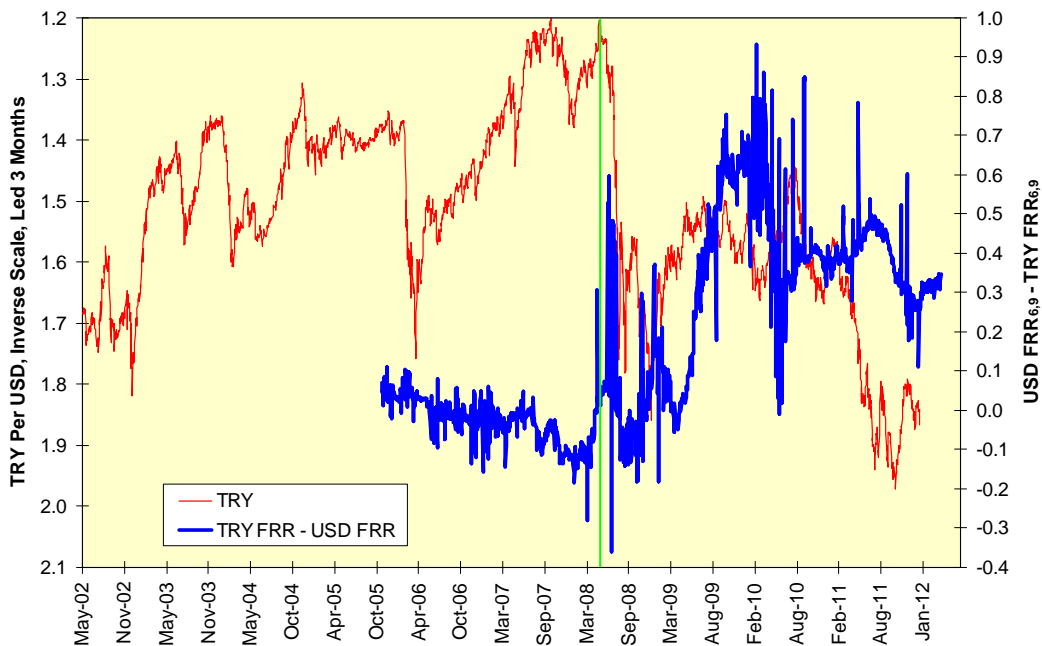
The outlandish scale of Turkish short-term rates distorts any direct relationship between the TRY and the spread between three-month TRY and USD deposits; as the story is the same for the spreads to the EUR, it will not be presented separately.

TRY Not A Function Of Direct Interest Spreads



A more direct but not statistically powerful connection is visible when we shift the measure to the differentials between USD and TRY forward rate ratios between six and nine months ($FRR_{6,9}$). The $FRR_{6,9}$ is the rate at which we can lock in borrowing for three months starting six months from now, divided by the nine-month rate itself. The more it exceeds 1.00, the steeper the yield curve is. In normal markets a high $FRR_{6,9}$ indicates expectations for higher short-term interest rates; in the American case since the financial crisis began in 2007, a high $FRR_{6,9}$ has signaled artificially low short-term interest rates. As a result, the TRY has been moving as an inverse function of the $FRR_{6,9}$ differential between the USD and TRY since early 2008, marked with a green vertical line. The American policies of near-zero interest rates and quantitative easing have preserved capital flows into the TRY.

