

Stability And Breakout In The Euro

Looking for something in short supply? May we suggest historic perspective, the ability to step back from the daily or intraday noise in markets and place matters in a larger context? As we turn the corner on the eighth anniversary of the euro's advent, what should we make of the common currency's history?

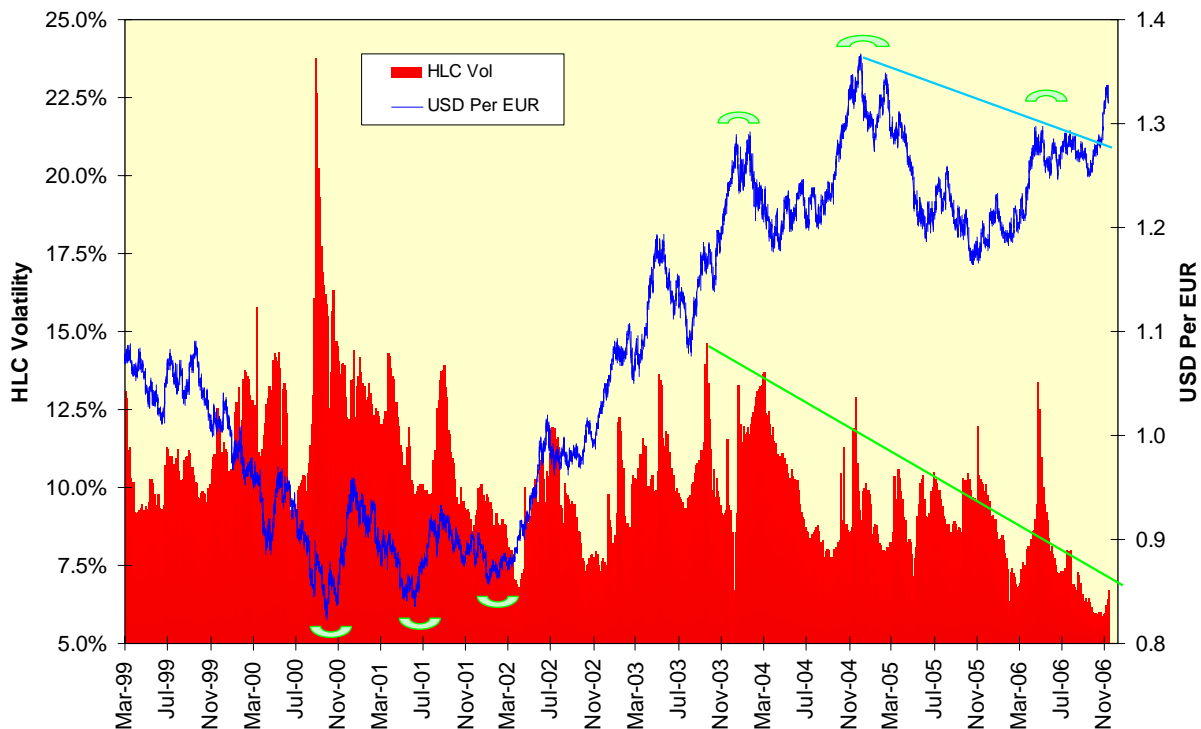
Here we defer to Chou En-Lai, the premier of China during the 1960s. The story goes he was asked by the French ambassador to China for his thoughts on the French Revolution, a period then 170 years in the rearview mirror. Chou allegedly replied, "It's too early to tell." We may apply this same wisdom to our own era; after all we are living still in the aftershocks of World War I. And to turn back to the subject at hand, the birth of the euro can be traced back quite easily to that event.

Our task is simpler and more rewarding. We will demonstrate how a handful of market-derived indicators can be used to gauge longer-term currency movements for traders with patience.

The Longer-Term View

Dollar bullishness never is fashionable. To some, it is nothing more than a gauche celebration of the bourgeoisie; to which we retort there is no word in French for *laissez faire*. And yet dollar bullishness was the correct view for the first three years of the euro's existence. How many of us recognized the multiyear rising triple bottom that formed between mid-2000 and early 2002, now so visible when marked on Chart 1, while it was happening?

**Chart 1: Acceptance Of A Long-Term Trading Range...
And Its Breakout**



Conversely, since the dollar's sharp decline from mid-2002 to the end of 2004 met so many people's prior expectations, how many of us saw what by the autumn of 2006 appeared to be a multiyear head-and-shoulders top that formed between the beginning of 2004 and the 2006? The likely answer is none: As is typical in all such tops-in-formations, the late-2004 high looked like just one more in a never-ending ascent. By December 2006, the euro broke out of the topping formation, marked with a green trendline; this surge higher brought the usual crowd of dollar bears out of hibernation.

