

Mitigating Tail Risk With Short Volatility Trading

INTRODUCTION

REGULATORY BACKGROUND

TYPHON CAPITAL MANAGEMENT, LLC IS REGISTERED WITH THE U.S. COMMODITY FUTURES TRADING COMMISSION (THE "CFTC") AS A COMMODITY POOL OPERATOR ("CPO") AND IS EXEMPT FROM REGISTRATION WITH THE U.S. SECURITIES AND EXCHANGE COMMISSION (THE "SEC") UNDER SECTION 203(B)(6) OF THE INVESTMENT ADVISERS ACT OF 1940, AS MODIFIED BY THE DODD-FRANK ACT, AND UNDER SECTION 3(C)(1) OF THE INVESTMENT COMPANY ACT OF 1940. THIS OFFERING IS EXEMPT FROM REGISTRATION WITH THE SEC BY REASON OF SECTION 4(A)(2) OF THE SECURITIES ACT OF 1933 AND RULE 506 PROMULGATED THEREUNDER.

PURSUANT TO AN EXEMPTION FROM THE CFTC IN CONNECTION WITH POOLS WHOSE PARTICIPANTS ARE LIMITED TO QUALIFIED ELIGIBLE INVESTORS. A PPM FOR THESE POOLS IS NOT REQUIRED TO BE, AND HAS NOT BEEN FILED WITH THE CFTC. THE CFTC DOES NOT PASS UPON THE MERITS OF PARTICIPATING IN A POOL OR UPON THE ADEQUACY OR ACCURACY OF A PRIVATE PLACEMENT MEMORANDUM. CONSEQUENTLY, THE CFTC HAS NOT REVIEWED OR APPROVED THIS OFFERING OR ANY PPM FOR THESE POOLS.

PURSUANT TO RULE 506(B) OF REGULATION D, THIS POOL IS OFFERED AS A PRIVATE OFFERING UNDER SECTION 4(A)(2) AND ITS INVESTORS ARE LIMITED TO CERTAIN QUALIFIED INVESTORS.

RISK DISCLOSURE STATEMENT

THE RISK OF LOSS IN TRADING COMMODITIES CAN BE SUBSTANTIAL. YOU SHOULD THEREFORE CAREFULLY CONSIDER WHETHER SUCH TRADING IS SUITABLE FOR YOU IN LIGHT OF YOUR FINANCIAL CONDITION. IN CONSIDERING WHETHER TO TRADE OR TO AUTHORIZE SOMEONE ELSE TO TRADE FOR YOU, YOU SHOULD BE AWARE OF THE FOLLOWING:

IF YOU PURCHASE A COMMODITY OPTION YOU MAY SUSTAIN A TOTAL LOSS OF THE PREMIUM AND OF ALL TRANSACTION COSTS.

IF YOU PURCHASE OR SELL A COMMODITY FUTURE OR SELL A COMMODITY OPTION YOU MAY SUSTAIN A TOTAL LOSS OF THE INITIAL MARGIN FUNDS AND ANY ADDITIONAL FUNDS THAT YOU DEPOSIT WITH YOUR BROKER TO ESTABLISH OR MAINTAIN YOUR POSITION. IF THE MARKET MOVES AGAINST YOUR POSITION, YOU MAY BE CALLED UPON BY YOUR BROKER TO DEPOSIT A SUBSTANTIAL AMOUNT OF ADDITIONAL MARGIN FUNDS, ON SHORT NOTICE, IN ORDER TO MAINTAIN YOUR POSITION. IF YOU DO NOT PROVIDE THE REQUIRED FUNDS WITHIN THE PRESCRIBED TIME, YOUR POSITION MAY BE LIQUIDATED AT A LOSS, AND YOU WILL BE LIABLE FOR ANY RESULTING DEFICIT IN YOUR ACCOUNT.

UNDER CERTAIN MARKET CONDITIONS, YOU MAY FIND IT DIFFICULT OR IMPOSSIBLE TO LIQUIDATE A POSITION. THIS CAN OCCUR, FOR EXAMPLE, WHEN THE MARKET MAKES A "LIMIT MOVE." THE PLACEMENT OF CONTINGENT ORDERS BY YOU OR BY YOUR TRADING ADVISOR SUCH AS A "STOP-LOSS" OR "STOP-LIMIT" ORDER, WILL NOT NECESSARILY LIMIT YOUR LOSSES TO THE INTENDED AMOUNTS, SINCE MARKET CONDITIONS MAY MAKE IT IMPOSSIBLE TO EXECUTE SUCH ORDERS.

