

## Other VIX Need Other Tricks

The late Senator Daniel Patrick Moynihan left many memorable phrases in the English language; including “Defining deviancy down” in reference to increased acceptance of what once was considered abnormal behavior. Financial markets have done something similar with their definition of “sophistication.” Somewhere along the line volatility traders became inordinately pleased with themselves when they discovered the obvious with stock market volatility, that it tends to rise when prices fall.

The truth was always a little more complex (see “The VIX and Market Capitulations,” May 2009). Certain markets such as equities and crude oil have what is called an “investor skew,” which is nothing more than a fancy term for saying panic rises when prices fall. That relationship always needed to be tempered by normalization to realized volatility, and as those who were quick to use absolute levels of the VIX as buy-signals during the fall of 2008 can attest, high volatility can get higher still.

Other markets have what is known as a “demand skew;” this occurs in markets such as natural gas where buyers tend to panic when the price rises. Short-term interest rates have yet another pattern; declining levels of short-term rates and ever-steeper yield curves are seen as unstable and invite hedgers to seek protection from either a rise in rates or a flattening of the yield curve. The growth of the credit default swap market has put a three-way link between corporate credit, stock prices and option volatility, with option volatility rising along with CDS costs.

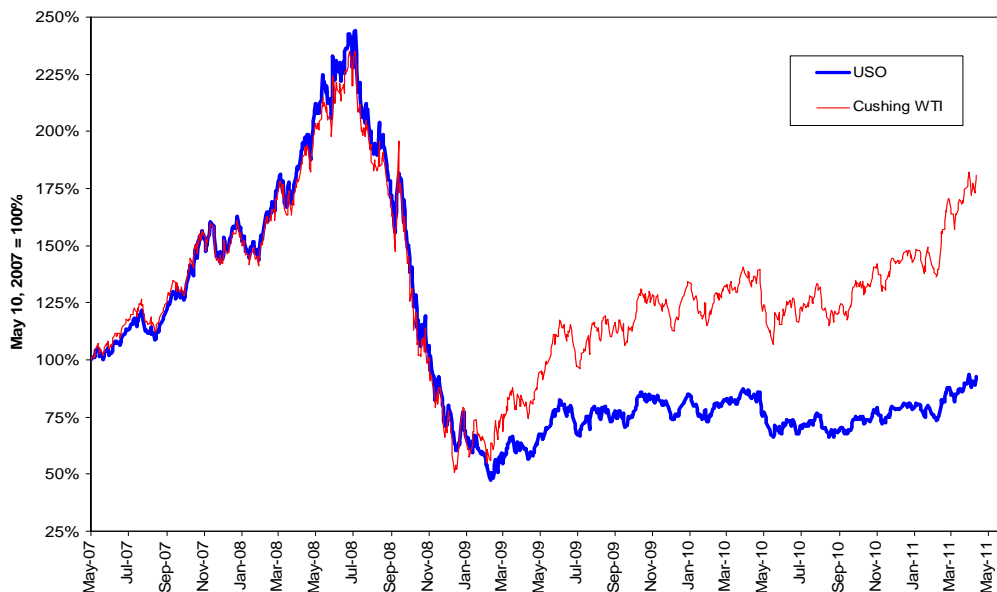
Each market has a different footprint between price and volatility, and woe should be to those who seek a singular approach to trading volatility. Attempts to translate what has been learned in the relationship between the S&P 500 index and the VIX, which is based on that index, to other markets invite learning about the differences the hard way.

Let’s take a look at three different markets based on exchange-traded funds linked not to a standard equity but to markets such as crude oil, gold and the euro.

### Crude Oil Volatility Index

One of the first things to remember is the U.S. Oil Fund (USO), the basis for the Chicago Board of Options Exchange’s crude oil volatility index (OVX) is not one and the same as the spot price of West Texas Intermediate crude oil at Cushing, Oklahoma. The USO is based on rolling a futures position from the front month contract to later contracts and therefore must incorporate a negative roll yield when the forward curve of crude oil is in a carry structure.