Enough on price; (words you seldom hear in any trading literature) let's turn our attention now to volatility. Specifically, the volatility before us is not the implied volatility derived from the options market, but rather actual high-low-close (HLC) volatility. This measure accounts for intraday price range as well as interday price change

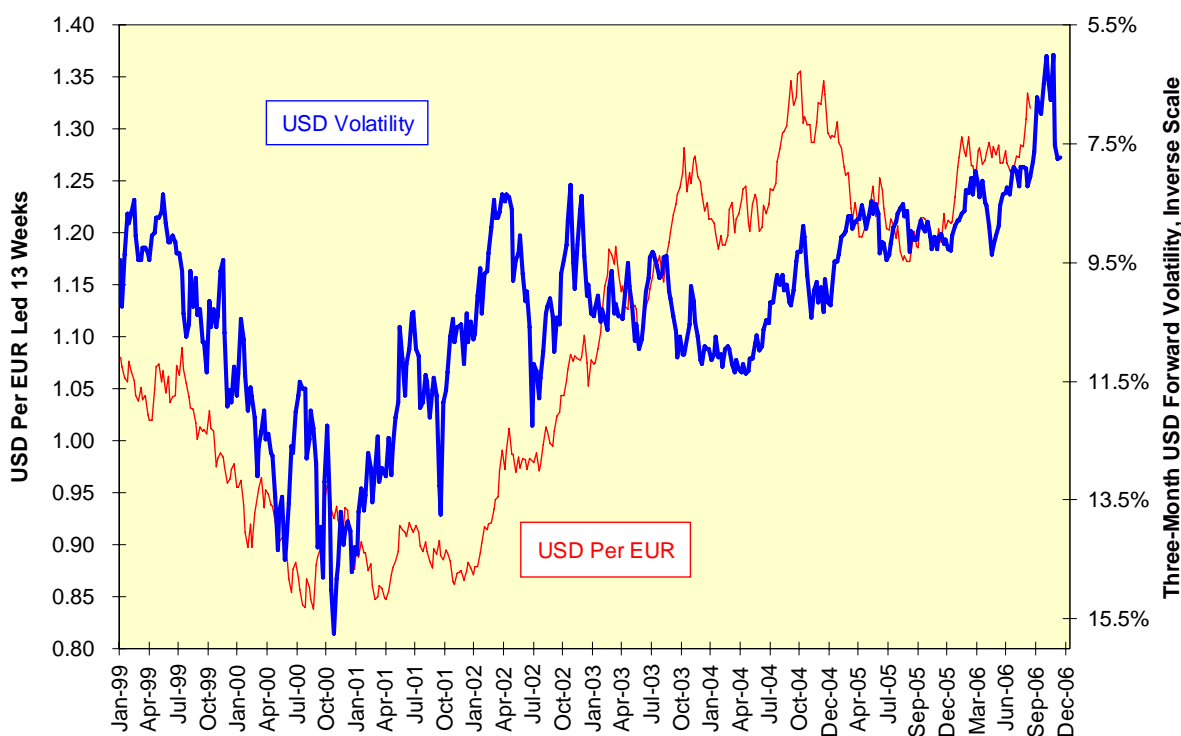
and therefore expands with market uncertainty (a full discussion of the derivation and use of this volatility measure can be found in the author's book, *The Dynamic Option Selection System*, Wiley, 1999).

Once the left-hand shoulder formed in January 2004, the general trend of HLC volatility started to decline, as highlighted with an overlaid turquoise trendline. As the market settled into its long-term trading range, the bounds of 1.15 – 1.30 dollars per euro increasingly were accepted as the norm. But, tellingly, when the breakout occurred in late 2006, volatility remained near historic lows. If we can characterize people as being in denial, we can characterize this market as being in acceptance, in this case of a stronger euro.

Another View Of Volatility

The HLC volatility measure, as is true of all historic volatilities, is a backward-looking calculation made from observed data. It carries no forward-looking insurance information extracted from swap and options traders who need to protect themselves against future adverse movements. For that we must return to implied volatility, in this case the volatility of three-month dollar forwards being paid by holders of euros. This will differ slightly from the volatility expressed in the futures market, which is a series of options on expiring futures as opposed to the cash market's use of non-deliverable forwards; the forwards market dwarfs the futures market in size and liquidity.