A "SPREAD" POSITION MAY NOT BE LESS RISKY THAN A SIMPLE "LONG" OR "SHORT" POSITION.

THE HIGH DEGREE OF LEVERAGE THAT IS OFTEN OBTAINABLE IN COMMODITY TRADING CAN WORK AGAINST YOU AS WELL AS FOR YOU. THE USE OF LEVERAGE CAN LEAD TO LARGE LOSSES AS WELL AS GAINS.

IN SOME CASES, MANAGED COMMODITY ACCOUNTS ARE SUBJECT TO SUBSTANTIAL CHARGES FOR MANAGEMENT AND ADVISORY FEES. IT MAY BE NECESSARY FOR THOSE ACCOUNTS THAT ARE SUBJECT TO THESE CHARGES TO MAKE SUBSTANTIAL TRADING PROFITS TO AVOID DEPLETION OR EXHAUSTION OF THEIR ASSETS. THE RELEVANT OFFERING DOCUMENTS CONTAIN A COMPLETE DESCRIPTION OF EACH FEE TO BE CHARGED TO YOUR ACCOUNT BY THE COMMODITY TRADING ADVISOR.

YOU SHOULD ALSO BE AWARE THAT THIS COMMODITY TRADING ADVISOR MAY ENGAGE IN TRADING FOREIGN FUTURES OR OPTIONS CONTRACTS. TRANSACTIONS ON MARKETS LOCATED OUTSIDE THE UNITED STATES, INCLUDING MARKETS FORMALLY LINKED TO A UNITED STATES MARKET, MAY BE SUBJECT TO REGULATIONS WHICH OFFER DIFFERENT OR DIMINISHED PROTECTION. FURTHER, UNITED STATES REGULATORY AUTHORITIES MAY BE UNABLE TO COMPEL THE ENFORCEMENT OF THE RULES OF REGULATORY AUTHORITIES OR MARKETS IN NON-UNITED STATES JURISDICTIONS WHERE YOUR TRANSACTIONS MAY BE EFFECTED. BEFORE YOU TRADE YOU SHOULD INQUIRE ABOUT ANY RULES RELEVANT TO YOUR PARTICULAR CONTEMPLATED TRANSACTIONS AND ASK THE FIRM WITH WHICH YOU INTEND TO TRADE FOR DETAILS ABOUT THE TYPES OF REDRESS AVAILABLE IN BOTH YOUR LOCAL AND OTHER RELEVANT JURISDICTIONS. THIS BRIEF STATEMENT CANNOT DISCLOSE ALL THE RISKS AND OTHER SIGNIFICANT ASPECTS OF THE COMMODITY MARKETS. YOU SHOULD THEREFORE CAREFULLY STUDY THIS DISCLOSURE DOCUMENT AND COMMODITY TRADING BEFORE YOU TRADE INCLUDING THE DESCRIPTION OF PRINCIPAL RISK FACTORS IN THE RELEVANT OFFERING DOCUMENTS.

THIS COMMODITY TRADING ADVISOR IS PROHIBITED BY LAW FROM ACCEPTING FUNDS IN THE TRADING ADVISOR'S NAME FROM A CLIENT FOR TRADING COMMODITY INTERESTS. YOU MUST PLACE ALL FUNDS FOR TRADING IN THIS TRADING PROGRAM DIRECTLY WITH A FUTURES COMMISSION MERCHANT.

James Koutoulas

Chief Executive Officer



Typhon's CEO, James L. Koutoulas, Esq., founded Typhon 2008 in order to provide investors with the ability to access emerging managers who are surrounded by institutional infrastructure. He sits on Typhon's Risk and Investment Committees and is the head of portfolio management for Typhon's multi-strategy products. James has 24 years experience in accounting, computer programming, operations, and trading. He graduated from the University of Florida with a B.S. in Finance as a National Merit Scholar and has a J.D. from the Northwestern University Pritzker School of Law with a concentration in Securities Law. Northwestern Law named James its top Emerging Leader in 2016.

James is one of the leaders of the futures industry. He is the President and co-founder of the Commodity Customer Coalition and led the full recovery of \$6.7B for customers affected by the MF Global Bankruptcy. He served on the Board of Directors of the National Futures Association for three years. He was named one of "Wall Street's Top Crypto Rockstars" by Business Insider.

