RCM Alternatives

Investing in Volatility & **the VIX**

(Updated March 2021)

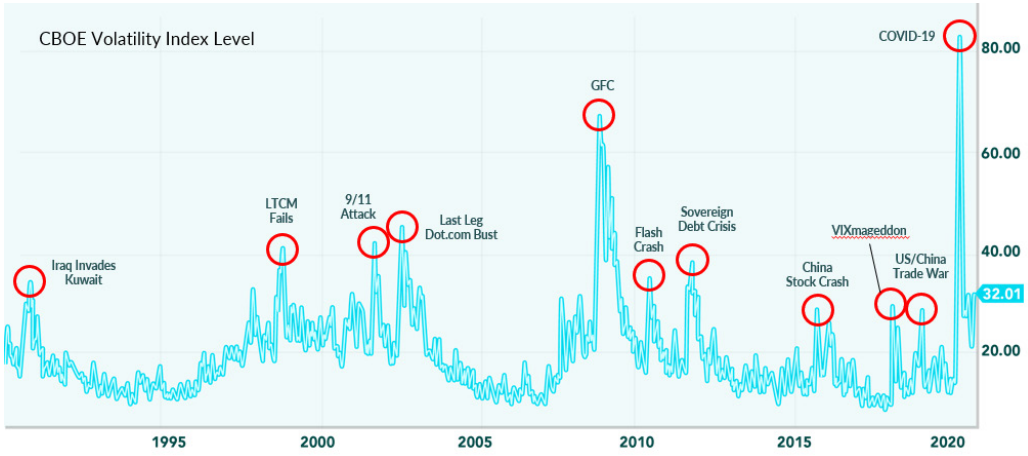
website blog podcast

Everything you need to know about **the VIX**

February 5th, 2018. Out of the blue, the financial market's so-called fear gauge, the VIX, spiked more than 100%, going above 30 for the first time since 2011! Left in the VIX's wake: more than $4 Billion or so in assets invested in exchanged traded products that tracked the VIX, with the majority of that on the short (read: wrong) side of the move a near Billion dollar mutual fund selling volatility via options forced to close, allegations of market manipulation in VIX futures, and a stunned market wondering after seeing the Dow drop 1,000+ points whether the fear index reflects moves in the stock market, or whether the stock market is now reflecting moves in the VIX.

Roughly two years later, in March 2020, and a global pandemic sent stock screaming lower – putting in their fastest 30%+ drop EVER, in turn sending the VIX from 13 all the way up to 83. And products like the $TVIX ETN from a price of 40 to more than 800 as its assets ballooned from $2 Billion to $8 Billion.

If you haven't caught on yet, the VIX spikes when US stock markets crash. Sometimes magnificently so. Here's the action back to 1990 where you can see the VIX as a sort of tuning fork for some of the most memorable market events of the past 30 years:



So what exactly is the VIX Index? How does the investment community use it? What is it based on? How did to become something people invest in? Are there VIX and volatility investments out there that are a suitable option?

All questions we hope to answer in this report meant to give you the basics of the VIX, how it can spike so dramatically, why it erodes so drastically the rest of the time, and how hedge fund managers approach this unique asset.

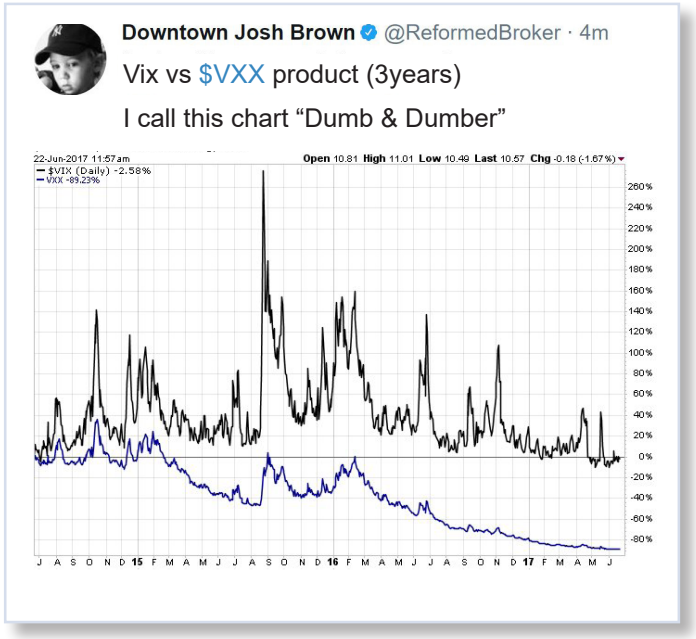
What is the VIX?

It's hard to imagine now, but we didn't used to see the VIX quoted in the Wall Street Journal, CNBC ticker, and Bloomberg terminals like we do these days. It's been 20 years in the making - and the VIX has cemented itself as the defacto volatility gauge just as the Dow (or S&P) is the defacto stock market gauge.

What's of infinitely more interest to investors, however, is how the VIX has become something much more than just an index. There are now VIX Futures and Options on VIX Futures, and a whole host of exchange traded products attempting to track the VIX to the upside, downside, levered, further out, and more. And last, but not least, hedge funds, quants and algorithms that now use the structure of the VIX to find returns with or without the fear and volatility typically associated with the VIX.