Chart 2: Declining Demand For Long Dollar Insurance



If we plot this volatility inversely against the dollars per euro rate in Chart 2, we find implied volatility has led the exchange rate by 13 weeks on average since the euro's inception. This 13-week lead time corresponds exactly to the standard three-month non-deliverable forward of the cash market. As this volatility falls – which is the same thing as saying the price of insurance against a strengthening dollar falls – the euro strengthens in response. By the fall of 2006, this volatility was heading toward its all-time low even as the euro remained mired in its long-term trading range. This drop in implied volatility suggested a breakout to the upside by the euro out of the trading range defined by both price and declining HLC volatility.

Rates In The Balance

Trading system designers always have a certain hubris about their craft; they tend to believe their systems somehow are guiding the market. This is so cute; it should remind us of those cargo cults on New Guinea who thought their tribal dances made the airplanes reappear. At least most market technicians have foresworn cannibalism, for now at least.

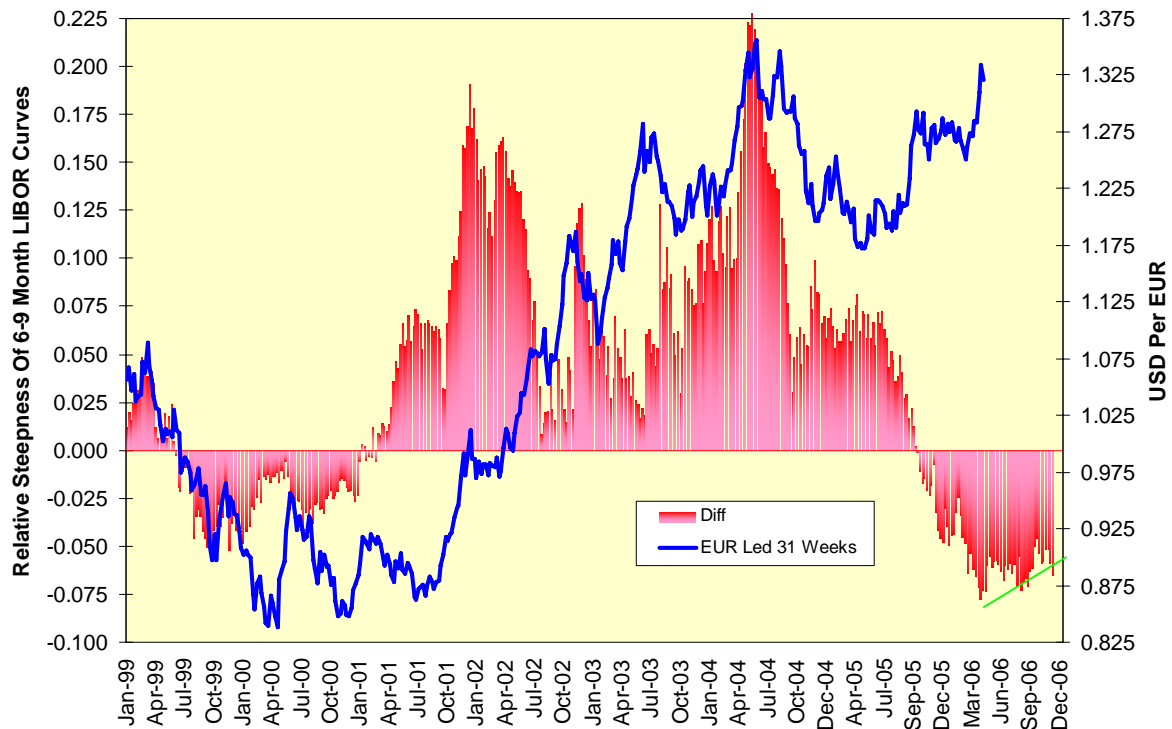
But exchange rates are driven by a combination of factors, including different interest rate expectations for the two economies and returns on assets. The dollar/euro rate is based primarily on interest rate differentials, so let's see how these have operated recently.

A three-month currency future or non-deliverable forward involves borrowing the currency to be shorted and paying that rate, selling that currency for the one to be bought and lending in that rate. The trade is unwound in three months at a forward spot rate. That rate is determined in large measure by what the prevailing interest rates will be three months hence.

Traders can lock those rates in via forward rate agreements for the three-month rate starting three months from now and six months from now. If the interest rate market foresees a steepening yield curve in a currency, the ratio of the forward rate between six and nine months to the nine-month rate itself ($FRR_{6,9}$) will be considerably higher than 1.00. The opposite will be true in the market foresees tighter credit policies and a flattening yield curve developing; the forward rate ratio can move below 1.00 if an inverted yield curve is expected.