National Media Profiles

Business Insider- [Meet James Koutoulas, The Man Who Never Wanted To Be A Lawyer But Now Fights For 8,000 MF Global Customers](#)

Chicago Tribune- [Hedge-fund Manager an Impassioned Advocate for Commodities Customers](#)

Forbes- [The Hero of MF Global's High-Noon James Koutoulas Wins Big for the Little Guys](#)

Fortune- [The Boy Wonder of the MF Global Nightmare](#)

Motley Fool- [You Want Real Change in the Financial Industry? I suggest you keep an eye on James Koutoulas](#)

Thomson Reuters- [Brash Commodities Trader Shakes up MF Global case](#)



D. Matthew Thompson, CFA

Portfolio Manager: Proteus Dynamic Volatility



Matthew Thompson is currently Co-Head of Typhon Capital's volatility group where he manages the Proteus Dynamic Volatility Program and Proteus Risk Overlay. Mr. Thompson became a principal of Typhon in November 2013, and in January 2014, he also became an associated person to operate Proteus exclusively for Typhon. Prior to Typhon, Mr. Thompson was a principal at Advocate Asset Management and a proprietary trader for Avalon Trading, a group within the prop trading arm of ED&F Man Ltd.

Earlier in his career, Mr. Thompson was a portfolio manager at Hills Capital Management, a \$100MM family office where he co-developed the Proteus strategy.

Prior to these roles, Mr. Thompson held portfolio analytics and management roles at Northern Trust and a \$500MM registered investment advisor in Chicago, IL as well as a portfolio analytics and consulting role at Envestnet, a \$3B consultant to registered investment advisors across the US.

Mr. Thompson holds a B.S. in Economics from the University of Illinois at Urbana/Champaign and has earned the CFA designation. He is currently a member of the CFA Institute and the CFA Society of Chicago.



Michael A. Thompson, CFA

Portfolio Manager: Proteus Dynamic Volatility



Michael Thompson is currently Co-Head of Typhon Capital's volatility group where he manages the Proteus Dynamic Volatility Program and Proteus Risk Overlay. Mr. Thompson became a principal of Typhon in November 2013, and in January 2014, he also became an associated person to operate Proteus exclusively for Typhon. Previous to Typhon, Mr. Thompson was a principal at Advocate Asset Management and a proprietary trader for Avalon Trading, a group within the prop trading arm of ED&F Man Ltd.

Earlier in his career, Mr. Thompson was a portfolio manager at Hills Capital Management, a \$100MM family office in Barrington, IL where he co-developed the Proteus strategy.

Mr. Thompson has also held portfolio management roles at a \$500MM registered investment advisor and an investment analyst role at William Blair & Company where he developed and implemented an options overlay strategy for a mutual fund and client portfolios. Mr. Thompson began his career at Northern Trust & Co as a performance analytics analyst in the Global Custody department before moving to the Northern Investment Counselor investment group as an Investment Officer.

Mr. Thompson earned a B.S. in Economics from the University of Illinois at Urbana/Champaign and holds the CFA designation. He is also a member of the CFA Institute and the CFA Society of Chicago.



“The long term expected value of your ETN is zero. If you hold your ETNs as a long-term investment, it is likely that you will lose all or a substantial portion of your investment.”

- Credit Suisse's VelocityShares

“Virtually guaranteed to lose money through time.”

- Robert E. Whaley, The Creator of VIX

“VXX: Where Wealth Goes to Die”

- Daniel Putnam

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This Makes Selling Vol Appealing

Especially combined with record low yields from fixed income



Volatility Looks Like an Obvious Short



But, it's not as easy as it looks...



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When Vol Selling Goes Wrong

Over-levered, unconstrained short vol that is...

