

Regarding: Potential impact of sudden fluctuations, Minimizing impact of daily rebalance, etc.

While analyzing the operation of leveraged Exchange Traded Products (ETP) in 2012 (sixfigureinvesting.com/2012/03/under-the-hood-of-a-leveraged-etf/), I realized that existing leveraged funds have what I consider to be an architectural weakness. Commenting on this I said:

“Surprisingly, the daily rebalancing required for -1X and 2X funds is identical if they have the same AUM”

“If inverse or leveraged ETFs are present in a thinly traded market this rebalancing process is a concern. On up days both the long leveraged and inverse funds need to buy more shares, on down days they both need to sell. If the effective market size is small these transactions could amplify market moves.”

What I did not mention was this same issue was present for large markets if the rebalancing needs of the funds were a significant fraction of the overall market size.

This architectural weakness is exacerbated by the way underlying indexes (e.g., SPVXSP) are constructed. They typically create a “catch-22” situation, where the index value needed for rebalancing before the market close was not available until the market settlement value at the close. This incents ETP managers and 3rd parties to concentrate their rebalancing transactions towards the very end of trading and probably created the demand for the Cboe’s Trade At Settlement (TAS) process for VIX futures that enabled rebalancing at a price guaranteed to be close to the final settlement price.

In my opinion, the need for both long and inverse leveraged ETPs to trade in the same direction, reinforcing the daily trend, and the concentration of rebalancing transactions at the close of trading created the situation that led to the 8-Feb-2018 crashes of XIV and SVXY (sixfigureinvesting.com/2019/02/what-caused-the-february-5th-2018-volatility-spike-xiv-termination/).

I believe that the architecture of the -1X Short VIX Futures ETF (“the Fund”) and its associated SHORTVOL index sets the example of how **ALL** leveraged ETPs should be constructed. By distributing its rebalance operations over time, limiting its trading volume to 25% or less during any rebalance period, allowing it to transact in the TAS close, and in the aftermarket, the Fund is a dramatically more robust architecture.

This new architecture substantially reduces the potential for fraudulent and manipulative acts & practices because it tremendously dilutes a key piece of information that currently encourages front running, liquidity withholding, and other manipulative strategies—the time that the rebalance is done. Without a specific rebalance time, it will be dramatically harder to unduly influence the market with carefully timed buys/sells or liquidity disruptions.

In addition to discouraging illegal acts, this architecture will likely reduce the overall volatility of the market by smoothing out order flow over a significantly longer time than is currently the case.

Because this new architecture is fundamentally based on averaging trade prices over time, it’s inherently insensitive to sudden fluctuations in market volatility. The impact of intra-day or end of day volatility spikes is dramatically reduced.

Regarding: Protecting Investors and the Public Interest

I believe that the fund will also protect investors and the public interest by providing a safer way to take a short volatility position. Currently, many institutions and sophisticated investors, to generate the level of short volatility exposure they desire, will short long volatility products like VXX, UVXY, or VIX futures. Unfortunately, these short positions have some undesirable characteristics:

- Their leverage increases when volatility increases, exacerbating losses
- Their losses are unconstrained, there is no inherent mechanism that limits how much can be lost
- With ETPs, Investors can be exposed to inappropriate margin calls if the trading price and Indicative value (IV) diverge. See ([wsj.com/articles/runaway-etns-trap-traders-in-wild-west-of-index-investing-11603099802](https://www.wsj.com/articles/runaway-etns-trap-traders-in-wild-west-of-index-investing-11603099802)) for an example.
- Borrowed ETP shares can be recalled by their owners at any time, requiring the trader to close or attempt to reestablish their short position at times that are likely to be disadvantageous.

The -1X Short VIX Futures ETF (“the Fund”) provides an alternative to shorting long volatility products. Its characteristics, negative and positive:

- On the negative side
 - Due to its rebalancing, the Fund will experience a price drag due to volatility. A short position in a long volatility fund does not have this characteristic.
- On the positive side
 - Its leverage decreases when volatility trends up and increases when volatility trends down, a non-linear characteristic that aids the investors regardless of the direction of the market
 - Losses are constrained to be no more than the initial investment
 - There is no exposure to inappropriate margins calls if the trading price and the IV price diverge
 - For short volatility, investors are long the fund, so there is no possibility of the shares being recalled.

Overall, I believe the Fund provides a more predictable investment that has lower complexity and a better-defined risk profile.