If we subtract the FRR for euros from that for dollars, we see in Chart 3 how the euro $FRR_{6,9}$ became steeper than the dollar $FRR_{6,9}$ shortly after the October 2005 nomination of Benjamin Bernanke to be the new chairman of the Federal Reserve. All else held equal, a steeper $FRR_{6,9}$ for the euro means a looser monetary policy in the Eurozone and therefore a tendency toward euro weakness. The difference between the two $FRR_{6,9}$ measures has led the euro by 31 weeks on average. This lead time is about the midpoint between six and nine months.

Chart 3: Differential Short-Term Rate Expectations Stagnated During Trading Range

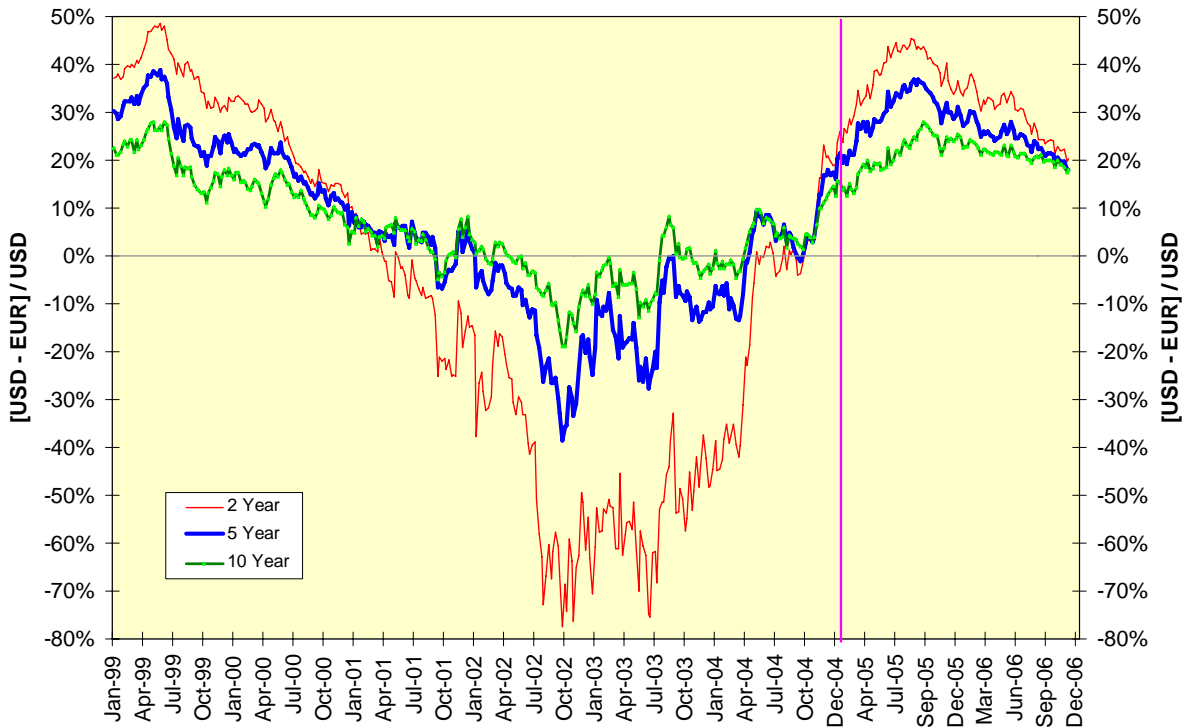


The stagnant $FRR_{6,9}$ differential led the stability in the euro perfectly into the Spring of 2006. So long as monetary policy expectations between the U.S. and the Eurozone moved in a parallel fashion, there was no reason to expect a breakout of the euro from its trading range. Once this $FRR_{6,9}$ differential started to narrow, as marked with the green line, pressure for the euro to break out of its range higher built.

Capital Market Horizons

Do the parallel monetary policy expectations and stability in the euro affect the relative movement of capital markets in the two currencies? If we compare the yield spread at the note horizon between American and European sovereign bonds, we see in Chart 4 how the rate gap as a percentage of the American rate converged after the euro's December 2004 top. The longer the maturity of the note, the more quickly this convergence occurred; this is due to the greater volatility of short-term rates and the greater influence of monetary policies thereon.