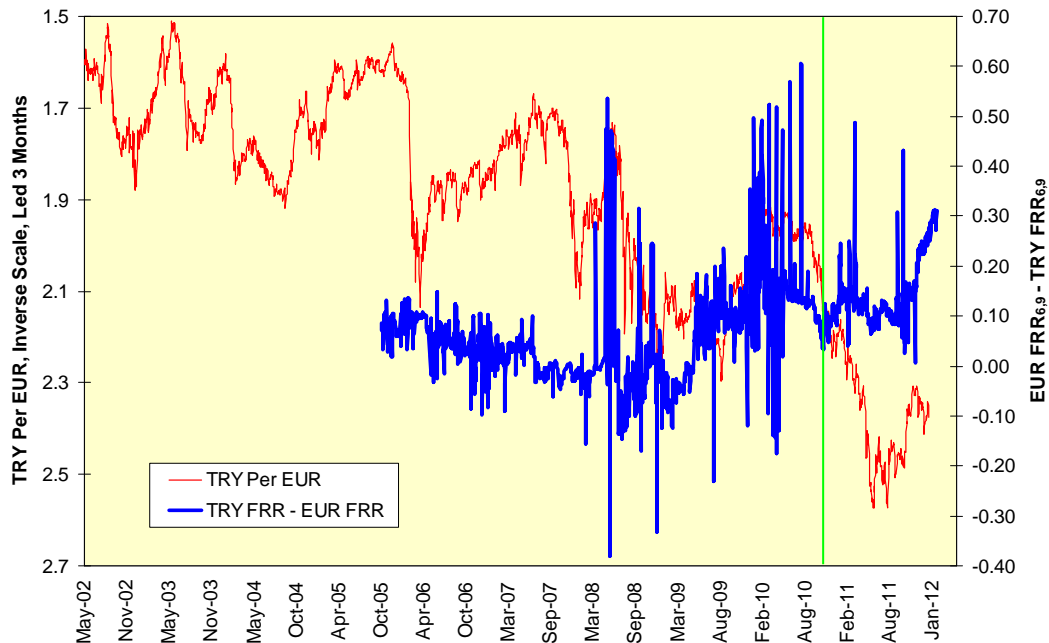
TRY Now An Inverse Function Of Relative Interest Rate Expectations To USD



The expected interest rate differentials between the EUR and TRY have had a much less certain effect as the benchmark rates for the euro are set by the higher-quality credits while much of the Eurozone's periphery has had to adopt much higher short-term interest rates to prevent capital outflow. As the rolling sovereign debt crisis in the

Eurozone moved into Ireland in late 2010, here marked with a green vertical line, the TRY/EUR cross-rate started to weaken in expectations of lower short-term benchmark rates within the Eurozone.

TRY An Irregular Function Of Relative Interest Rate Expectations To EUR



Volatility

Now let's take a look at the TRY against both the USD and the EUR overlaid with its excess volatility. This is the ratio of the implied volatility for three-month non-deliverable forwards to high-low-close (HLC) volatility, minus 1.00. It serves as a measure of the market's demand for insurance.

HLC volatility is defined as:

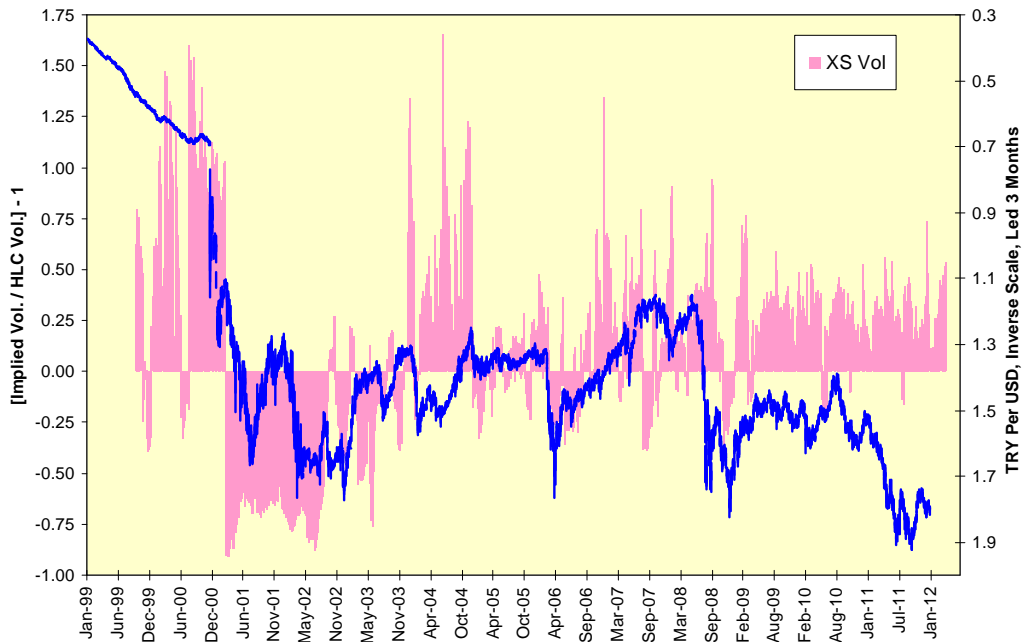
$$\sum_{i=1}^N \left[\frac{[.5 * (\ln(\frac{\max(H, C_{t-1})}{\min(L, C_{t-1})}))^2 - .39 * (\ln(\frac{C}{C_{t-1}}))^2] * 260}{N} \right]^{1/2}$$

