## The Dollar And Its Hidden Risks

Let's say for the sake of argument you are a hunter confronted with a charging rhinoceros. You take careful aim, squeeze the trigger of your suitably heavy gun, and hit the rhino square in the forehead. He keeps coming. Who has the problem now?

Currency traders face a similar if less dramatic dilemma on occasion. The fundamentals, or in the discussion below the quantitative indicators, behind a given market may look to favor a given currency, but the market starts moving in the other direction. Such was the case for the U.S. dollar (USD) vis-à-vis both the euro (EUR) and the Japanese yen (JPY) by the late spring of 2006. Both currencies were strengthening against the USD and for non-parallel reasons based on the three separate quantitative indicators below.

## Short-Term Interest Rate Expectations

The standard three-month non-deliverable forward can be described in large part as a short-term interest rate arbitrage. The buyer of the JPY is borrowing the USD, selling the USD and buying the JPY at the spot rate and then lending the JPY. In three months, the trade can be unwound or rolled over for another three months. The rollover rates can be locked in using forward rate agreements; this is why the forward rate ratio (FRR) for various currencies’ LIBOR over the 6-9 month horizon is such a useful tool. This FRR is the rate at which borrowing costs can be locked in for 3 months starting 6 months from now, divided by the 9 -month rate itself. The more the number exceeds 1.00, the steeper the yield curve; numbers less than 1.00 indicate inversion.

The USD FRR ${ }_{6,9}$ fell sharply in the two years of Federal Reserve tightening beginning in mid-2004. By contrast, the $\mathrm{FRR}_{6,9}$ for both the EUR and JPY steepened beginning in June and November 2005, respectively. All else held equally, we should think the flatter USD money market curve would support the greenback in 2006 as it did in 2005. But all else is never held equal.

Six-Nine Month LIBOR Forward Rate Ratios


Linking Comparative Curves To Currencies
Now let's restate the information in the FRR curves above into differences and see whether the courses of the two currencies can be related to them.


If we map the difference between the USD and EUR $\mathrm{FRR}_{6,9}$ against the course of the EUR itself, we see two patterns emerge. First, there is a defined leading relationship. The FRR spread leads the EUR by 31 weeks. We should expect FRR changes made today to be reflected in the exchange rate seven months from now. Second, the spread is as negative as it ever has been; never before in the history of the EUR has its $\mathrm{FRR}_{6,9}$ been as steep relative to the USD's. The only other period of prolonged negativity occurred between mid-1999 and the end of 2000, a time of EUR weakness. Third and finally, the trend which began in 2004 actually accelerated after Ben Bernanke was appointed to be chairman of the Federal Reserve in October 2005; this defies the popular belief Bernanke is an easy-money inflationist.

What happens if we repeat the exercise with the JPY? As was the case with the EUR, the relative steepness of the JPY relative to the dollar is near its highest level since the advent of the EUR. And as was the case with the EUR, the FRR spread leads movements in the currency, in this case by 19 weeks. Although past performance does not predict future results, we should note how a previous period of divergent FRRs in 2000, noted with a magenta rectangle preceded a significant selloff in the JPY. The assumption then was the Federal Reserve would begin cutting interest rates aggressively in the aftermath of the burst stock market bubble and this would stimulate economic growth in the U.S. vis-à-vis Japan. The ability of the JPY to rally is such an environment suggests the currency market is making the opposite bet today, that the long string of rate hikes in the U.S. will slow the pace of U.S. growth while Japan continues to prosper in the general Asian economic boom.

## Volatility

If exchange rates were nothing more than short-term interest rate arbitrage, we would have to conclude the USD should be much stronger than it is. Is this conclusion supported by the options market? The implied volatility of a currency forward represents the market's assessment of future uncertainty and the willingness to pay insurance against same.


The three-month volatility of USD forwards for a EUR-domiciled buyer generally falls as the EUR strengthens. The average lead-time is 13 weeks, or one quarter. The most recent data show volatility rising as the EUR rallies, which indicates those going long the EUR also are buying USD option protection. This is a market uncomfortable with its own trend.

The JPY exhibits a different relationship. Here the three-month volatility for a JPY forward for a USD-domiciled buyer falls as the JPY strengthens. The average lead-time here is 23 weeks, or nearly six months. The most recent data show volatility rising, which indicates an increased demand for protection by USD holders against a stronger JPY. Unlike the case of the EUR, the JPY market appears quite comfortable with the notion of a stronger JPY.

## Stock Market Indications

While we do not normally thing of equity markets containing information on relative currency movements, they in fact are quite useful in this regard. Stock prices discount information on future returns, and in a global market those future returns reflect the currency-adjusted competitiveness of the country in question. In addition, global stock investors have to convert their funds into the local currency to participate in the local stock market. Both of these factors combine to inject a vital element of expected returns on capital into the currency equation.


The relative performance of the U.S. stock market as measured by the Russell 3000 index to the Morgan Stanley Capital International Euro index led movements in the EUR by an average of 22 weeks, or five months, until the end of 2005. We can summarize the observed counterintuitive relationship by saying capital appeared to flow to the stock market with the weakest prospective currency as if both sides of the Atlantic were somehow able to devalue themselves to prosperity. The situation reversed and reversed significantly in 2006. The EUR strengthened even as the European equity markets outperformed the U.S. Did something similar occur in Japan?

Not at all; in fact, the lead/lag relationship reverses here. Relative stock market performance between the Russell 3000 and the Nikkei 225 lead movement in the JPY by 20 weeks. In other words, the currency leads the relative stock market performance when it comes to the JPY. A stronger JPY often is the sign of Japanese investors and firms repatriating JPY for whatever reason and parking these funds in the Japanese stock market.

## Risk As The Missing Variable

Much has been made of the ability of certain physical commodity markets, gold and crude oil among them, to rise under the weight of investor funds regardless of fundamentals. In the case of crude oil in particular futures markets cannot be regarded as inventory scorecards as much as the fully-insured forward costs of a replacement barrel. It is as if the market is daring you to go short in the face of supply risk.

We now see this operating in the currency market. Despite the messages sent from these key quantitative indicators and others reflecting sounder fundamentals for the USD, the market is convinced the U.S. will undertake a repudiation of its substantial international debts by debasing the USD. After all, this was the official policy of the U.S. in 1985-1986 and again in 1993-1995. With the U.S. twin deficits claiming an ever-larger share of world savings, the risk of debasement is huge.

But there is no need to simply dwell on the oft-stated negatives for the USD. In the case of the JPY in particular, it would be simplistic to state the USD is going to weaken against the JPY. A far better description is the currency and equity markets together agree Japan’s relative growth prospects are stronger than those for the U.S. at this point in the cycle. This will both increase Japanese interest rates and demand for yen-denominated assets. While the net effect is going to be the same - a stronger JPY - we should not regard it ipso facto as a repudiation of the dollar.

And, of course, the vagaries of the European political economy should give pause to those who might like to see the EUR emerge as a reserve currency. The last two years have seen the rejection of the EU constitution and a widening of French and Italian sovereign debt spreads vis-à-vis Germany.

The conclusion we reach is there are no single rules for the currency world. Each situation, each market environment is different in critical aspects, and what worked well last year can fail spectacularly today. There is a name for watching the market and making decisions: Speculation, derived from the Latin word "to watch." It is an honorable endeavor, one we should all recommend to others in an uncertain world.