Nobody ever accused the financial industry of lacking innovation (even if it is often tainted with a negative connotation and called financial engineering), and VIX products – and ways of producing structural alpha out of those products – are just the latest example of this. It's a world with incredible opportunity, but also a world pitfalled with danger. Just take a look at the VIX chart with the VXX tracking ETF overlaid onto it, in what blogger The Reformed Broker titles "Dumb and Dumber." The VIX is roughly where it started, while the VXX is down more than -80%.

So before tackling the VIX and the dozens of ways to get exposure – let's dig into how the VIX actually works and learn a little bit more on how the products using and tracking it are designed. And you can officially upgrade your tagline to 'Smart and Smarter' *(which come to think of it would have been a better Dumb and Dumber sequel – where they take some intelligence potion or something).*



The History of the VIX

It's been nearly a quarter of a century since the CBOE launched the VIX. Like most inventions, the VIX was created out of necessity. As the Wall Street Journal puts it in this article:

> *The VIX was conceived after the Black Monday crash in 1987… The measure used stock-market bets, known as options, to gauge expectations for the speed and severity of market moves, or what traders call volatility. Options prices rise and fall based on the perceived odds of a payoff…. [and]…options prices fluctuate constantly as traders react to news and reassess their risks. Those prices feed into the VIX.*

Armed with all of this data of the option prices and their reactions to news, the largest options exchange – the Chicago Board Options Exchange - launched the VIX as an index in 1993. But there it stayed as just a way to gauge market sentiment for nearly 20 years, until Mark Cuban (yeah, that Mark Cuban…we weren't expecting him to be part of this story either) entered the picture in 2002.

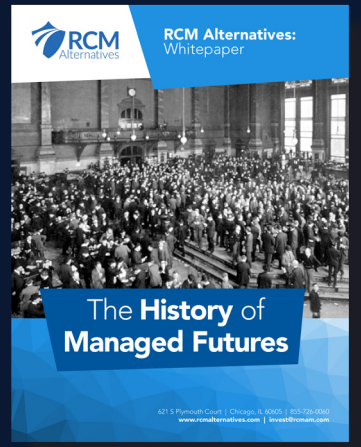
> *… newly minted billionaire Mark Cuban called Goldman Sachs Group Inc. looking for a way to protect his fortune from a crash. Because the VIX typically rises when stocks fall, he wanted to use it as insurance. But there was no way to trade it.*
>
> *Devesh Shah, the Goldman trader who fielded the call, says he instead offered him an arcane derivative called a "variance swap," but Mr. Cuban wasn't interested.*

Goldman Sachs is many things, but one thing it seems to do well is realize that a billionaire wanting something is probably a good place to start when thinking of new products, and sure enough…

> *Lamenting the lost opportunity, Mr. Shah met up with Sandy Rattray, a Goldman colleague and erstwhile indexing buff with a knack for packaging investment products. What if, the pair speculated, they could tap the VIX brand and reformulate the index based on their esoteric swaps?*

Shah and Rattray ran with the idea, coming up with a reformulated version of the VIX which could better be productized, and "handed it over" (that's all we can find on the deal, but surely they sold it for something…we hope) to the CBOE, who eventually launched VIX Futures in 2004, followed by VIX options in 2006. As an aside, Mr. Shah became the CIO of Man Group, who knows a thing or two about futures markets via their purchase of AHL (see our History of Managed Futures for more on that).

Check out our "The History of Managed Futures whietpaper:



So, What Does a VIX of 20 Mean?

We all see the numbers now pretty frequently, but it's rare to find many people who actually understand how its calculated and what the VIX value really means. To understand how it's calculated, think about it like a real time reading of prices for insurance on the US stock market, as represented by options on the S&P 500 which go up and down based on expectations of market price movement. If it were car insurance, imagine it like insurance re-priced in real time, with premiums going up when you get in the car, go faster, when it's raining, and so on, and going down when you pull into the garage, are asleep at night, and so forth.

But with the VIX, this isn't long term insurance – the options prices that feed into the VIX calculations are only designed to be looking 30 days out. And to make it more confusing, the 30-day look is then annualized to arrive at the VIX number, which represents the annualized implied volatility of the S&P 500 stock index (over the next 30 days). Technically, it is the implied 1-month variance of the S&P 500, as explained here in detail, but to keep it simple here volatility will do.

Doing some math, we can then surmise what that means for daily or weekly implied volatility. For example, when the VIX is around 20, it implies that traders believe the S&P 500 will have about 20% annualized volatility over the next 30 days, which equates to a monthly vol of 5.4% and daily vol of 1.26%. Here's a good explainer if you want to dig into the math some more.

Now, as noted, the VIX is a measurement of the estimate of option prices over the next 30 days, but there are options ranging everywhere from the next day to next 500 days. And indeed, the creator of the VIX, the CBOE, also has volatility indices on option prices for 9-, 93-, 180-, and 1-year prices – but we've all sort of decided as a financial society to just quote the VIX as the defacto volatility gauge.

The VIX is also trying to reflect what is happening across many different option strike prices, which the VIX does by sampling between 175 and 200 option prices (you can see the listing here if you're interested). But, again, it is using a subset of all available options.

Now, most of the time it does a pretty good job of reflecting what is happening across all these different time frames and market levels. But every now and then the timing (and/or the pricing) matters.

Bring On the Volume

We're not sure if anyone at the CBOE would have imagined the runaway success VIX futures and options when it first launched, when the contract mostly languished unknown and unloved by investors and traders.