Volatility ETN collapsing

VelocityShares Daily Inverse VIX Short-Term ETN (XIV:NASDAQ)

USD

Extended Hours

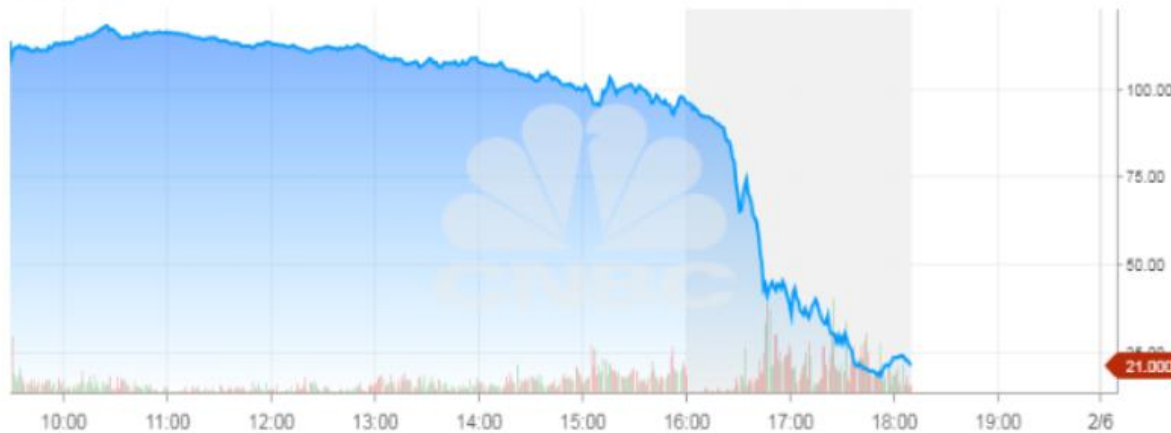
Last | 6:11:20 PM EST

21.00 -78.21 (-79.00%)

Close | 4:00:00 PM EST

99.00 -16.55 (-14.3228%)

1 Day



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When Vol Selling Goes Wrong (Part 2)

The Ironically-Named LJM Preservation and Growth Fund

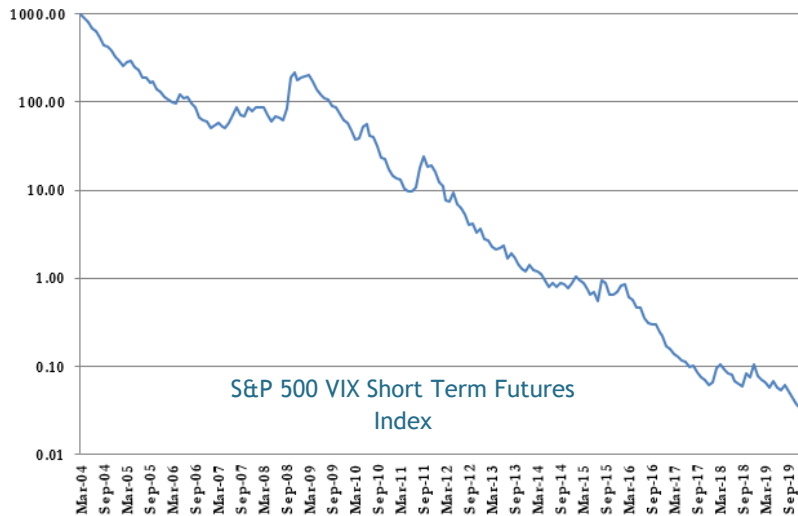


Static Approaches to VIX Fall Short

Gaining exposure to VIX via static approaches is easy to implement but doesn't produce the desired portfolio effect.

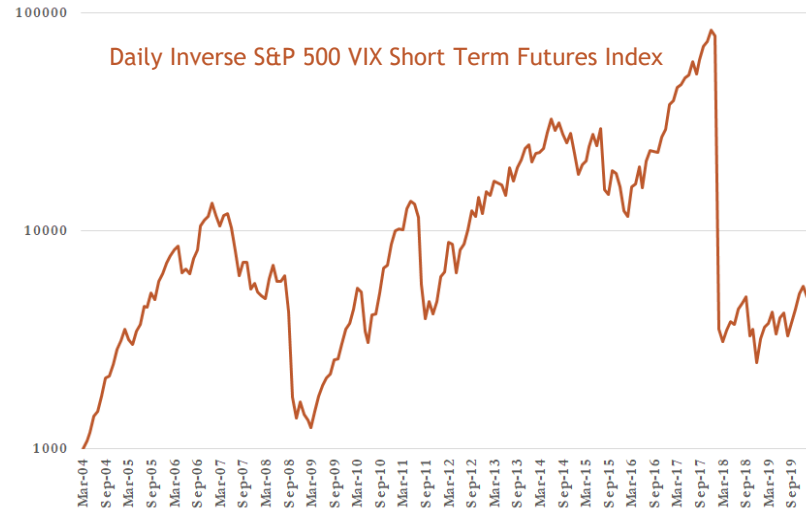
Long VIX Futures Profile

Can profit during rising volatility, but -40% annual since Mar 2004.