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

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

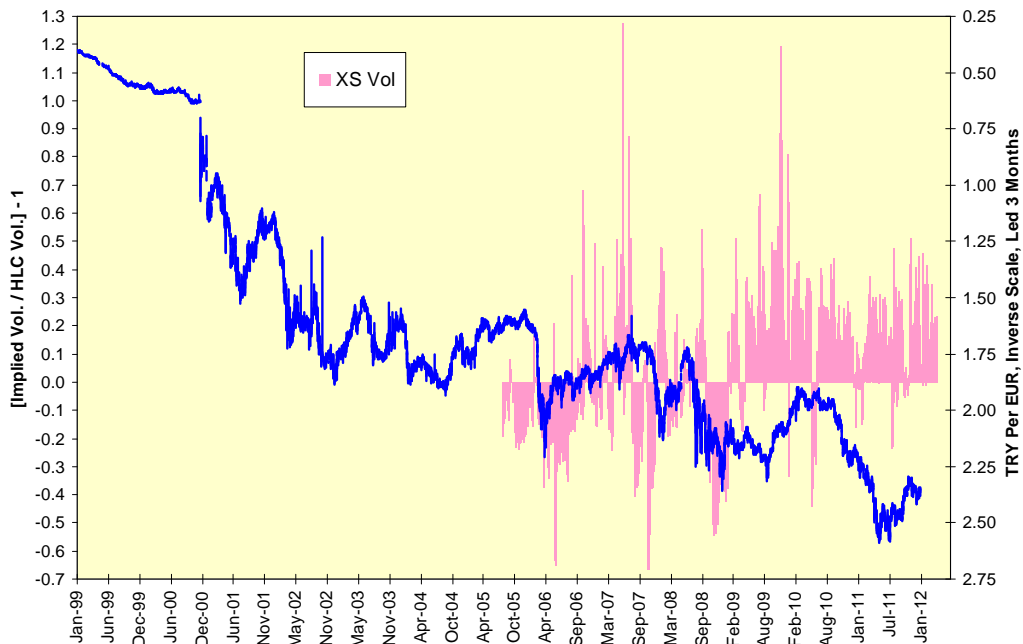
Excess volatility seldom has tended to decline somewhat in the USD case whenever the TRY weakens, as was the case in 2002-2001 and again in periods such as 2006, but it does not go the other way. We do not see a strong demand for excess insurance against the TRY whenever it strengthens. The market is more or less comfortable with a weakening TRY and indifferent to a strengthening one.

**Excess Volatility Seldom Surges
USD Case**



The same cannot be said in the EUR cross-rate case. Here over a much shorter history, we do see excess volatility spikes during periods of TRY strength on the cross-rate. This market does not accept a stronger TRY.

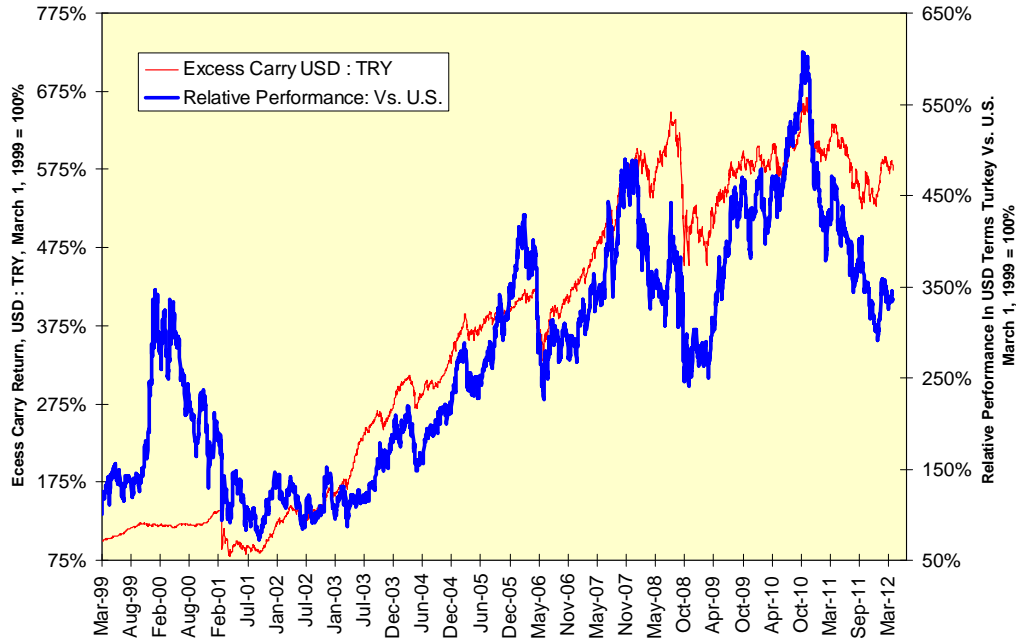
**Options Market Uncomfortable With Rising TRY
Euro Case**