But then along came the biggest financial crisis since the Great Depression, sending the VIX screaming higher, reaching a peak in the 80s during the 2008-2009 financial crisis (representing the expectation of monthly moves of more than 23% in the S&P), when markets were moving more than 5% a day and 20% monthly moves seemed like a realistic possibility.

That spike in volatility led to more Cuban-like interest in protection, which led to some more financial product engineering/innovation/development in the form of Barclays PLC launching the first exchange traded VIX product in 2009. The flood gates had been opened, and the new era of VIX as not just an index, but as a product was born.

Enter trading legends like VXX, XIV, and TVIX – who, along with more than 20 other VIX related products on the market at one point or another, have made it easier for billions upon billions of investor dollars to bet on moves in the VIX.

VIX Current and Past Products:

EVIX = VelocityShares 1X Long VSTOXX Futures ETN
EXIV = VelocityShares 1X Daily Inverse VSTOXX Futures ETN
IVOP = iPath Inverse S&P 500 VIX Short-Term Futures ETN II
PHDG = PowerShares S&P 500 Downside Hedged
SVXY = ProShares Short VIX Short-Term Futures ETF
TVIX = VelocityShares Daily 2x VIX Short-Term ETN
TVIZ = VelocityShares Daily 2x VIX Medium-Term ETN
UVXY = ProShares Ultra VIX Short-Term Futures ETF
VIIX = VelocityShares VIX Short-Term ETN
VIIZ = VelocityShares VIX Medium-Term ETN
VIXM = ProShares VIX Mid-Term Futures ETF
VIXY = ProShares VIX Short-Term Futures ETF
VMAX = REX VolMAXX Long VIX Weekly Futures Strategy ETF
VMIN = REX VolMAXX Short VIX Weekly Futures Strategy ETF
VQT = Barclays ETN+ ETNs Linked to the S&P 500 Dynamic VEQTORTM Total Return Index

VXX = iPath S&P 500 VIX Short-Term Futures ETN
VXZ = iPath S&P 500 VIX Mid-Term Futures ETN
XIV = VelocityShares Inverse VIX Short-Term ETN
XVZ = iPath S&P 500 Dynamic VIX ETN
XXV = iPath Inverse S&P 500 VIX Short-Term Futures ETN
ZIV = VelocityShares Inverse VIX Medium-Term ETN

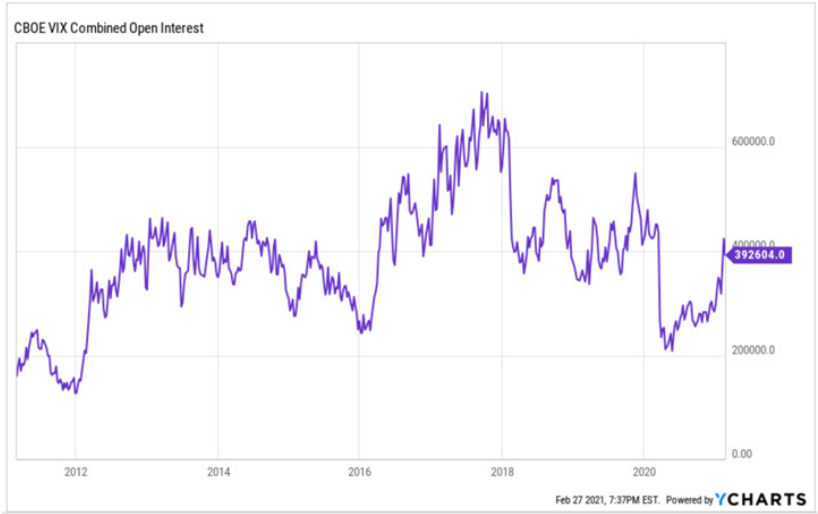
Bring On the Volume

Biggest Active VIX ETFs as of the end of February 2021 per ETF Database:

Symbol	ETF Name	Total Assets ($MM)
UVWY	ProShares Ultra VIX Short-Term Futures	$2,597.40
VXX	IPath Series B S&P 500 VIX Short-Term Futures ETN	$1,439.32
SVXY	ProShares Short VIX Short-Term Futures	$463.93
VIXY	ProShares VIX Short-Term Futures ETF	$460.29

The interest in these products keeps the folks at the CBOE smiling from ear to ear when they lay their option filled heads on their pillows at night, with the products use of the VIX futures having led to one of the best futures contract success stories since the e-mini S&P, seeing 1,400% growth in open interest between 2007 and 2018.

Although… the blow up of the XIV product during Vixmageddon in 2018 and delisting of the TVIX product in 2020 has certainly shifted the narrative around the success of this product, with open interest in the VIX futures roughly half of their 2017 peak.



For more on TVIX, listen to this Derivative podcast episode:

$TVIX gets Terminated – What^%$#
Jim Carroll
Pat Hennessy

How To Trade the VIX?

With all of these choices, including options, futures, ETFs, inverse ETFs, ETNs, options on futures, and more allowing investors to establish a bet on what happens to the VIX; how do investors wisely go about getting the exact exposure they want? That calls for two types of explanation:

1. The simplistic, humorous, graphical explanation:

2. The more serious, technical explanation of VIX ETPs/ETFs:

Of course, not everyone has that handy infographic to fall back on; and without a guide – billions of dollars have flowed into VIX related exchange traded products (read: ETFs and ETNs). At first, most of this money was using the long VIX products designed to make money when VIX prices rose. After all, what's not to like about a low-cost ETF you can turn on/off to protect against volatility spikes. It's just the sort of thing Mark Cuban was after.