Short VIX Futures Profile

Profitable in rising markets, but does not hedge against rising volatility.



Any indices and other financial benchmarks shown are provided for illustrative purposes only, are unmanaged, reflect reinvestment of income and dividends and may not reflect the impact of advisory fees. Data is of date of publication. For more information regarding the benchmarks included herein, see ishares.com, cboe.com, and standardandpoors.com.



Typhon Manages Two Programs With Short Vol Components

Proteus Dynamic Volatility Program: Futures-Based

The Proteus Dynamic Volatility Program trades the VIX futures term structure. The program analyzes the shape of the curve to determine whether it should be short-vol, flat, or long-vol.

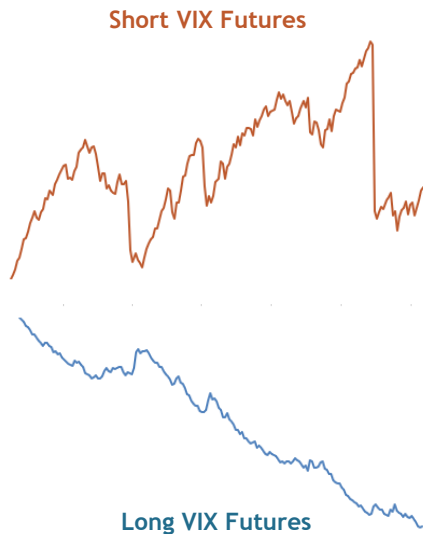
Proteus Dynamic ETP Fund: ETP and Options-Based

The Proteus Dynamic ETP Fund is a systematic, uncorrelated capital appreciation strategy using a rules-based trading system on Exchanged-Traded Products (ETPs) that track VIX futures, either long or short.



Proteus Dynamic Method

Using a proprietary analysis of VIX market relationships, Proteus systematically alternates between alpha generation and hedging portfolios to produce a more effective VIX exposure.



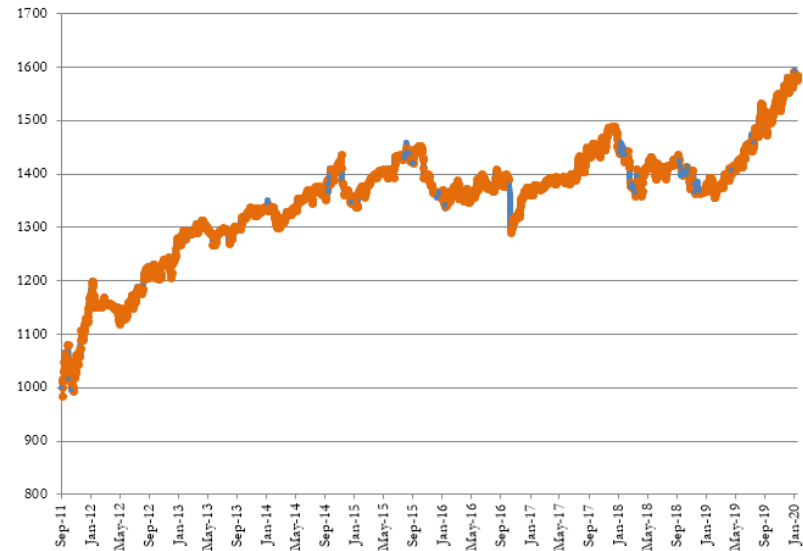
**Systematic Positioning
Based On Relationships
Among:**



