



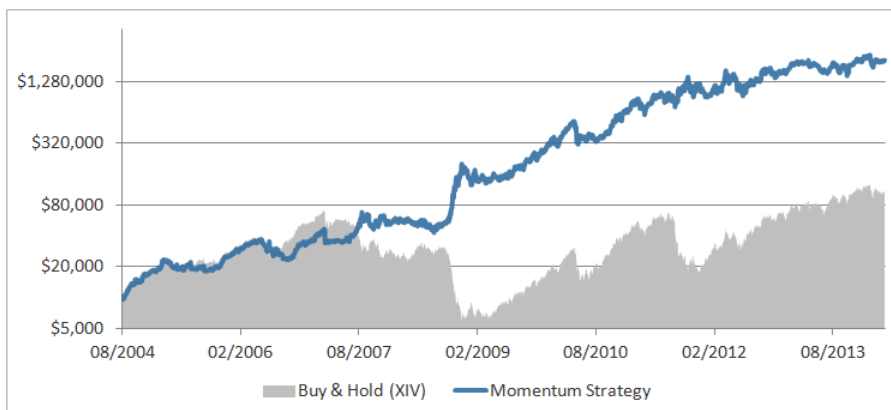
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A Momentum Rotation Strategy for Trading VIX ETPs

Posted on April 10, 2014 by Volatility Made Simple

This is a test of a simple rotation strategy detailed in the paper [Easy Volatility Investing](#) from Double-Digit Numerics, which uses momentum to trade VIX [ETPs](#).

Below are trading results (blue), compared to buying and holding XIV (grey), from mid-2004 to present.



Strategy rules: The four ETPs traded are [XIV](#), [VXX](#), [ZIV](#), and [VXZ](#). Go long at the close the ETP with the highest return over the last 83-days. If all 83-day returns are negative, move to cash. Hold until a new ETP signals a trade.

Read about [test assumptions](#). Get help [following this strategy](#).

As one would expect, due to their bigger, more volatile returns, the strategy spends about 74% of all days in either XIV or VXX, but would have also frequently chosen the mid-term VIX ETNs VXZ (14%) and ZIV (11%).

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Summary Statistics: VIX ETP Momentum Strategy

08/2004 to 03/2014

Statistic	Momentum Strategy	Buy & Hold XIV
Annualized Return	73.8%	28.5%
Sharpe Ratio	1.45	0.41
Max Drawdown	-43.5%	-91.9%
Ulcer Performance Index	4.06	0.56
Correlation with S&P 500	-6.3%	76.1%
Best Month	117.3%	37.1%
Worst Month	-25.6%	-58.6%
% Winning Months	69.8%	62.9%
Trades per Year	13.7	N/A

The 83-day lookback is no doubt an optimized number, as the paper's author concedes.

Below I've shown key stats for other lookbacks from 73 to 93 days. Notice the steep drop off outside of values in the 80's. While I think the general concept of momentum might be effective (relative to buy & hold), I think that drop off is an indication that the big numbers the strategy would have posted to date are probably a bit generous.

VIX ETP Momentum Strategy, Other Lookbacks

01/2005 to 03/2014

Statistic	Lookback (Days)										
	73	75	77	79	81	83	85	87	89	91	93
Annualized Return	39%	46%	51%	48%	60%	67%	62%	68%	56%	51%	47%
Sharpe Ratio	0.7	0.8	0.9	0.9	1.1	1.3	1.2	1.3	1.1	0.9	0.8
Max Drawdown	-56%	-48%	-46%	-54%	-45%	-44%	-48%	-42%	-44%	-48%	-52%
Ulcer Performance Index	1.4	1.8	2.1	2.0	3.0	3.6	3.3	3.7	2.8	2.4	2.1

NOTE THAT, UNLIKE THE RESULTS ABOVE, THESE STATS BEGIN 01/2005

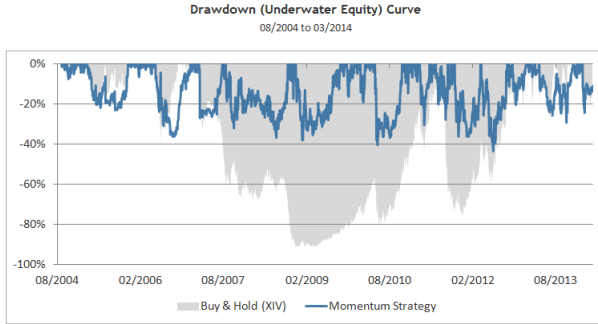
What makes the strategy work? From the author:

Momentum (a form of trend following) has been a widely studied phenomenon in the literature and has been found in many asset classes...

It might be expected that there is momentum in volatility markets as well because of the persistence of volatility. The roll

yield and VRP charts above show that there also seems to be persistence in these factors as well. Zooming in on the relevant charts we see that sign persistence frequently lasts for one, three, six months and even longer. So we might see momentum for look-back periods of a few months.

Finally, for the sake of completeness, a drawdown curve and monthly/annual returns for the original 83-day version of the strategy (click to zoom).



Monthly and Annual Returns

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2004								16.9%	21.6%	0.9%	14.9%	9.7%	80.9%
2005	10.4%	12.4%	-12.5%	-4.5%	7.8%	-5.9%	2.9%	-7.0%	6.0%	4.4%	21.4%	8.1%	46.2%
2006	12.6%	8.8%	6.7%	4.2%	-17.4%	-13.7%	1.7%	-10.5%	7.0%	30.1%	6.1%	3.7%	35.5%
2007	15.7%	-15.5%	0.0%	2.0%	-1.8%	14.3%	27.4%	14.5%	-15.4%	-1.6%	14.7%	-4.4%	48.9%
2008	3.6%	2.9%	-3.0%	-10.3%	14.1%	-15.2%	0.6%	8.2%	23.1%	117.3%	16.7%	-17.6%	151.4%
2009	6.6%	0.2%	-4.3%	9.2%	0.6%	10.1%	8.5%	3.8%	17.1%	0.6%	16.9%	18.3%	126.6%
2010	3.7%	18.7%	22.6%	-3.3%	-20.0%	10.7%	-13.0%	8.0%	6.9%	30.2%	2.5%	25.1%	117.0%
2011	15.1%	2.4%	-2.8%	25.1%	5.6%	-5.7%	-12.6%	18.1%	37.0%	-24.8%	4.2%	-13.1%	37.4%
2012	15.3%	5.0%	37.1%	-2.8%	-25.6%	2.4%	7.8%	9.3%	22.5%	-5.7%	5.2%	-2.1%	72.3%
2013	21.1%	1.4%	0.7%	-1.1%	-9.8%	-5.0%	11.9%	-13.4%	7.8%	8.2%	12.9%	5.0%	40.4%
2014	-15.8%	8.4%	3.6%										-5.4%

When the strategies that we cover on our blog (including this one) signal new trades, we include an alert on the daily report sent to [subscribers](#). This is completely unrelated to our own strategy’s signal; it just serves to add a little color to the daily report and allows subscribers to see what other quantitative strategies are saying about the market.

Click to see *Volatility Made Simple’s* own [elegant solution](#) to the VIX ETP puzzle.

Good Trading,
Volatility Made Simple

Posted in [Strategy Backtests](#).

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