Well, turns out there was a lot not to like about it. For one, the structure of these things, being a security (an ETF, or technically an Exchange Traded Note, or ETN, most of the time) which owns a derivative (VIX futures) of an index (VIX) calculated off of prices of derivatives (S&P 500 options) of a stock index (the S&P 500) is a sort of derivative on steroids – a quadrivative, if you will, - with enough twists and turns to make your head spin. As one Barron's article put it bluntly:

> *Can you trade the fear gauge that everyone quotes? If you answered yes, study the VIX and come back next year. If you know the fear gauge is a tracking index, onward to the next level. How are VIX options priced? If you answered VIX futures, you know more about the VIX than most. Still, if you cannot see the VIX futures curve in your head, burning $100 bills is probably more profitable than trading them.*

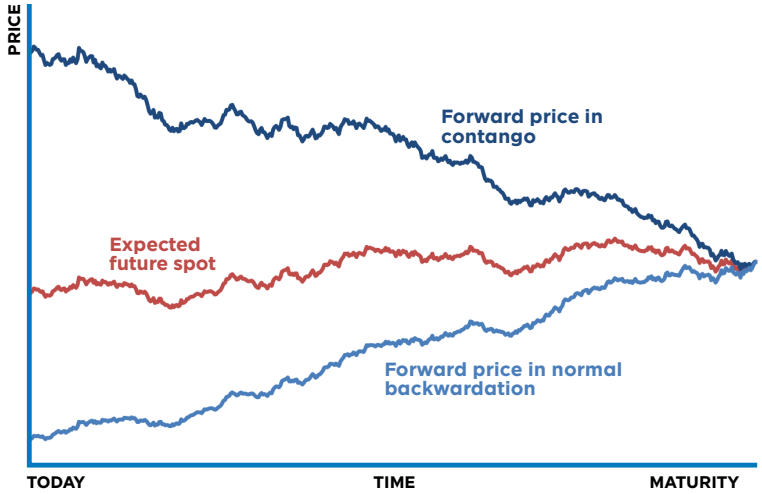
Click here to view full version

How to Trade the VIX?

That part about the futures curve might be the most important, however, because investors quickly found out there was a massive roll cost associated with the ETFs structure of providing access to front month futures prices – which must be sold and reestablished in the new 'front month' contract each month. That becomes a problem when the futures curve is in what's called contango.

Simply, contango is when the front month contract is priced lower than the later dated contracts (i.e., April's Crude Oil contract may be priced lower than June or July's), which in and of itself isn't a problem, but signals a situation in which the spot price is below the nearest futures price, in turn causing the futures price to typically fall to the spot price at expiration.

This is an inherent issue for commodity ETFs which usually find their commodity exposure in the front month futures contract. Which means when the front month contract converges (i.e., sells off) to the lower spot price, the ETF loses money – even if the cash or index price of the thing the ETF is tracking, be it Crude Oil or VIX futures, hasn't moved at all. It's especially a problem in the VIX, where the index has a rather natural inclination to be higher at first and decline into each futures expiration. This makes sense, as a lot of things can happen between the present date and the futures contract's expiration date, so investors and traders' price the contract higher based on that uncertainty.



Source: The Balance.com

For more on Commodity ETFs, check out this blog post:

Commodity ETFs are a BAD Long Term Bet - Duh

Wait... If exposure to the VIX (Volatility) is so expensive, why have it in a Portfolio?

It seems counter-intuitive that you would want an asset in your portfolio that mostly loses money, except for rare, quick bursts to the upside. For one, it would be very hard to stick with over years and years. But it can be true on the portfolio level that this type of 'lose a lot of the time, win rarely but spectacularly' investment can actually help a portfolio. Here's an abridged version of a great tweet thread by one of the smartest hedge fund managers we know, Benn Eifert explaining the phenomenon:

Benn "DJ D-Vol" Is Not A Cat
@bennpeifert

"Tail hedging involves buying option-based insurance against market drawdowns. Because markets generally charge a risk premium for insurance, the expected returns of a tail hedging strategy over long periods of time are negative..."

"But what [about] the portfolio effect. Tail risk hedges are inversely correlated with the performance of risk assets and produce outsized returns during times of crisis. As a result, if tail risk hedges are added to a long-term, regularly rebalanced portfolio, they can cushion drawdowns and mitigate the mechanical reduction of risk asset exposure during times of stress."

*"In doing so, they can enhance the long-term compound rate of return of the overall investment program, **despite the hedges themselves losing money over long periods of time on a stand-alone basis**. "*

"Some people find this counterintuitive at first. How can adding a money-losing strategy to a portfolio cause that portfolio to make more money over time? Intuitively, it is because the outsized performance of a tail hedge during large market drawdowns allows a regularly rebalanced portfolio to have more dollar exposure to risky assets in the periods immediately following those large market drawdowns. "

For more from Benn Eifert, listen or watch this Derivative podcast episode:

VOL - Benn There, Done that with Benn Eifert of QVR Advisors

Follow more tweets from Benn Eifert

@bennpeifert

Wait... If exposure to the VIX (Volatility) is so expensive, why have it in a Portfolio?

