

A Currency Of Biblical Proportions

Most of us have heard at some point in our lives the bumblebee should be incapable of flying. As few of us are versed in aerodynamics, we sort of shrug, note the bumblebee does in fact fly and give the matter little further thought.

The Israeli economy is a bumblebee of sorts. The country has been forced to maintain an outsized military, is saddled with a large and growing self-imposed obligation to support ultra-orthodox religious scholars, has an open-door policy to absorb Jewish immigrants, is one of the last vestiges of a mid-20th Century labor socialism that never works well and as the old joke goes, was settled by people who wandered for forty years in the desert only to come to the only spot in the Middle East without oil. This last part is not as true as it once was: As soon as large natural gas deposits were found offshore in the Mediterranean, the country promptly decided to tear up its 1952 energy policy and impose stiff new taxes. Deflation has not been a problem in Israel over its history.

Offsetting these handicaps is one of the world's most vibrant technology centers, a booming tourism industry, a large and persistent current account surplus and large external transfer payments.

The Shekel

As befitting a country doubling as an open-air archaeological site, the Israeli shekel (ILS) has a very long history; the word itself derives from a Hebrew word meaning, "he weighed." Monetary terms around the world often originate from neighboring empires; the shekel appears to be of Babylonian origin. How captivating.

Just as many of the Asian currencies we have examined have an important cross-rate to the Japanese yen, the ILS has an important cross-rate to the euro; we will examine this rate along with the spot rate versus the USD. First, let's take a look at the ILS against the USD overlaid with its excess volatility, the ratio of the implied volatility for three-month non-deliverable forwards to high-low-close (HLC) volatility, minus 1.00, as a measure of the market's demand for insurance.

HLC volatility is defined as:

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

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

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

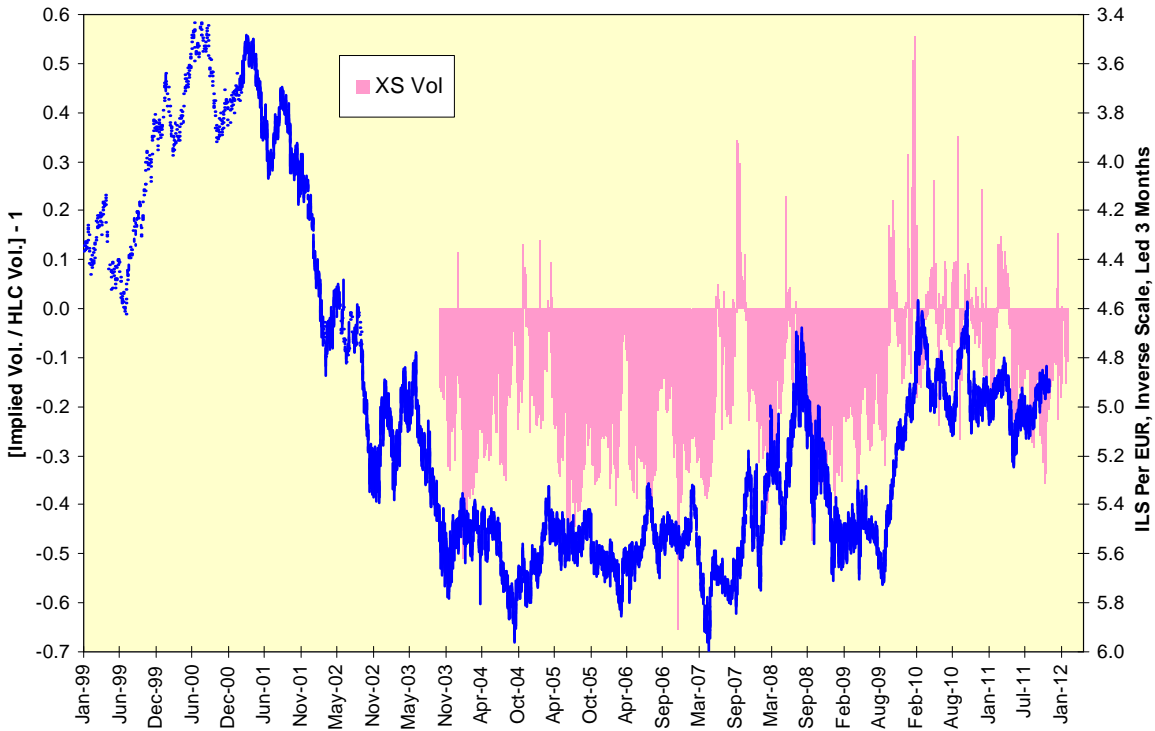
The ILS has had one major downturn since the introduction of the EUR in January 1999, and that was during the dotcom bust of 2000-2002; Israel was the third largest country of domicile for stocks listed on the NASDAQ during that period. Excess volatility surged as traders bought insurance against further downturns. Once the ILS entered what proved to be a long-term bull market in early 2003, excess volatility fell as has been negative more often than not. This is one of the more prominent investor skews in currency option volatility we have seen.