- VIX futures
- Cash volatility indexes
- Implied / realized volatility

Proteus Dynamic Volatility

1x Gross VAMI, Oct 2011 – Feb 2020

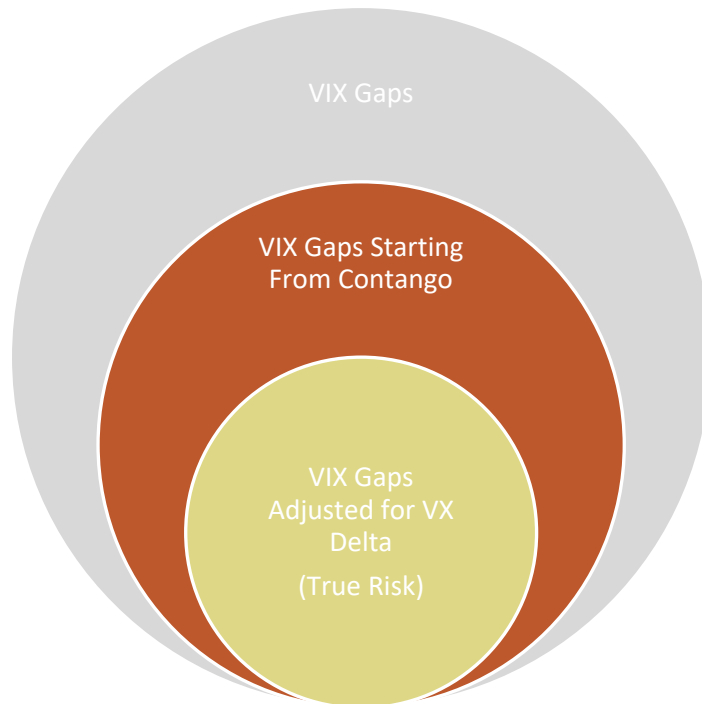


- Profitability of short VIX profile at a fraction of the volatility
- Ability to profit from rising volatility like a long VIX exposure
- Low margin usage (3-5% avg), offered up to 4x leverage

Performance prior to April 2013 is proprietary pro forma for fees. The above graph depicts daily VAMI net of commissions but gross of fees. Please see the two slides forward for monthly performance net of fees.

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Defining the True Risk of Short-Vol

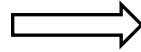


First, let's define the actual risk.

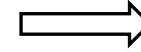
- a. Start with “big VIX gaps” (overnight moves), represented by the grey circle
- b. Now filter that by the ones that started with a contango VIX futures curve, to arrive at the orange circle
- c. Finally, we're not trading spot VIX, we are trading VIX futures. We need to adjust for VIX futures delta (front month VIX future moves roughly half the move of spot VIX on any given day). That gives us the “true risk” of shorting vol, represented by the yellow circle.

True Risk: Statistically

All VIX Gaps



VIX Gaps In Contango



VX Delta-Adjusted Gaps
(True Risk on Naked Shorts)

VIX 20%+ Overnight Gaps, 1986 - 2020
(VXO Index prior to 1990)

Rank	Date	Overnight Gap	Previous Close
1	10/19/1987	96.1%	36.37
2	10/16/1989	83.1%	28.24
3	11/15/1991	51.7%	13.96
4	7/23/1990	51.5%	15.63
5	6/24/2016	51.1%	17.25
6	10/28/1997	46.8%	31.12
7	8/3/1990	40.7%	20.43
8	3/17/1989	39.1%	16.11
9	9/17/2001	35.7%	31.84
10	8/19/1991	32.4%	16.01
11	6/22/1990	31.5%	14.72
12	1/22/2008	29.2%	27.18
13	11/27/2009	25.7%	20.48
14	7/23/2012	25.4%	16.27
15	8/6/1990	24.9%	28.74
16	1/4/2016	23.4%	18.21
17	1/12/1990	22.9%	20.05
18	11/30/1987	21.8%	42.11
19	3/15/2011	21.4%	21.13
20	1/15/2016	20.9%	23.95
21	1/3/2020	20.4%	12.47
22	11/1/2011	20.3%	29.96

VIX 20%+ Overnight Gaps
Starting From VIX < 20

Rank	Date	Overnight Gap	Previous Close
1	11/15/1991	51.7%	13.96
2	7/23/1990	51.5%	15.63
3	6/24/2016	51.1%	17.25
4	3/17/1989	39.1%	16.11
5	8/19/1991	32.4%	16.01
6	6/22/1990	31.5%	14.72
7	7/23/2012	25.4%	16.27
8	1/4/2016	23.4%	18.21
9	1/3/2020	20.4%	12.47

VIX 20%+ Overnight Gaps
Starting from VIX < 20
VX Delta Adjusted

Rank	Date	Overnight Gap VX Delta Adj
1	11/15/1991	26.9%
2	7/23/1990	26.8%
3	6/24/2016	26.6%
4	3/17/1989	20.3%
5	8/19/1991	16.8%
6	6/22/1990	16.4%
7	7/23/2012	13.2%
8	1/4/2016	12.2%
9	1/3/2020	10.6%

VX Delta-Adjusted Gaps (True Risk)