Figure 4: Cumulative simulated performance of systematic hedge (1-year 30-delta S&P 500 puts, delta hedged)

Notes: Rolled quarterly, targeting new 1-year 30-delta puts, skew delta neutral initially and rehedged daily. Targeting a constant gross dollar notional size. Performance shown as a % of target notional. Simulated transactions include transaction costs of 0.1x vega. It is worth noting that QVR's option transaction cost attribution, as independently estimated by SpiderRock, is consistently positive, indicating buying below theoretical mid-market and selling above theoretical mid-market on average.

Figure 5: Simulated cumulative impact of adding 1-year put hedge to 60/40

Notes: Hedge portfolio simulation as described in above paragraph, with quarterly rebalancing staggered in tranches at 2-week intervals to average out rebalance timing luck.

"Let's take a (money-losing, on average, over time!) hedging strategy... nothing special, just 1-year 30-delta puts, delta hedged and rolled quarterly..."

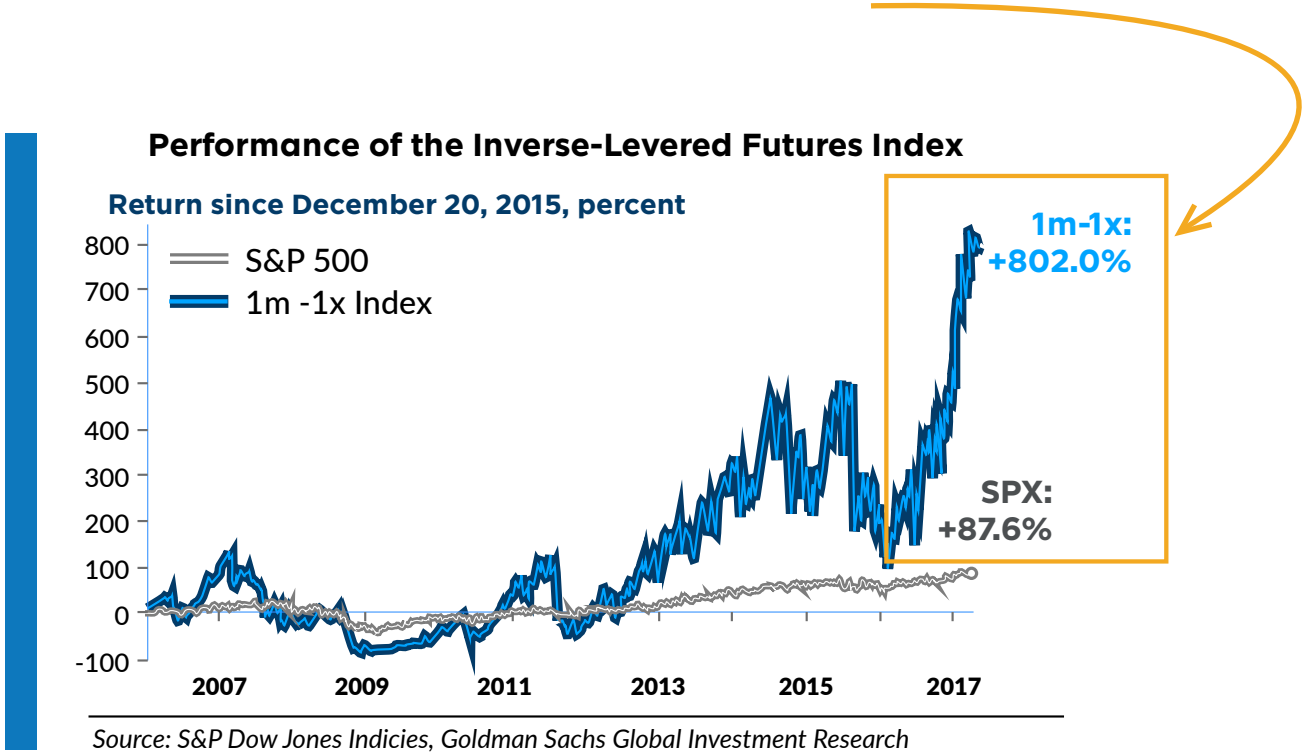
"And now let's add it to a 60/40 portfolio with regular quarterly rebalancing between all three components... see how it's not just a lower volatility portfolio as a result, its long-term returns are higher..."

🚀 MANY DO NOT UNDERSTAND THIS 🚀

The Short Volatility Siren Song

Of course, not everyone thinks like Dr. Eifert. Most see the steady decline of long volatility and want to capture it. And indeed, seeing this huge roll cost and time decay inherent in the structure of the futures market and resulting ETF products, the good folks at the ETF shops did what ETF folk do – they created products which did the exact opposite, rolling out inverse VIX based ETFs which would rise in price as volatility fell (or even as it remained at the same levels due to that roll cost, which the inverse ETFs would now be earning and calling a roll yield).

The benefit of this strategy, selling front month VIX futures, was laid clear for all to see in The prices of the inverse VIX products; two of the most popular XIV, and SVXY both went from 20 - 130 in 24 months (2016-2017) – and in this handy inverse VIX index put out by Goldman Sachs research, showing a gain of about 700% since the beginning of 2016!