Excess Volatility Surges With ILS Downturns USD Case



The picture is different for the cross-rate against the EUR. Here the ILS' bear market persisted well into the origins of the global financial crisis in 2007, and option traders were perfectly fine with that. Once an option market on the ILS for EUR holders arose in 2003, negative excess volatility has been associated not with a strong ILS but rather a weak one. Indeed, the spikes higher in excess volatility have occurred during times of a strong shekel.

Options Market Uncomfortable With Strong ILS Euro Case

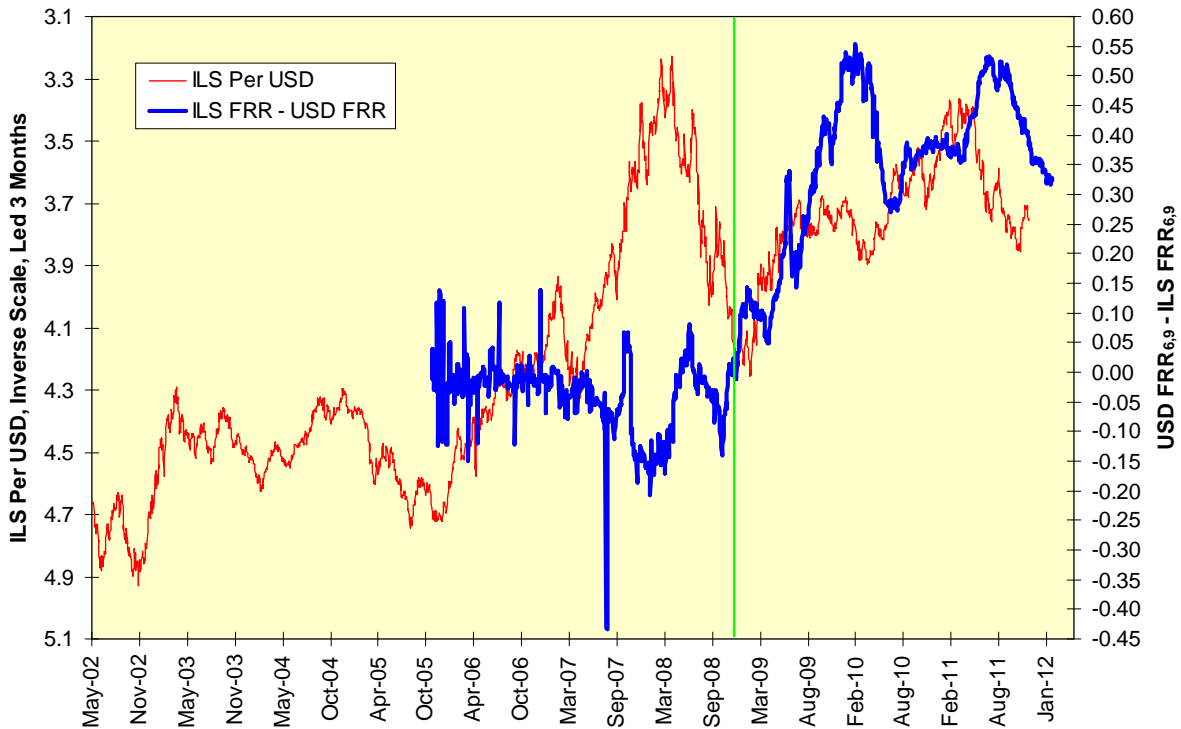


Interest Rate Expectations

Normally, we should expect a currency to strengthen when its expected interest rate advantage increases. However, the move toward money-printing in the U.S. in 2008 led to an environment of “perma-expectations” the ultra-low short-term interest rates were not sustainable and had to rise shortly. This pushed the forward rate ratio between six and nine months ($FRR_{6,9}$) for USD and other currencies’ deposits to historic levels of steepness. 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.