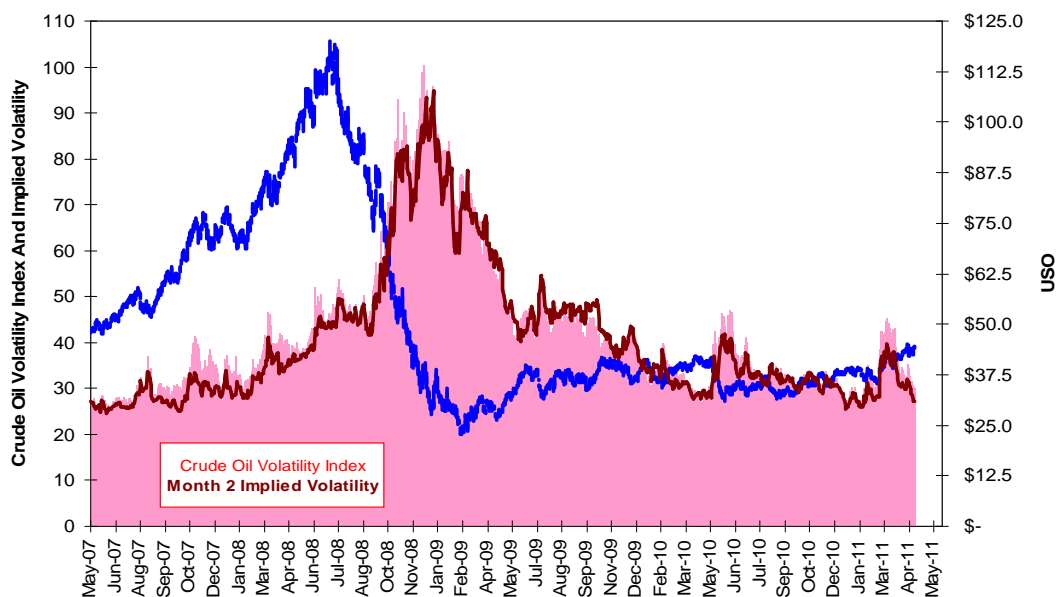
The U.S. Oil Fund Is Not Cash WTI



As the movement of the USO differed considerably from the spot price of WTI and from the front-month futures contract based thereon, did the OVX look different than the volatility of the futures? Not especially: Both the OVX and the implied volatility of the second-month futures contract have exhibited the general investor skew we should

expect from crude oil. This was especially apparent during the price collapse of late 2008. Interestingly, even though the price of the USO rose considerably less than did the spot price of WTI in 2009-2011, the two volatility measures moved very similarly.

**Crude Oil ETF And Crude Oil Volatility Index**



The net effect for the OVX is traders familiar with the VIX and its rhythm should feel comfortable with the OVX and its relationship to crude oil prices.

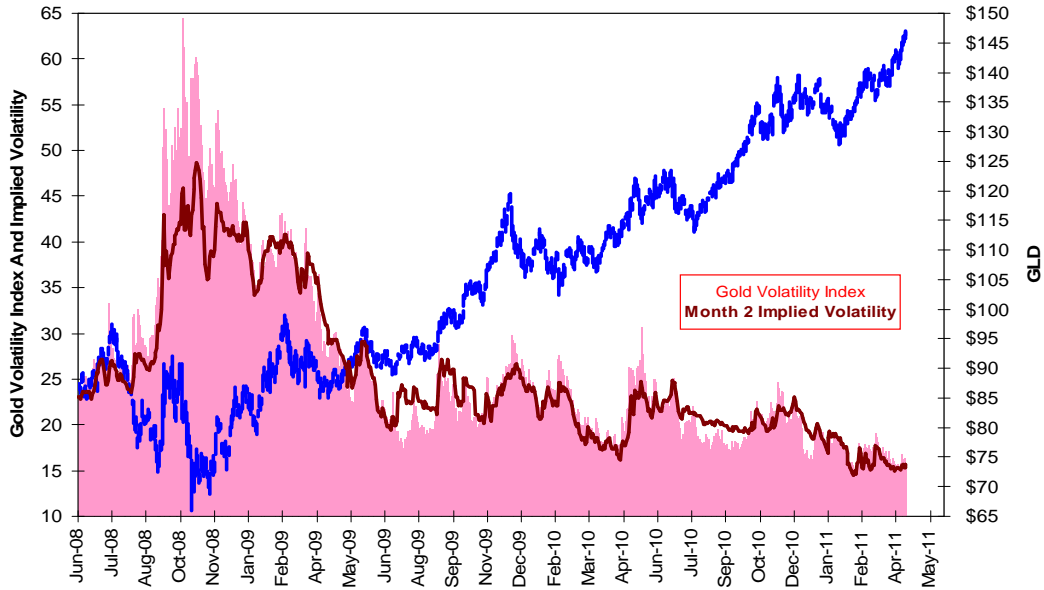
### Gold Volatility Index

The CBOE's gold volatility index (GVZ) is based on the SPDR Gold Trust (GLD), which holds gold bullion in the HSBC vaults in London. It is not subject, therefore, to the roll of the futures contract seen in crude oil; the only real difference between GLD and the futures is the futures "roll down the curve" to the spot price in recognition of storage costs.