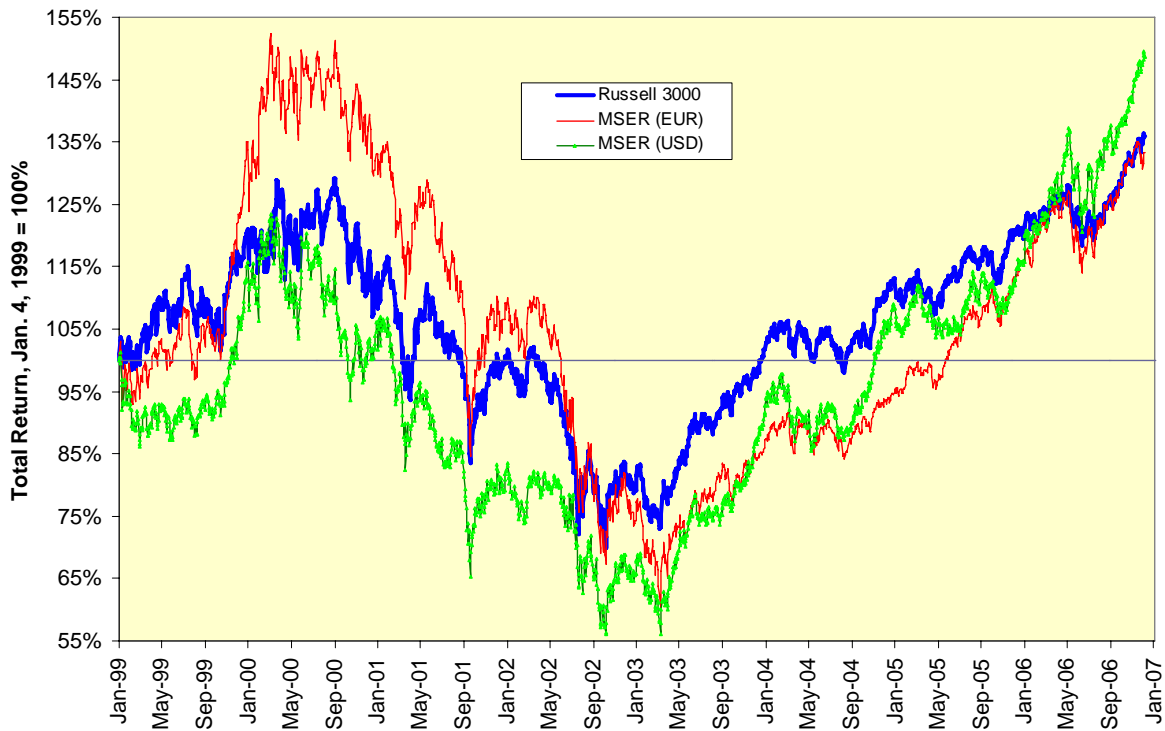
Chart 4: Note Horizon Rate Gaps Converged After Euro's Top



The comparison gets more interesting with stocks. Let's compare the total returns on the Russell 3000 index with those for the Morgan Stanley Euro index expressed both in dollar and euro terms. The indices will be normalized back to a January 4, 1999 = 100% basis.

As we can see in Chart 5, the total return paths diverged in one direction during the euro's bear market, which coincided with the general global bear market in equities, and then converged in the other direction during the combine euro/equity bull markets of 2003-2004. Once the euro peaked in December 2004, the total return paths of the Russell 3000 and the Morgan Stanley Euro index expressed in euro terms converged. The total returns for the Morgan Stanley Euro index in dollar terms, the laggard well into 2003, pulled ahead.

Chart 5: What Are The Benefits Of International Diversification?



The implications are profound for the generally accepted theory that stock portfolios benefit from international diversification as well as asset diversification. If we strip away the currency effect, we have to conclude the total returns for an American index in dollars and a European index in euros are the same. Restated, an investor would be just as well off staying in his or her domestic market and trading a currency overlay.

The chances of such a proposal being accepted by the investment committee of any institution are near zero. Everyone believes they can add value by both asset selection and currency overlays. Too bad the data say this is wrong.

The one thing these institutions have on their side, ironically enough, is the historic perspective noted above. Stability in any currency exchange rate is a temporary state of affairs. Sooner or later and as was the case by late 2006, monetary policies and economic conditions will diverge sufficiently to put the euro/dollar exchange rate back into a trend. And when that happens, trading opportunities in instruments as diverse as the Eurodollar, EURIBOR and both American and European stocks and bonds appear.