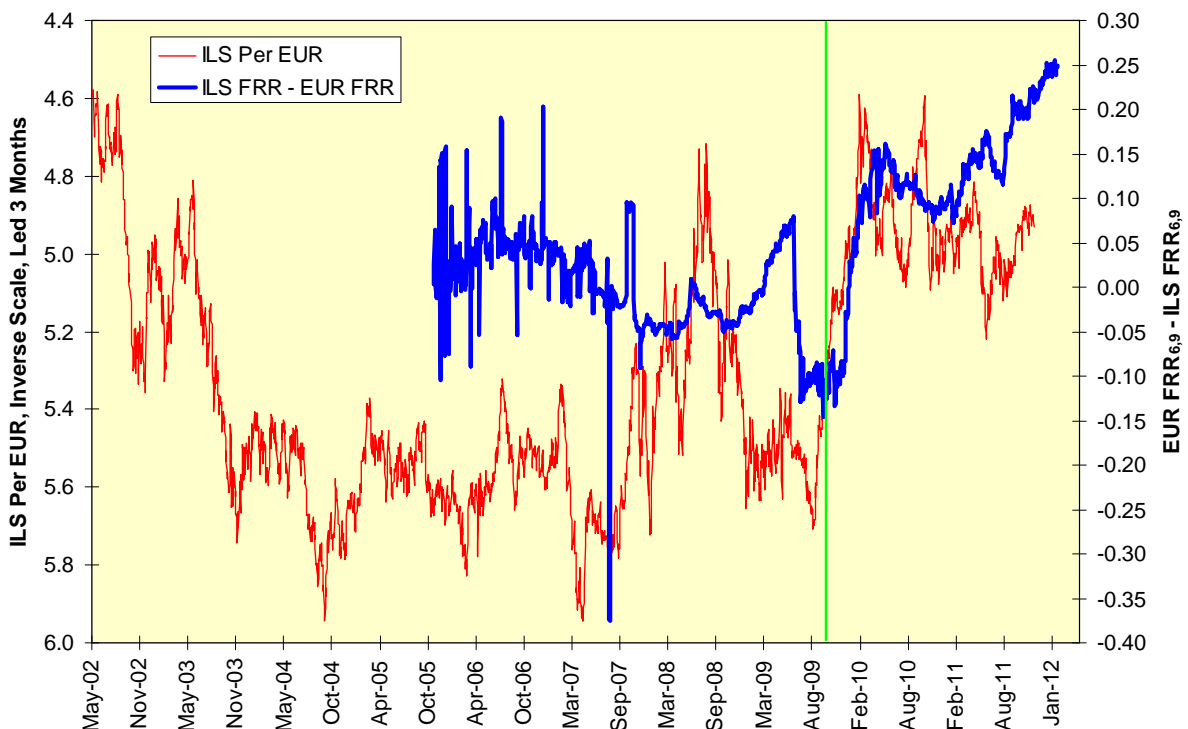
The effect on the ILS is quite visible; once the U.S. began printing money, marked with the green line, higher interest rate expectations for the USD were accompanied by a stronger ILS. We should expect the normal relationship to reassert itself if and when the U.S. returns to a more normal monetary policy.

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



The same phenomenon took place with respect to the cross-rate against the EUR. Here the magic moment in time was the onset of the European sovereign debt crisis in October-November 2010, once again marked with a green line. In both the USD and EUR cases, the ILS has strengthened not so much on an absolute basis so much as on a relative basis against the two major currencies.

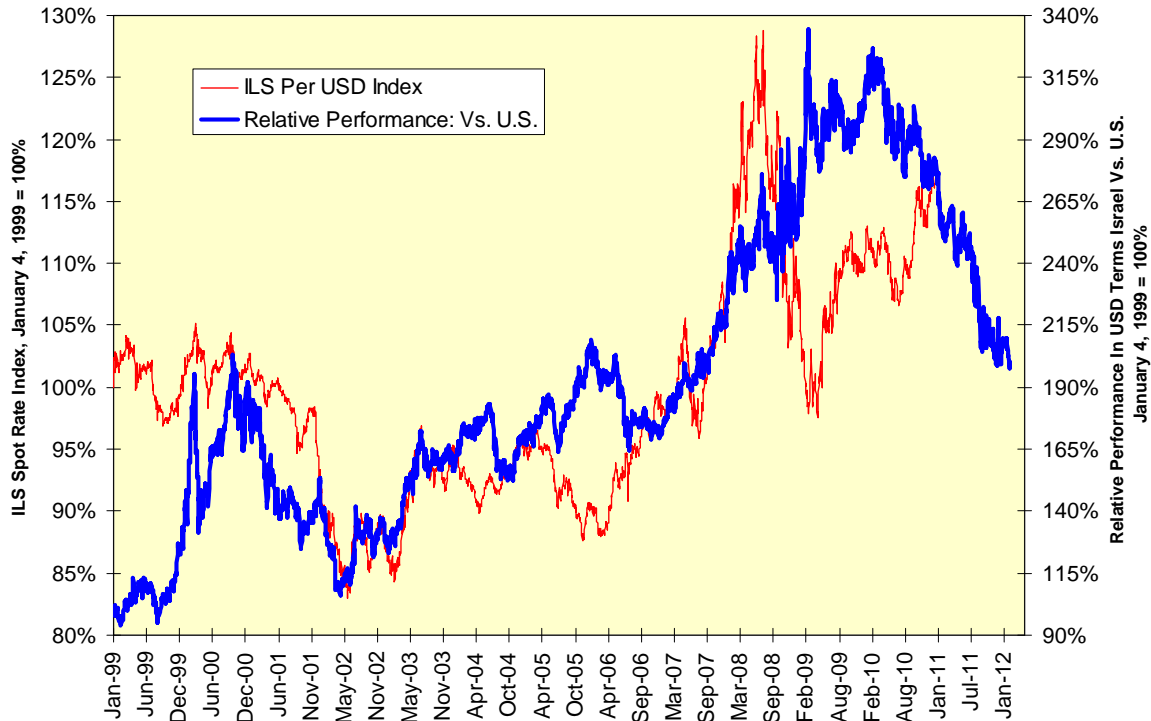
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Asset Returns

