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## A Weird All-Long Strategy

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by: Harry Long

### Summary

- We usually capture convexity using Hedged Convexity Capture.
- This time, we are examining giving convexity a chance to eat us.
- The results are weird.

My firm has [pioneered](#) profiting from convexity by creating Hedged Convexity Capture. This time, let's conversely examine the results of going long a 3X leveraged S&P 500 bull instrument like the SPXL (NYSEARCA:[SPXL](#)), and pairing it with TMF (NYSEARCA:[TMF](#)) as a hedge, and VXX (NYSEARCA:[VXX](#)) as a further tail hedge. How would such a strategy perform?

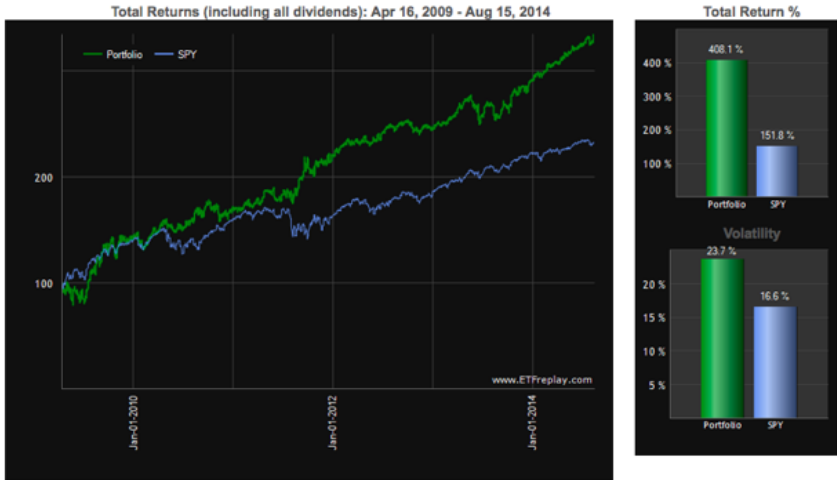
Unlike shorting SPXU (NYSEARCA:[SPXU](#)), the 3X leveraged S&P bear instrument, there are fewer scenarios in which SPXL will capture convexity, rather than eating it. Same for buying TMF, rather than shorting TMV. Moreover, VXX has all kinds of contango issues, but it does have the virtue of being a tail hedge which is not reliant upon the bond market.

Here is the weird strategy's rules.

1. Buy SPXL with 50% of the dollar value of the portfolio.
2. Buy TMF with 45% of the dollar value of the portfolio.
3. Buy VXX with 5% of the dollar value of the portfolio.
4. Rebalance weekly to maintain the 50%/45%/5% dollar value split between the positions.

Here are the strategy's results in a log scale:

*(click to enlarge)*



**Summary Statistics**

	CAGR	Sharpe Ratio	SPY Correlation	Max Draw vs Start	Max Drawdown
Portfolio	+35.7%	1.37	+0.39	-13.34 %	-17.26 %
SPY	+18.9%	1.05		-3.55 %	-18.61 %

**Annual Performance**

	2009 *	2010	2011	2012	2013	2014
Portfolio	+32.6%	+23.5%	+41.4%	+18.4%	+38.3%	+34.0%
SPY	+30.9%	+15.1%	+1.9%	+16.0%	+32.3%	+7.0%
+ / -	+1.7%	+8.5%	+39.5%	+2.4%	+6.0%	+27.0%

\* 2009 return calculated from Apr 16

The strategy beats the S&P 500 in every year of the test period and has a very moderate correlation of 0.39. However, the strategy must have one of the ugliest equity curves I have ever seen.

I do not like to be mathematically speculative, but I shudder to think of what this strategy might look like in an extremely choppy sideways market. In such a sideways market, it would be very profitable to capture convexity, rather than to eat convexity.

This weird strategy was a fun mathematical exercise, but it makes me very uncomfortable to be in a position where I could possibly eat, rather than capture, convexity given certain scenarios.

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