

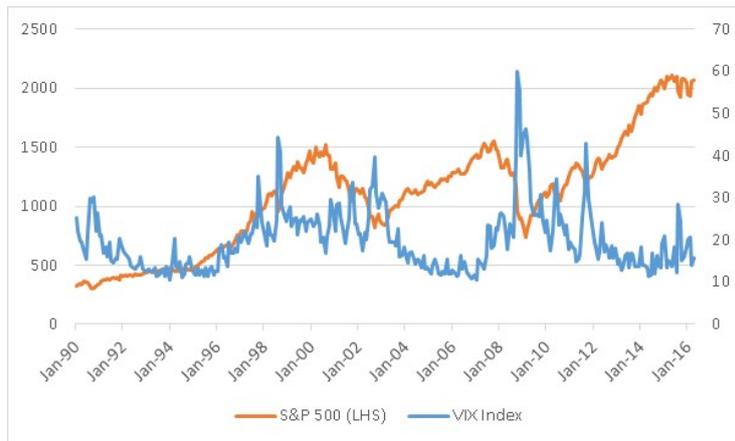
VIX AND VIX ETFs: VOLATILITY IS NO LONGER AN INDEPENDENT VARIABLE



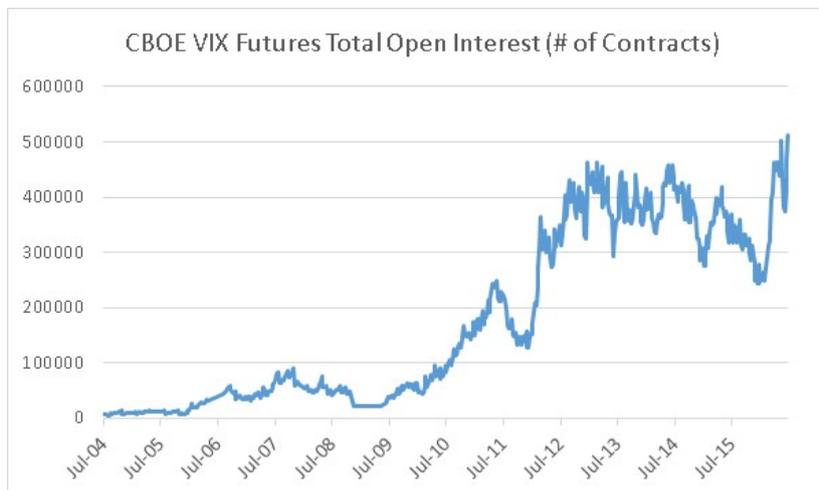
Russell Clark's
Market Views

“However from 2009 as VIX ETFs were launched, volumes traded in VIX futures increased substantially and the relationship of commercial net position in VIX futures and the movement in the VIX has reversed. In general, if the commercial position in VIX futures is long, VIX tends to be low.”

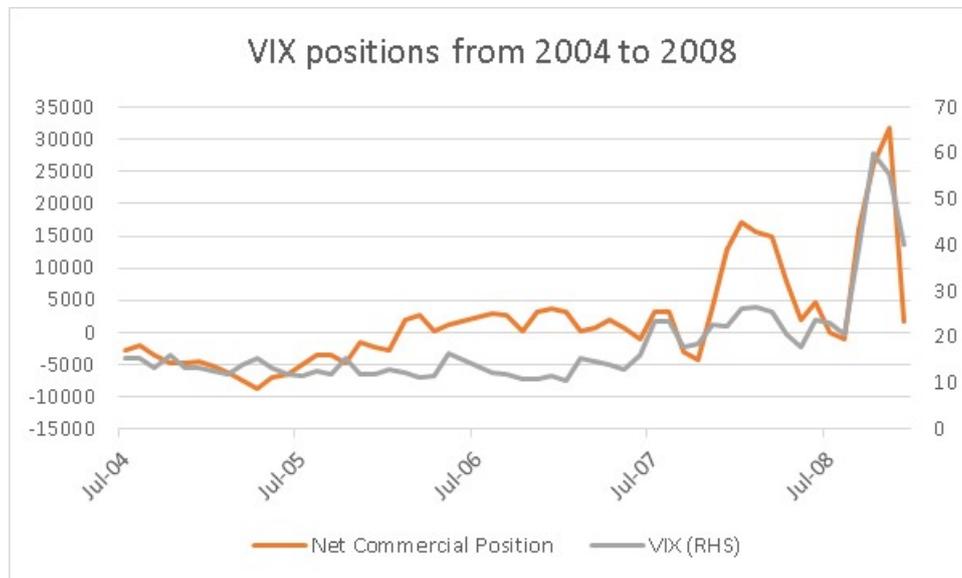
The VIX index is the ticker symbol for the Chicago Board Options Exchange “CBOE” volatility index. It uses the implied volatility of the options on the S&P 500 to generate a market measure of expected stock market volatility over the next 30 days. Typically VIX tends to be higher in markets that are falling rather than rising markets. This probably reflects the tendency for markets to fall faster than they rise.