Asset Returns

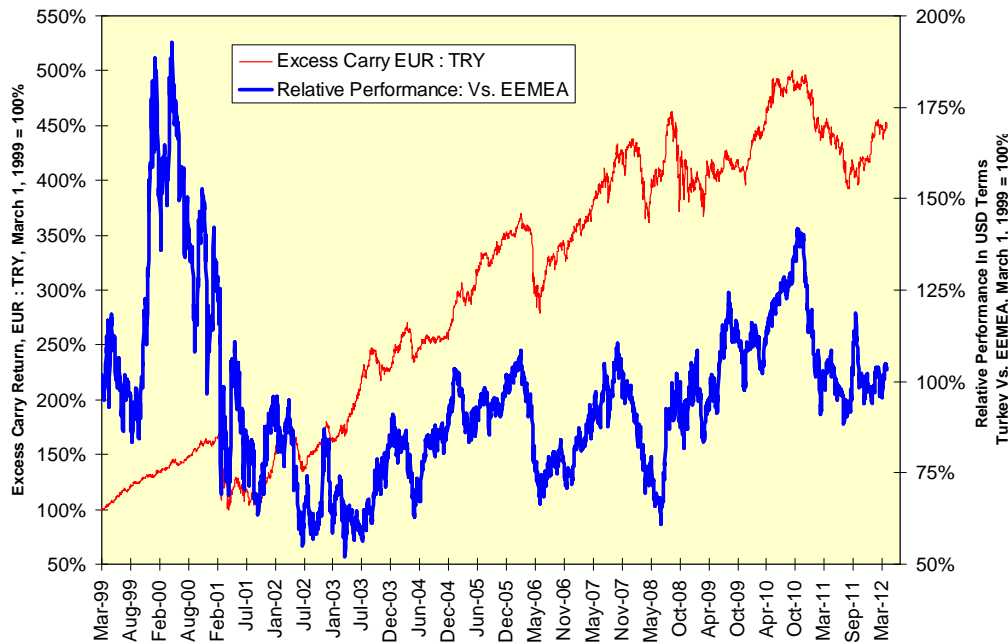
If high short-term Turkish rates are necessary to attract and retain capital, then we should expect the relative performance of Turkish to U.S. stocks to be a strong function of the excess carry return from borrowing the USD and lending into the TRY. This does in fact appear to be the case.

Relative Stock Performance Mirrors Dollar Carry Trade



A related concept does not provide a similarly compelling argument. The relative performance of Turkish equities to the MSCI Emerging Europe and Middle East index is not a particularly strong function of the excess carry return from borrowing the EUR and lending into the TRY. This is for two reasons. First, the EEMEA index includes a large number of “special cases” in the former Soviet Union and in the Middle East / North Africa region. The combination of these special cases creates an unstable base. The second reason is the euro seldom has been a funding currency for carry trades; its interest rates have been well over American, Japanese and Swiss rates for just about the entire period. A Turkish borrower and a European lender might convert their financing arrangement into USD terms before proceeding.

Relative Stock Performance Vs. MSCI-EEMEA



The net result in Turkey remains at a crossroads in all senses. Despite its location and history and the large Turkish expatriate population in Europe, it still must look to the U.S. rather than to the European Union neighbors in

financial matters. There is something quite sad about this residue of history, but why anyone should be surprised anymore is unclear.