Does gold have a demand skew, an investor skew, or neither? The actual answer is neither. Bullion holders tend to hear other voices in their heads and are unlikely to be panicked out of the market by declining prices or general market duress; the very events affecting the world negatively are why they bought gold in the first place. This negates the investor skew; the demand skew is negated by the ability of gold buyers such as jewelry fabricators to pass on higher prices to their customers. Moreover, most gold demand is not final-use demand but demand simply to hold onto the metal in the event the world ends, at which point something religious is supposed to happen, we guess.

The experience of the GVZ over its relatively short life has been it rose during the 2008 financial panic and then trended sideways while GLD kept moving higher. The GVZ market has been uninteresting at the very time when GLD has been interesting.

### Gold ETF And Gold Volatility Index

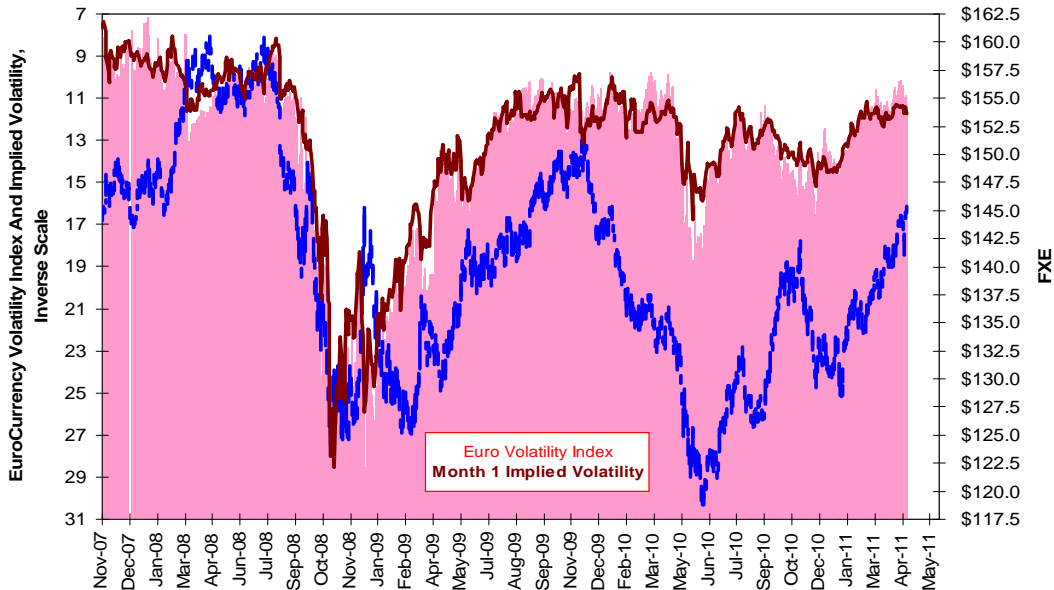


### Euro Volatility

Now let's conclude with the Euro Currency ETF (FXE) and the CBOE's Euro Currency volatility index (EVZ). As in the case of gold, the forward curve for the euro is nothing but a cost of carry measure between U.S. and Eurozone interest rates; we do not see, therefore, a divergence between the euro and the FXE. The EVZ follows the front-month futures volatility as well.

The relationship between the EVZ and the FXE is not quite the jump-diffusion process we see with the S&P 500 and the VIX, but rather an asymmetric and inverse one. The EVZ rose during the FXE decline of late 2008, and then fell as the FXE rallied into late 2009. However, once the very existence of the euro came into question in the rolling sovereign credit crises of 2010-2011, the EVZ barely rose. Imagine saying this for any other volatility index: The market could disappear and volatility traders just shrug. This is neither a demand skew nor an investor skew; it is a set of special conditions.

### EuroCurrency ETF And EuroCurrency Volatility Index



### One Size Fits One. Maybe

We are left with the singular and, to some, unsatisfying conclusion of all volatility indices being special cases. What you learn to trade one market will not serve you well in trading another. Oddly enough, this is a conclusion the

author reached long ago about the “just numbers” approach to technical analysis: Different markets do in fact have different return distributions, bounds, skews and substitution patterns. This is not a tragedy, it simply demands a little homework.