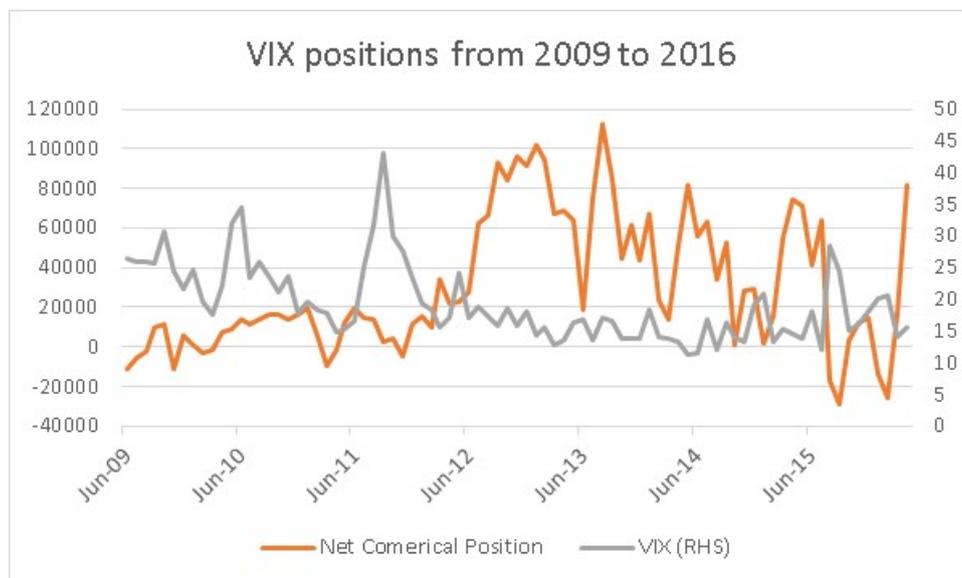
Historically, the VIX was just a representation of the cost of options and could not be traded directly. However from 2004 VIX future contracts started trading which allowed investors to trade VIX directly. The open interest (a measure of volume traded for futures) has exploded since 2010.



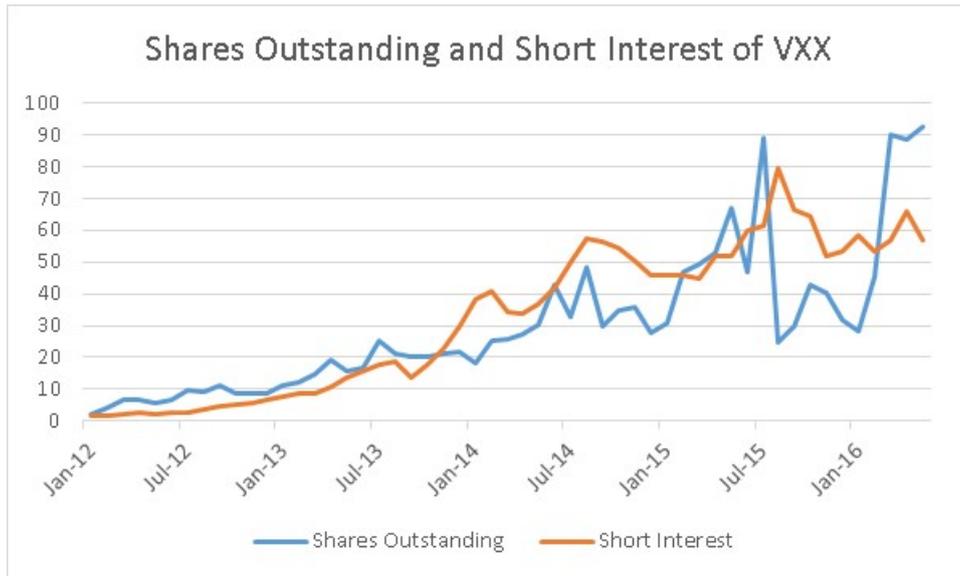
Until 2009, there were no Exchange Traded Funds “ETFs” on this market, just futures, which meant that only relatively large and sophisticated investors traded VIX futures, and volumes traded in the futures market were relatively small. What we saw then, was that VIX tended to move in line with the net position of commercial traders. That is the cost of portfolio insurance rose as investors increased their demand for insurance.



