## The Euro Was Never In Danger

It is always fun to sit around the digital campfire and speculate about Really Big Events. Not only does it beat working for a living, it makes you feel more important than you really are and, like a double-shot of espresso helps you fritter and waste the hours in an offhand way. What events have been bigger than the Second Hellenic Boo-Boo and its corollary concern, which is why do we have the euro in the first place?

The answer to the second question is surprisingly straightforward: We have the euro because the European elites really wanted to feel they were in control of something greater than a group of smaller countries who had a bad tendency to clobber each other with distressing frequency. The answer to the first question is the events in Greece, certain to end with a default that will not be called a default and a bailout that will not be called a bailout, never constituted an existential threat to the euro.

Let's illustrate this with a technique borrowed from a <u>risk-of-ruin</u> analysis for BP back in 2010 when the Macondo well was still making an unholy mess in the Gulf of Mexico. If we map the volatility skew and smile for options on the euro at various large up- and down-days so far in 2011, we will not see a rise in at-the-money volatility relative to out-of-the-money volatility for put options. The large rises in the euro will have a green theme and the large declines a red theme.

First, let's take a look at the implied volatility of euro options by moneyness. We see a definite skew toward higher volatility at lower prices, an investor skew phenomenon similar to stock option volatility. In the absence of the color-coding, would you be able to tell me which were the up and down days? Not really; the pattern on May 27, 2011 when the euro rose is about the same as it was on May 5<sup>th</sup> and June 15<sup>th</sup> when the euro fell. This should be our first clue that the options market is not pricing in the euro's disappearance.



## **Euro Option Volatility On Selected Dates**

Now let's normalize everything to the ATM volatility level. If the options market associated a large downward move in the euro with a risk of ruin, you would see the 100%+ moneyness strikes' volatility ratio to the ATM volatility rise. Such a move would not be seen as the lottery-ticket often associated with buying out-of-the-money options but rather a more binary bet on the euro disappearing.

## **Euro Smile On Selected Dates**



One of the ironies is currencies can and do disappear. For example, the Brazilian real (BRL) came into existence in 1994 after the country had gone through the cruzeiro, cruzerio novo, cruzado and cruzado novo. Germany was proud of its Deutsche mark, but maybe it does not like to talk about its predecessors in the 20<sup>th</sup> century. If you travel in Mexico, you see the symbol "N\$" for the peso; that is to distinguish it from the old peso of blessed memory.

The euro may one day bite the dust unless they find a way to allow countries to exit the arrangement. Right now, no such mechanism exists and the Eurozone's leadership will move heaven and earth to preserve their project. The options market likes their chances for success.