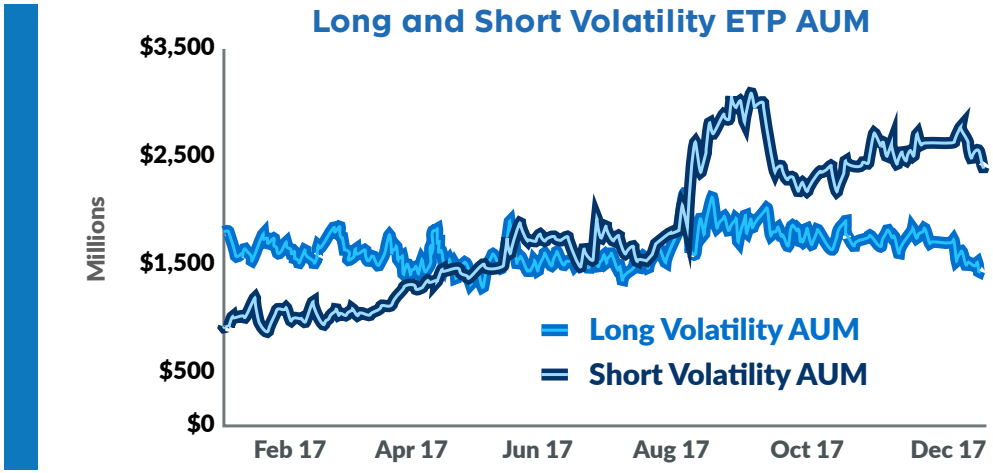
Source: S&P Dow Jones Indicies, Goldman Sachs Global Investment Research

The Short Volatility Siren Song

Of course, with one side – the short side - of the VIX trade having performed so much better on the nearly $4 billion in investor bets on volatility, it was only natural for more and more players to enter the volatility trade on the short side, leading perhaps to a self-fulfilling volatility dampening profile. As JPM's quant Marko Kolanovic put it via ZeroHedge.

> ***Shorting volatility is a multi-year alpha generating strategy*** *utilized by the largest pension funds, asset allocators, asset managers and hedge funds alike that has profited from selling into short-term vol spikes (similar to 'buying the dip').* ***It will be continue being done until it ceases working; it remains a performance driver for now.***

Said another way, the short volatility trade became something of a wealth transfer mechanism between the cautious/fearful and the observant/risk acceptors, with Goldman estimating that *the S&P 500 VIX Short-Term Futures Daily Inverse Index which tracks the return of being short a one-month VIX future was up 4364% from March 9, 2009 through 1Q 2017.* With returns like that, it's no surprise that 2017 saw assets on the short side of the trade eclipse those on the long side. The insurance sellers now outnumbered the insurance buyers.



Source: TCW FactSet

Of course, it's never that easy….

For more on strategies, check out our Managed Futures 2020 Strategy Review:

Volatility Comes Knocking

Surprising everyone, and somehow at the same time **– no one –** volatility awoke form its long slumber on February 5th, 2018.

- **The Dow lost -1,175 points, or -4.6%** (after going about 14 months without a -3% decline)
- **The VIX rose 116%, from 13 to 37** (its largest daily move ever)

Suddenly, the short volatility trade Goldman had been trumpeting and seemingly everyone had been piling into per the billions in short VIX ETFs, had reversed course in a massive, drastic way. If selling volatility is picking up pennies in front of a freight train, there were suddenly Billions of dollars left exposed on the tracks as a massive train came barreling down on investors.

But here's where things get interesting, because this wasn't just a run of the mill 1,000-point decline in the market. No, the bulk of this move happened in the last hour of trading, with losses in Dow terms going from -800 points to -1597 points at the lows - nearly doubling after 3pm EST.

Why the late day move? Turns out the late day increase in selling pressure, was due in large part to our friends the volatility sellers – and specifically the two largest inverse VIX products, XIV and SVXY, who had massive amounts of short VIX futures they had to buy back to 1. meet margin calls and 2. rebalance the fund to track that day's move in the VIX index. Here's blogger Kid Dynamite on how this all works, via Bloomberg:

> *So, XIV has $ 1.5B notional short VIX futures, and an NAV of $ 1.5B ($ 100/share). Now let's make up some numbers: Imagine what happens when the short VIX futures go up 40%. XIV now has $ 2.1B in short futures exposure, and a NAV of only $ 900MM (because it has lost $ 600MM on the short futures position). So, what does the XIV manager have to do? He goes out and buys VIX futures to reduce his exposure and get it back in line with the NAV.*
>
> *Herein lies the rub… As the XIV manager goes out and buys VIX futures, in massive size, in an illiquid volatility market, he drives the price up…which drives the NAV down… which requires him to buy more VIX futures… Rinse, repeat. This is why we saw VIX futures spike late in the day on Monday, and especially into the 4:15pm ET benchmark ….*

Volatility Comes Knocking

And here's where a bad day became a very bad day for XIV, in particular.... because there was an artificial line in the sand that drew traders to it like a moth to a flame. We're talking about the -80% 'knock out' level created by XIV issuer Credit Suisse in the fund's prospectus (read more about that here) which said if the fund was less than 20% of its previous day's value, Credit Suisse would terminate the product to insure they didn't lose more money than was invested in the product.

[Listen to the RCM podcast with Logica's Mike Green who, along with Chris Cole of Artemis Capital Mgmt. had actually called this out to the creator's face on stage at a derivatives conference and built up a rather sizable position to cheaply bet on exactly what happened.]

Meaning, the closer XIV got to being down -80%, fund wouldn't just have to buy more futures – it would need to buy all of its positions back, meaning other traders were all of a sudden clued into the fact that there was a very large buy order waiting in VIX futures if prices just went a bit further up, creating a massive short squeeze that essentially drove the VIX to exactly the spot it needed to be in order to pierce the -80% level for the ETF.