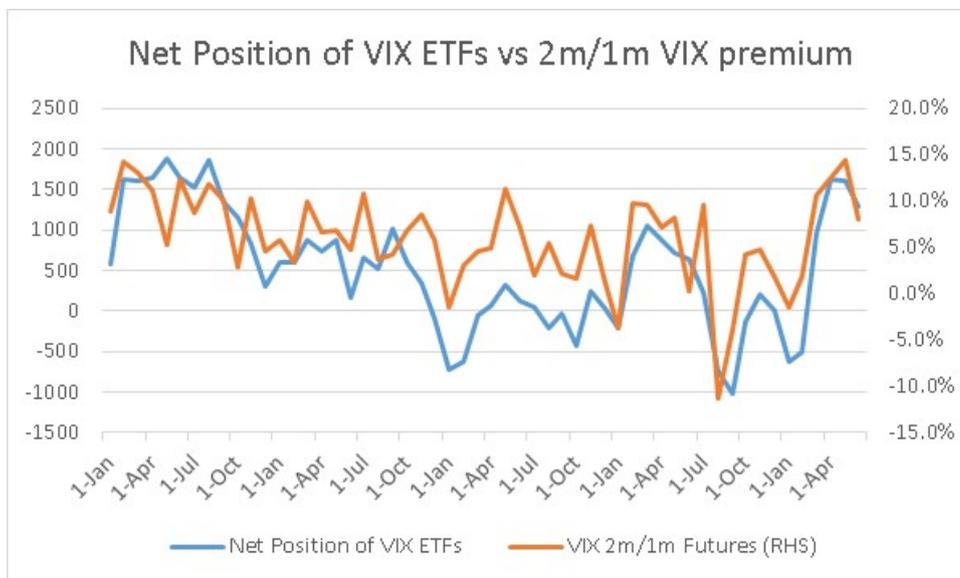
However from 2009 as VIX ETFs were launched, volumes traded in VIX futures increased substantially and the relationship of commercial net position in VIX futures and the movement in the VIX has reversed. In general, if the commercial position in VIX futures is long, VIX tends to be low.



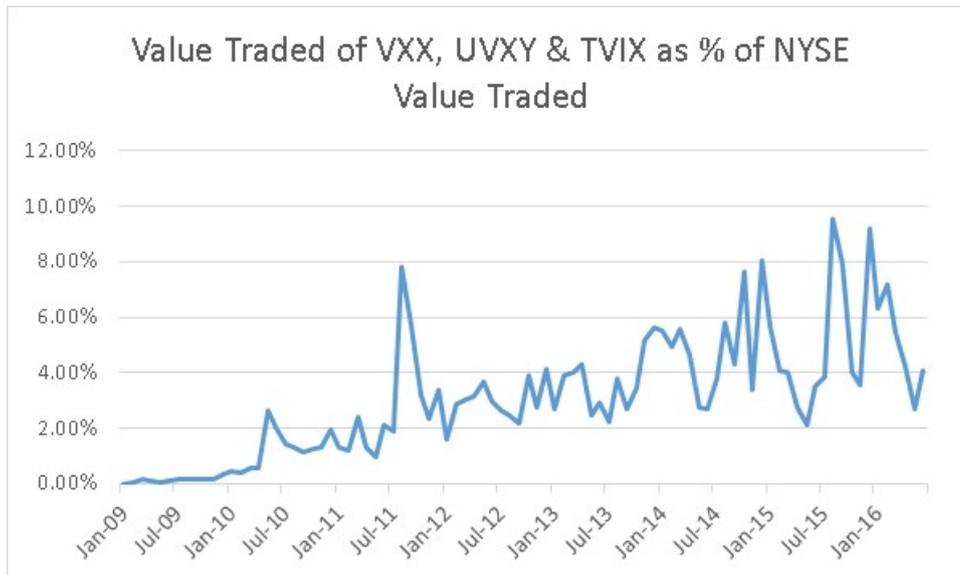
The change in behaviour of VIX and VIX future positioning has been driven by the emergence of VIX ETFs in the US market. The three largest ETFs are VXX, UVXY and TVIX. However VIX ETFs are unlike normal market ETFs. They often have a short interest position that is larger than shares outstanding. That is investors use this VIX ETFs not only to get long VIX, but also to get short VIX. As VIX measures a range (implied volatility) and offers no dividend, there is no point being a long term holder. Most investors would look to buy these ETFs when low, and short when high as a way of controlling risk.



