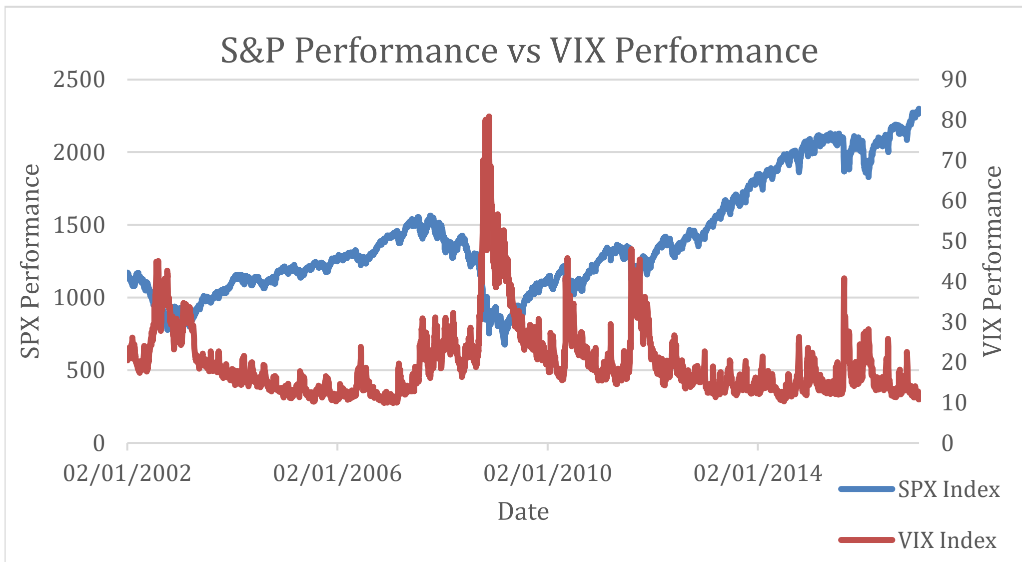
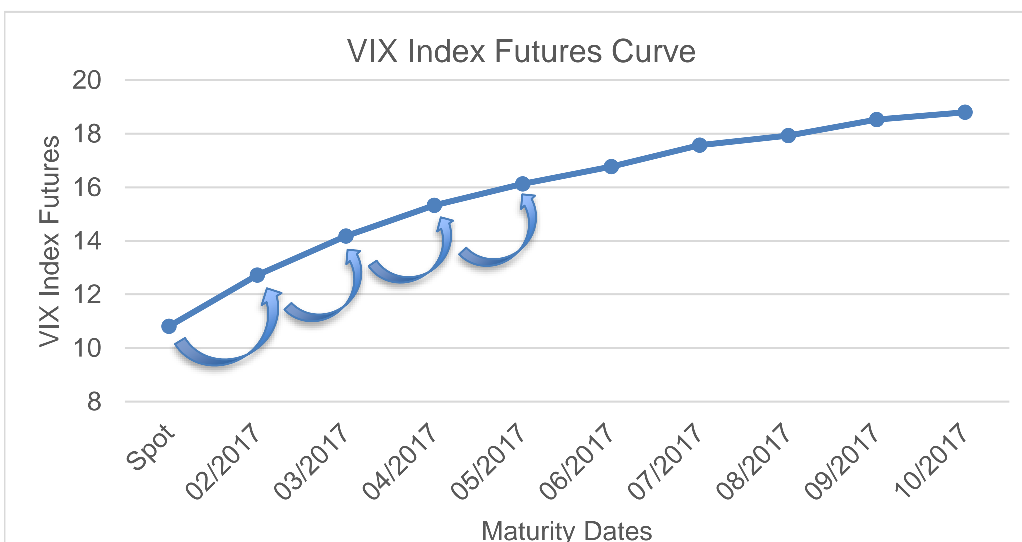
So, you want to buy the VIX; what should you be looking out for?

27th January 2017



The above graph shows the performance of the S&P500 vs the performance of the VIX. From this you can see the two are negatively correlated, and in theory buying volatility makes for an effective hedge against falling equity markets. Moreover, implied volatility over the long term tends to be mean reverting. This makes **buying and holding implied volatility** when it is low (as it is now – please see tables on the right) an enticing strategy at first thought. However, as we will explain, long volatility positions (from the humble put option to the well-known VIX - aka Wall Street's fear gauge) have a cost of carry when the VIX futures are in **contango**. For those unfamiliar with the term, contango is not an amalgamation of two famous dance routines. It simply means that the front-month futures are cheaper than the back-month futures. For VIX futures, this is the case 85-90% of the time. Take an example case of the VIX futures curve, as of last night:



Product	Capital Growth
Citi 6yr GBP FTSE/S&P Digital 60% EKIP and 65% Digital Barrier	45.50%

Rates (bps)		
	Current	Week Chge
GBP 1yr	58.40	0.40
GBP 3yr	83.80	4.20
GBP 5yr	106.40	5.70

Equity Indices (%)		
FTSE 100	7173.39	-0.35%
S&P 500	2246.19	-1.11%
Nikkei 225	19467.4	1.72%
Eurostoxx 50	3299.29	0.00%

Currencies (%)		
GBPUSD	1.2527	1.23%

5yr Credit Spreads (bps)		
Citigroup	70.48	-3.05
Credit Suisse	110.61	-4.30
Deutsche	160.34	5.15
GS	88.37	-3.24
HSBC	66.08	-1.97
JPM	61.14	-2.82
MS	83.56	-2.94