When the dust settled, $1.7 Billion invested in XIV was essentially wiped out, and the question of when will the short volatility trade become too crowded was answered. Between 3 and 7pm on February 5th, 2018.

Credit Suisse's inverse VIX ETF - XIV

Source: Barchart.com

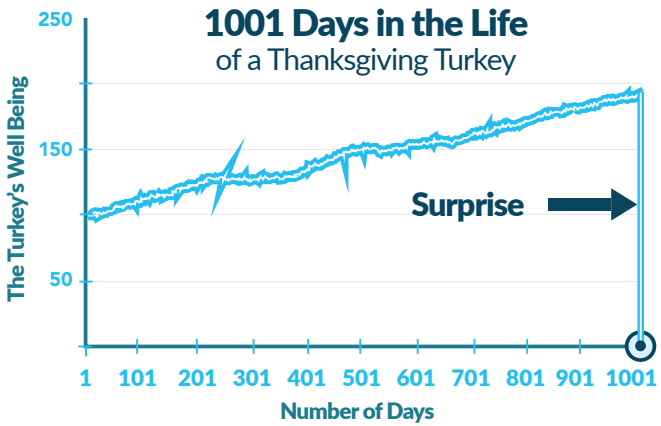
Listen or watch the Derivative podcast with Logica's Mike Green:

Straddles, SVXY, and (GAMMA) Scalping with Logica's Mike Green

Volatility Comes Knocking

We couldn't help but be reminded of the lovely chart of the life of the Thanksgiving turkey from Nassim Taleb's wonderful book, The Black Swan, when looking at the XIV graph.

XIV Comparison Life of a Thanksgiving Turkey



The reason for this profile is that inverse VIX products make a living by risking a small probability of losing a very large amount to generate a high probability of making a very small amount time and again. They are literally betting nearly everything against exactly what happened on Feb. 5th. Problem is, when you go through a period of next to no volatility, this risk gets masked.

It should statistically show up as a high Kurtosis and Negative Skew, but can only do so after many, many spikes such as that. There's just not a large enough sample size to show the true risk profile. Until that point, the losses were hidden from view. Just so happens all of these inverse products were launched and operated in an environment largely devoid of any such spikes which would have/could have informed investors.

Problem is – the other side of the trade was terribly bad (right up until Feb 5th) **too, with a steady diet of lower lows year after year. What's an investor to do?**

Check out our Thanksgiving Turkey blog post:

The Not So Pleasant Ending to The Pleasant Life of a Turkey

So how do you capture the natural decay in volatility pricing that led to that nice upward sloping performance curve in the inverse VIX products (the first 1000 days of the Turkey's life, so to speak), while protecting against those nasty spikes which can wipe away everything you've gained up to that point?

Well, none of the currently available ETFs and ETNs are up to that challenge; with each designed to perform during one or two of those phases, but not all three. No, to perform in all three, you would need to be able to deftly move between products, sometimes being long volatility, and sometimes short.

But how do you do that?

A new breed of managers are designed to do just this – dynamically moving between the three volatility environments of spikes, drops, and sideways movement. These managers are seeking to be a sort of 'go anywhere' strategy in the volatility space while retaining as much as possible of the convexity options and the VIX futures provide.

Some are looking to capture the VRP, or Volatility Risk Premium (a fancy way of saying capture the erosion of the VIX futures covered above without getting run over by the spikes. These are now called anything from volatility arbitrage to convexity to just plain old volatility traders. And others are looking to be the most direct hedge available in the Alts toolbox these days, acting as dedicated, active long volatility strategies.

The main types of VIX/Vol Trading can be categorized into three main types of strategies:

1. Volatility arbitrage
2. Long options tail risk
3. Convexity strategies.

For more on Volatility, listen or watch this Derivative podcast episode:

Navigating Market Volatility

Volatility Arbitrage

Taylor Pearson of Mutiny Funds (more on them in a minute), summarized this category of Volatility Traders in his blog post, What is the VIX... nicely, saying:

> *...the most common [ways to trade the VIX]...by professionals are relative value strategies. Relative value strategies allow volatility traders to have exposure to the VIX while managing their risk of either "bleeding" in calm markets or blowing up in volatile markets.*
>
> *Two of the most common relative value strategies that we'll look at are VIX Calendar Spreads and the VIX/S&P Pairs Trade.*
>
> *VIX calendar spreads involve selling one (or more) contracts on the VIX curve while buying another (or more).*
>
> *By selling the expensive part of the curve and buying the cheap part of the curve, they are betting on the relative value moving into line with what their models predict.*
>
> *The VIX/S&P pairs trade typically involves either going long both the S&P and VIX at the same time OR short both the S&P and VIX at the same time.*
>
> *By being long the VIX and long the S&P, a trader is typically betting on volatility expanding but also being somewhat hedged as declining volatility is usually accompanied by rising equity prices.*
>
> *Being short the VIX and short the S&P is a bet on volatility declining but also being somewhat hedged as a market sell off would cause a spike in the VIX (leading to losses) but a decline in the S&P (leading to some offsetting gains).*

Other strategies in the Vol Arb space look more like FinTwit stars @jam_croissant and @ksidii who monitor market flows and dealer positioning to find areas where the market may be dislocated, or supported, or both – and find convex ways to play those levels.