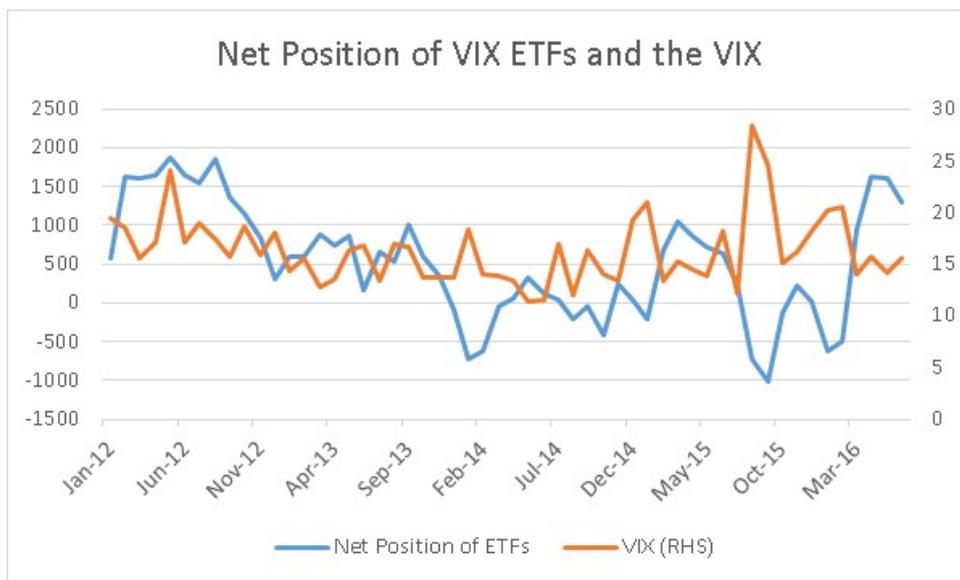
By taking the shares outstanding and short interest of the three main VIX ETFs (VXX, UVXY and TVXY) we can calculate the net positioning of the three funds. However, the problem is that the VIX futures are only liquid in the first two months. So typically the funds are constantly buying futures that expire in two months, and selling those futures as they get close to maturity. That means that when investors are long these ETFs they put upward pressure on 2m VIX futures, but downward pressure on 1m VIX (this is partly due to being passive investors, and other market participants knowing they are forced buyers of 2m VIX futures, and forced sellers of 1m VIX futures). We can see that the net position of VIX ETFs closely follows the premium that 2m VIX futures trades over 1m VIX futures.



Another extraordinary feature of these ETFs is that they often trade their entire shares outstanding on a single day. The volumes being traded through these ETFs make them a significant part of market activity. In the below graph I have aggregated the value traded of the three largest VIX ETFs and compared it to the value traded on the New York Stock exchange. Value traded in the VIX ETFs tends to spike when the VIX spikes. January value traded of the VIX ETFs was around 10% of NYSE value traded, but on some days in January this year was equivalent to 20% of the NYSE value traded.



In my view, the structural tendency for the VIX ETFs to sell short dated VIX futures and the huge volume being traded in these ETFs mean that when they are net long they tend to depress the actual VIX Index that it is meant to mimic. As can be seen below, VIX tends to be subdued when the ETFs are net long, and VIX tends to spike when the ETFs are net short.



As can be seen from the chart above net positions used to follow the VIX pre September 2013, but now they tend to be inversely correlated. So these days it is net short position in VIX ETFs that tends to drive VIX spikes. The VIX ETFs were set up to mimic the movement in VIX. However their success has led them to exert an influence on the market they are meant to mimic. To my mind it makes the VIX a poor indicator, as when nervous investors buy VIX ETFs they actually push down the VIX, and confident investors who are short VIX ETFs encourage it to spike. Given that VIX measures often are used to guide the risk that algorithms can take, this seems very contradictory to me. I would use extreme caution when using the VIX as part of any investment process.

INFORMATION

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