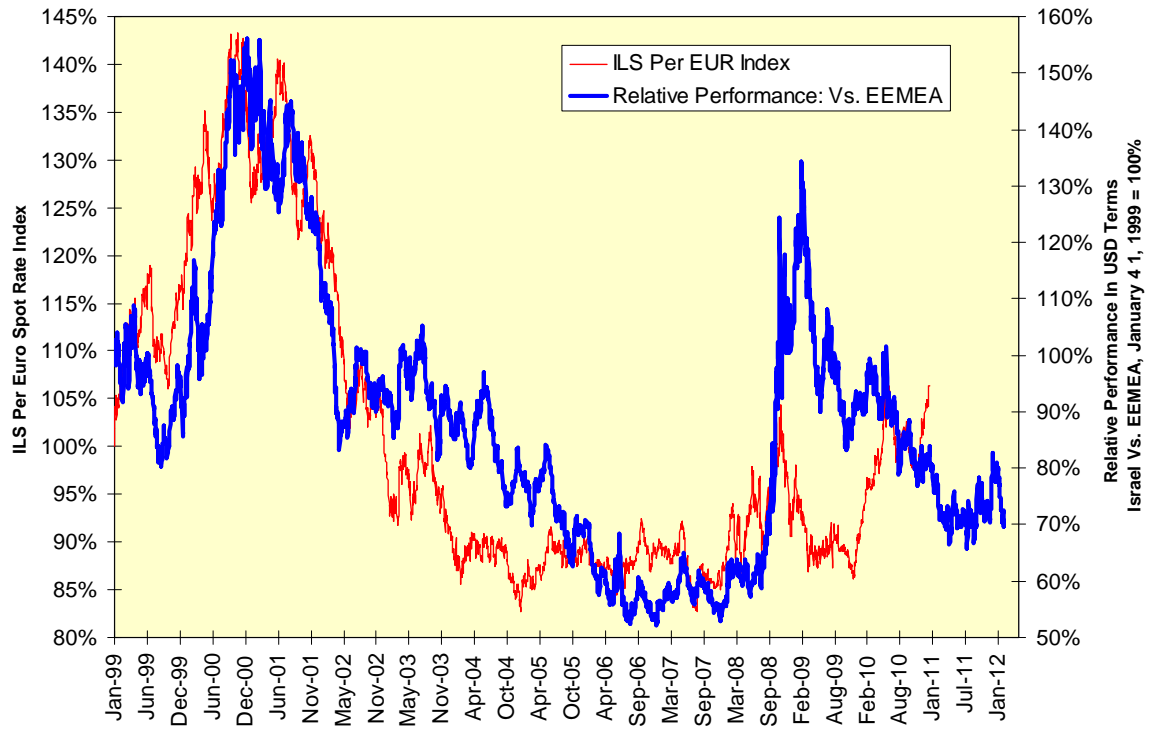
The Israeli stock market has been one of the stronger ones globally since the March 2009 low and indeed was able to make a new all-time high in USD terms in April 2010. Israel's performance relative to the U.S. had paralleled the spot currency rates between 2000 and 2007; this suggested part of the currency's movements was attributable to capital flows into and out of the Israeli stock market. The two markets diverged once the global financial crisis took hold. It began to reconverge by the end of 2010. We should expect a strong linkage between the stock market's relative performance and the ILS if for no other reason than the country's small size makes even minor capital flows count.

Relative Stock Performance Vs. U.S. Reconverging To Spot Rate



The same phenomenon is visible with the relative performance of Israel to the MSCI index for Eastern Europe, the Middle East and Africa. Capital flows into and out of the Israeli market had a great effect on the exchange rate against the EUR, the base currency around which this region fluctuates.

Relative Stock Performance Vs. MSCI-EEMEA



The strong linkage of the stock market and the inverted linkage seen for interest rate expectations suggest the best way to approach trading the shekel is to track the Israeli stock market. In the common parlance, both might be a good way to make a few shekels.