Commodities (%)		
Gold	1183.63	-2.21%
Oil	53.32	0.19%

3m Implied (vol pts)		
FTSE 100	11.33%	-1.01%
S&P 500	10.78%	-1.09%
Nikkei 225	18.31%	-0.62%
Eurostoxx 50	15.65%	-0.33%

5yr Implied (vol pts)		
FTSE 100	19.13%	-0.18%
S&P 500	20.53%	-0.47%
Nikkei 225	19.38%	0.04%
Eurostoxx 50	19.79%	-0.39%

Source Bloomberg / Partner Banks
Data as at 27th January, 11.00am

Upcoming events	
31st Jan	BoJ Policy Statement
31st Jan	UK Parliament to hold first Article 50 debate
31st Jan	Eurozone GDP (prelim) % q/q
1st Feb	Eurozone Manufacturing PMI (final) Index
1st Feb	Federal Reserve MC meeting & FED funds rate %
2nd Feb	BoE Monetary Policy Committee Meeting, Rate Decision, Inflation

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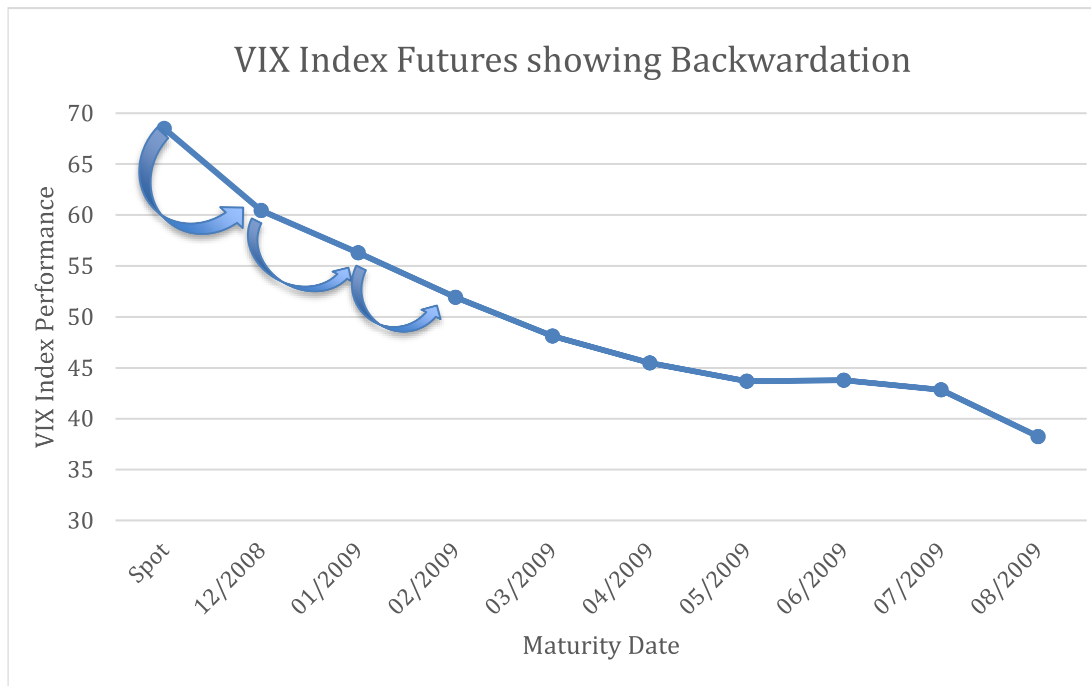
"Volatility is greatest at turning points, diminishing as a new trend becomes established." - George Soros

We can see higher VIX futures prices as we move further out in time; in other words, contango. This is an indication that the market is pricing in the likelihood of higher volatility in the future. Intuitively this makes sense, as the more time there is until maturity, the more time there is for something unexpected to happen. Now let's look at the opposite scenario, called **backwardation** which occurred between January and May 2009. This is where futures contracts get cheaper as we move out in time, and indicates that the market is pricing in the likelihood of lower volatility in the future. At times of market stress, this also makes sense as there is an awareness that volatility is high and that it is typically mean reverting.



When VIX futures are in contango, the prices of the contracts will decrease and "slide down the curve" over time if market conditions remain stable (as seen in chart 2). **This results in losses for long VIX futures and long VIX option positions alike (reminder: VIX options are priced to the futures and there is no physical way to trade the VIX index itself).** So, what could you buy? Long dated VIX futures as we have seen, realise at lower levels than they are initially priced and importantly, lack sensitivity to drawdowns in the near-term. The suggestion previously has been to roll short term futures month to month, but as can be inferred from the second graph, this is likely to be very expensive. The following data looks at the VIX futures curve from Feb 2009 to April 2015; just before the market bottom in March of 2009.

Trading Days	1,630	
Days in Contango	1,427	88% of the time

Given 88% of the time the market is in contango, the carry cost of rolling month to month futures is likely to be exceptionally expensive and rarely profitable as a long-term hedging solution; using chart 2 we can see that an investor would lose circa 15% each month were volatility not to rise. Therefore, in conclusion although the theoretical rationale of being long volatility as a portfolio hedge is good, the practical realities of investing make this a poor choice.

The Fortem team have developed several strategies for portfolio protection to mitigate this high carry cost and are at your disposal should you wish to discuss hedging and its implementation in more detail.

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