



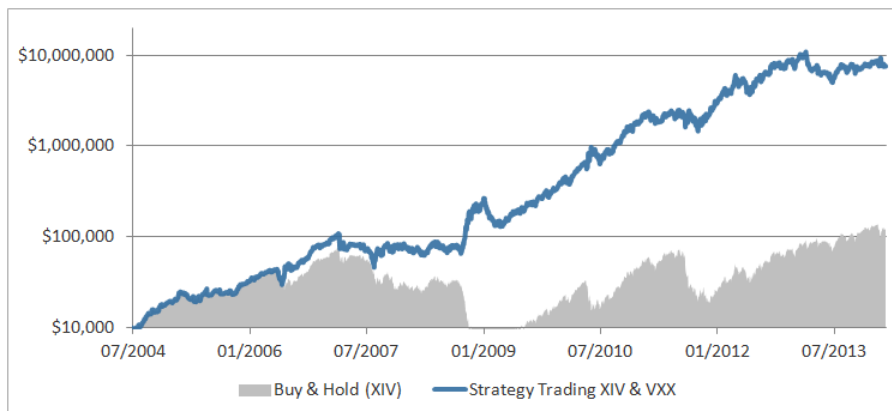
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# Backtest: Don't Fear the Bear's StDev Model

Posted on March 16, 2014 by Volatility Made Simple

This is a test of Don't Fear the Bear's [StDev Model](#) for trading VIX [ETPs](#) like XIV and VXX. This strategy is of the slower-moving variety, averaging less than five trades a year. It spends 89% of days in XIV (inverse volatility), but shifts to VXX (long volatility) when volatility rises above a certain threshold.

Strategy results from mid-2004 to present:



Strategy rules:

Go long VXX at the close when the 10-day standard deviation of daily % changes in the VIX index rises above 11%. Hold VXX until the 10-day standard deviation falls below 10%. Invest in XIV when not invested in VXX.

*Wonk notes: Transaction costs and slippage are assumed to total 0.1% of each trade (0.2% round-trip). Return on cash has been ignored. Data prior to the launch of each ETP has been simulated back to 2004. We're able to do this accurately using a combination of the indices and the futures data on which these ETPs are based. Read more about [simulating data](#) for VIX ETPs.*

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## Summary Statistics

Trading XIV & VXX, 07/2004 to 02/2014

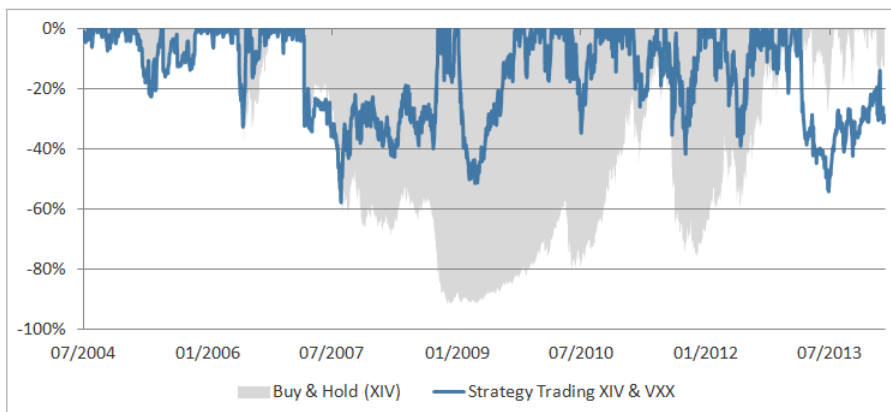
Statistic	Strategy XIV/VXX	Buy & Hold XIV
Annualized Return	98.4%	29.1%
Sharpe Ratio	1.77	0.42
Max Drawdown	-57.8%	-91.9%
Ulcer Performance Index	4.55	0.57
Correlation with S&P 500	19.0%	75.9%
Best Month	117.3%	37.1%
Worst Month	-31.6%	-58.6%
% Winning Months	68.1%	62.9%
Trades per Year	4.5	N/A

As with all VIX ETP strategies (including [our own](#)), a dash of extra skepticism of results is warranted given how little data (< 11 years) and how few trades we have to consider, but to date, backtested performance has been strong. Note the significant underperformance over the last 1+ year; this will be something to monitor moving forward.

If I had to pick on something, it would be the use of a plain vanilla standard deviation measurement. Conceptually, I don't like the idea of some random trading day 2 weeks ago being as important as today was in deciding whether I should enter a trade. I would much prefer to see something like a *weighted* standard deviation used.

Drawdown (Underwater Equity) Curve

07/2004 to 02/2014



## Monthly and Annual Returns

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2004							6.2%	16.9%	21.6%	0.9%	14.9%	9.7%	92.1%
2005	10.4%	12.4%	-12.5%	-3.4%	15.2%	-1.9%	12.2%	-7.0%	7.9%	-4.9%	21.4%	8.1%	66.2%
2006	12.6%	8.8%	6.7%	4.2%	-26.8%	56.2%	-6.9%	16.7%	8.8%	30.1%	6.1%	3.7%	163.7%
2007	15.7%	-24.6%	-0.9%	10.8%	2.4%	-13.8%	-21.2%	22.6%	15.0%	-0.6%	-4.7%	6.2%	-5.6%
2008	-8.3%	-4.4%	-10.6%	23.4%	14.1%	-15.2%	0.6%	6.2%	3.0%	117.3%	29.2%	7.5%	210.8%
2009	-31.6%	-14.9%	-8.5%	19.3%	19.8%	10.1%	8.5%	3.8%	17.1%	0.6%	16.9%	18.3%	53.4%
2010	3.7%	20.8%	22.6%	3.3%	34.8%	-22.2%	36.3%	1.5%	23.2%	30.2%	2.5%	25.1%	373.1%
2011	15.1%	2.4%	-14.3%	24.8%	7.6%	-2.8%	-12.6%	4.9%	-28.7%	19.7%	38.1%	14.0%	62.6%
2012	30.9%	5.0%	37.1%	-2.8%	-25.5%	26.5%	6.4%	16.0%	22.5%	-5.5%	19.5%	-13.7%	154.8%
2013	26.2%	-14.3%	-12.6%	-11.1%	-2.2%	-10.9%	35.1%	-13.3%	14.4%	-5.2%	12.9%	5.0%	10.3%
2014	4.0%	-12.4%											-9.0%

A big thank you to [Don't Fear the Bear](#) for sharing this strategy.

\* \* \*

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 and separate from our own strategy's signal; it just serves to add a little color to the daily report and allow 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*

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