VIX 20%+ Overnight Gaps
Starting from VIX < 20
VX Delta Adjusted

Rank	Date	Overnight Gap VX Delta Adj
1	11/15/1991	26.9%
2	7/23/1990	26.8%
3	6/24/2016	26.6%
4	3/17/1989	20.3%
5	8/19/1991	16.8%
6	6/22/1990	16.4%
7	7/23/2012	13.2%
8	1/4/2016	12.2%
9	1/3/2020	10.6%

Limit True Risk By:

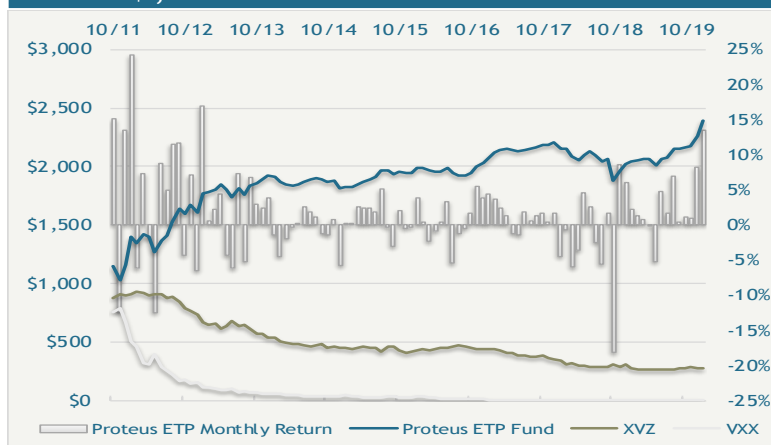
- Avoiding short vol when VX curve is inverted
- Limit Exposure
 - No Leverage
 - MTE caps
 - Notional exposure 25-50%
- Trade Construction
 - Avoid Naked Shorts
 - VIX puts / put spreads
 - VIX futures calendar spreads

Proteus Dynamic ETP Fund



Year	Monthly Net Performance												Year	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
2020	13.47%													13.47%
2019	2.14%	1.29%	0.76%	(0.09%)	(5.19%)	4.82%	1.59%	7.02%	0.45%	1.14%	1.00%	8.19%	24.93%	
2018	(4.53%)	(0.63%)	(6.05%)	(3.56%)	4.54%	2.60%	(2.44%)	(5.66%)	1.61%	(18.25%)	8.51%	6.11%	(18.84%)	
2017	4.42%	3.74%	2.33%	1.27%	(1.16%)	(1.43%)	1.87%	0.53%	1.34%	1.73%	0.43%	1.75%	17.99%	
2016	3.88%	0.42%	(2.30%)	(0.86%)	0.41%	3.28%	(5.36%)	(1.25%)	(0.45%)	1.71%	5.54%	3.89%	8.71%	
2015	0.02%	0.06%	2.54%	2.47%	2.46%	1.95%	5.21%	(0.33%)	(3.12%)	2.12%	(0.48%)	(0.25%)	13.12%	
2014	(1.42%)	(4.54%)	(2.03%)	(0.39%)	0.19%	2.64%	1.78%	1.18%	(1.19%)	(1.49%)	0.69%	(5.86%)	(10.27%)	
2013	16.96%	0.50%	2.19%	4.41%	(4.37%)	(6.12%)	7.40%	(5.15%)	6.79%	2.96%	2.44%	3.82%	34.13%	
2012	24.18%	(6.11%)	7.36%	(1.91%)	(12.45%)	8.78%	5.00%	11.46%	11.77%	(4.39%)	7.09%	(6.49%)	46.46%	

Growth of \$1,000



Selected Statistics

	Proteus	XVZ	VXX
Annualized Return	15.68%	(14.59%)	(53.92%)
Max Drawdown	(32.37%)	(74.16%)	(99.85%)
Largest Gain	24.18%	11.07%	67.47%
Largest Loss	(18.25%)	(12.35%)	(31.57%)
Sharpe Ratio	0.81	(1.07)	(1.05)
Sortino Ratio	1.47	(1.17)	(1.36)
Volatility (σ)	20.52%	13.79%	56.93%
Correlation (ρ)		-29.88%	-42.75%

Performance figures are a composite of managed account returns normalized to 2/20. Returns from October 1st, 2011 to July 31, 2016 have been independently verified by Alpha Performance Verification Services. VXX is the ETF designed to track the SPVIXSTR, S&P 500 VIX Short-Term Futures Index and XVZ is the ETF designed to track the S&P 500 Dynamic VIX Futures Index; see www.spindices.com for more information. Please see offering materials for more notes and risk factors.

