Quick Take: Lessons (re-)learned from XIV's demise

ACADIAN

February 2019

- February 6 marked the anniversary of the demise of XIV, VelocityShares Daily Inverse VIX Short-Term ETN. On that day in 2018, XIV's price dropped more than **92%** close-to-close. It was liquidated later in the month.
- Based on XIV's prior since-inception daily volatility of 3.9%, the one-day crash was nearly a 24 "sigma" event.[1]
- Assuming a normal distribution, the likelihood of a 24 sigma event is similar to that of winning *both* Mega Millions and Powerball back when their combined jackpots reached $1.5bn – 8 times in a row – extremely unlikely over timespans comparable to the age of our universe.[2]
- XIV had become a popular investment vehicle, generating an average annualized return of 55% and a Sharpe Ratio of 0.88 between its 2010 launch and January 2018.[3]

MULTI-ASSET CLASS STRATEGIES (MACS)

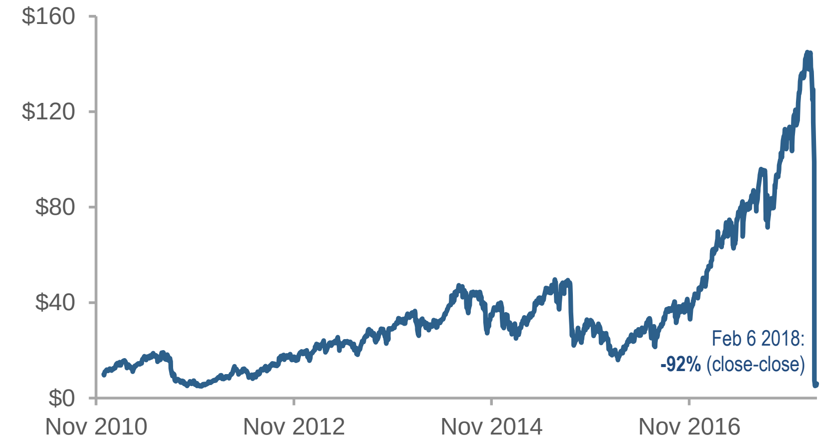
Max Golts, Ph.D.
VP, Portfolio Manager, MACS
mgolts@acadian-asset.com

Seth Weingram, Ph.D.
SVP, Director, Client Advisory
sweingram@acadian-asset.com

For more insights on MACS, visit our website, where you'll also find our original paper on the February 2018 VIX Spike.

[1] Based on returns from Nov 29, 2010 – Jan 31, 2018.
[2] Odds of winning $1 billion Mega Millions and $470mm Powerball jackpots sourced from Fox Business, Oct 19, 2018, citing Allstate Data Science Team.
[3] Based on annualized daily returns. Average is arithmetic.

XIV Price



Sources: Bloomberg, Acadian analysis. For illustrative purposes

- **Lessons (re-)learned:**
  1. Neither XIV's prior historical volatility nor its Sharpe Ratio were particularly informative as risk and performance measures. Conventional interpretations of these statistics that assumed XIV's returns would be normally distributed were misleading.
  2. Investors dealing with alternative and multi-asset portfolios should incorporate scenario analysis into their risk management process. XIV's sudden demise would have been deemed almost impossible in a conventional, naïve mean-variance framework based on backward-looking data.
  3. Construction details matter. There was foreseeable risk of a "negative feedback loop" associated with how XIV was constructed and therefore hedged. Knowledge of this risk would have informed meaningful, forward-looking risk assessment and management.

LEGAL DISCLAIMER

ACADIAN

BOSTON LONDON SINGAPORE TOKYO SYDNEY

ACADIAN-ASSET.COM