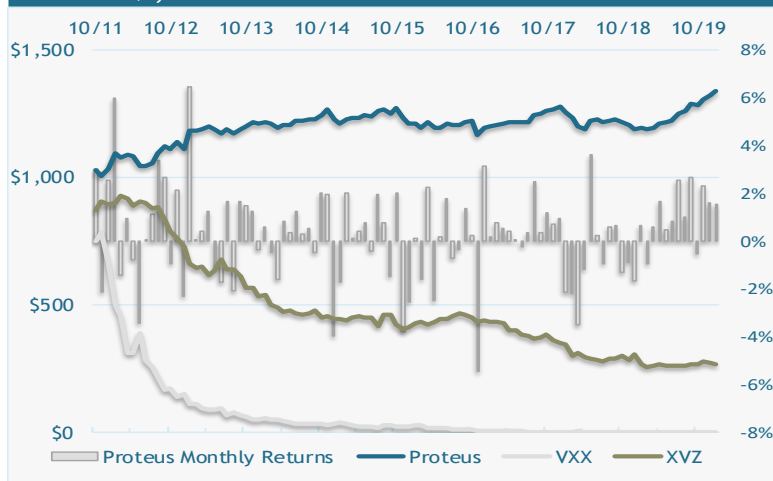
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Proteus Dynamic Volatility Program



Year	Monthly Net Performance												Year
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
2020	1.58%												1.58%
2019	0.65%	(0.91%)	0.61%	1.68%	0.49%	0.85%	2.58%	1.03%	2.70%	(0.49%)	2.30%	1.59%	13.08%
2018	(2.14%)	(2.20%)	(3.48%)	(1.14%)	3.61%	0.28%	(0.96%)	0.62%	0.64%	(1.31%)	(0.85%)	(1.62%)	(8.55%)
2017	0.20%	0.78%	0.57%	0.44%	0.09%	(0.24%)	0.36%	2.48%	0.38%	1.19%	0.70%	0.97%	7.92%
2016	0.12%	(1.56%)	2.28%	(2.48%)	0.22%	1.77%	(0.72%)	(0.32%)	1.40%	0.25%	(5.41%)	3.13%	(1.32%)
2015	(1.71%)	2.04%	0.15%	0.44%	0.80%	(0.38%)	2.00%	0.79%	(1.46%)	2.03%	(3.75%)	(2.52%)	(1.60%)
2014	0.60%	(0.45%)	(1.61%)	0.82%	0.35%	1.28%	0.33%	0.58%	(0.44%)	2.02%	1.97%	(3.95%)	1.36%
2013	6.50%	0.09%	0.46%	1.25%	(1.03%)	(1.73%)	1.67%	(2.03%)	1.69%	1.47%	1.28%	(0.35%)	9.38%
2012	6.01%	(1.40%)	0.99%	(0.75%)	(3.41%)	0.01%	1.17%	3.38%	2.68%	(0.95%)	2.15%	(2.31%)	7.43%
2011										3.05%	(2.12%)	2.59%	3.48%

Growth of \$1,000



Selected Statistics

	Proteus
Margin:Equity Avg, Max	1.9%, 15%
Annualized Return	4.07%
Max Drawdown	(10.72%)
Largest Gain	6.50%
Largest Loss	(5.41%)
Sharpe Ratio	0.59
Sortino Ratio	0.95
Volatility (σ)	6.66%

Performance prior to April 2013 is proprietary pro forma for 2/20 fees and a composite of net client returns thereafter. VXX is the ETF designed to track the SPVIXSTR, S&P 500 VIX Short-Term Futures Index and XVZ is the ETF designed to track the S&P 500 Dynamic VIX Futures Index; see www.spindices.com for more information. Please see offering materials for more notes and risk factors.

Typhon

Contact Information

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Typhon Capital Management, LLC is registered as a Commodity Trading Advisor and Commodity Pool Operator with the National Futures Association, with a 4.7 exemption for serving Qualified Eligible Participants only. Typhon Global Fund Management, LLC provides services only to non-US investors and tax-exempt US institutional investors. Typhon Securities, LLC is currently exempt from registering with the Securities and Exchange Commission.