Programs we work with in the Volatility Arbitrage space at RCM include:

- Kai Volatility Advisors (@jam_croissant)
- Ambrus Group (@ksidiii)
- Certeza (@CertezaAM)
- Covenant Capital (@CovenantCap)
- Deepfield Capital
- Principalium
- QVR Advisors (@bennpeifert)
- Rotella Capital

Tail Risk/Options/Convexity

There's lots of stuff out there which is labeled tail risk but is actually only Bonds or Gold or some other type of diversifier – so be careful and be sure to look under the hood. But true, actual Active Long Volatility strategies are different in that they actively look to profit from a market sell-off.

They don't rely on their portfolio eventually becoming negatively correlated to stocks (ehh hemm Managed Futures). They don't rely on their historical negative correlation to stocks like Gold and Bonds. And they don't rely on their trading strategy being statistically non-correlated.

They actively set up their trades and portfolios to make money at an increasing rate – what we call convexity - when the market sells off. The simple example to this is buying Puts, which payoff when prices fall – not because that's what's always happened, or because that's what's happened in a strategy's backtest; but because that's how the investment is actually structured. It can't not make money when the market falls.

Heavyweights in this space included Taleb and Spitznagel's Universa Fund, Chris Cole's Artemis Capital, and Vineer Bhansali's LongTail Alpha.

The trick with this strategy is being able to limit the cost of owning this long volatility exposure. In the owning Puts example, you would have to pay the premium month after month until the markets move down past your Puts. That gets expensive and is essentially the reason you see the long VIX ETFs lose money month after month. Universa, as far as we know, basically just tells investors to deal with this cost, as blended with the overall portfolio it will result in higher compound returns.

But elsewhere, the professional managers in this strategy use several methods to limit this bleed, including many different flavors and methodologies of the Vol Arb strategies mentioned above, the use of cheaper proxies to own Put options on stock down moves (like Bonds or Gold), the use of option spreads or complex options that payout on multiple events occurring, and more.

Convexity Seeking Short Term/Day Traders

One more strategy not quite encapsulated by the above categories are programs that different flavors of volatility breakout type models, AI, and pattern recognition to try and capture short term sell-offs (and rallies off sell offs.)

This is perhaps the toughest of the games out there, and nowhere near the 'structural' certainty one might have with Put options. But they also don't try and capture every move, and may even capture some equity market upside in their efforts to not have the bleed a more certain put strategy might have.And they can also participate in market downside when volatility is very high and more classical tail risk strategies based on purchasing options are expensive to implement.

Programs we work with in the Tail Risk/Options/ space at RCM include:

- Artemis Capital Mgmt. (@vol_christopher)
- Black Bear Advisors
- Equity Armor Investments (@JoeTigay)
- Logica Capital Advisers (@waynehimelsein & @profplum99)
- LongTail Alpha (@longtailalpha)
- SCT Capital Management (@HariPKrishnan2)

Prorgams we work with in the Short Term/Day Traders space at RCM include:

- 3D Capital
- Breakout Funds
- Deepfield Capital
- QTS

Volatility Trader Fund of Funds

If this is all seeming a bit complex right about now. You've been paying attention. This is incredibly complex (quadrivitive level, as we said earlier) type stuff. What's more, as with any investment class, it is very hard to know before hand which type of vol strategy, or which individual program, will perform in the near future and over the long term. It would be nice to bet on them all.

Enter the scratch their own itch, entrepreneurial, long vol loving folks over at Mutiny Funds. They worked on this problem and identifying these types of managers for years, and came to a few conclusions:

1. That they wanted this type of long volatility in their own portfolios.

2. That relying on just one or two of these managers introduced too much idiosyncratic risk – what if they missed the vol spike?

3. That there wasn't an easy way to gain access to many of these types of managers.

So they did something about it, launching a first of its kind Long Volatility Fund of Funds which allocates across these different types of Vol Trading strategies and across many of the managers listed above.

Mutiny Funds believes an ensemble approach which layers different strategies unique look on long volatility on top of one another will insure no matter what the next market crash looks like, they will be there to capture it. And that such an ensemble approach can do a better job of keeping the cost of such protection as low as possible. Indeed, they are designed to try and actually capture some positive returns in risk on environments as well as risk off.

See what they've been up to over at MutinyFund.com.

For more on this Fund, listen to their Derivative podcast episode:

Protecting Against a Market Mutiny with Tail Risk, Convexity, & Long VOL

Conclusion

Despite the very real dangers of VIX trading, as seen in the long volatility products losing the bulk of their value over several years, and the inverse volatility products losing the bulk of their value over a few days. It seems the VIX trading genie has been let out of the bottle, so to speak, and there'll be no putting back the dozens of ETFs and ETNs giving exposure to volatility one way or the other.

But while many are looking at VIX products with the simplistic type of decision tree outlined in our infographic (do you think it's going to spike? When?), there are professional hedge fund managers out there who look at the VIX in an entirely different way.

They see it as a product with inefficiencies to be captured, as a hedgeable trade on market structure; to both produce income during normal times and capture gains from the panic associated with market crashes, whether those be short-lived or longer term.

Call our team at **855-726-0060** to learn more **about how these managers are approaching the market** and **how they may fit into your portfolio.**

Resources

Watch

YouTube VIX & Volatility Playlist

Podcasts

The VOLvengers: Wayne Himelsein and Mike Green

Vol – Benn There, Done That with Dr. Eifert of QVR Advisors

Gold, Gas, and Global Inflation with Diego Parrilla of Quadriga Asset Managers

Vol Curves and Vanna Charm with Cem Karsan

Straddles, SVXY, and (Gamma Scalping with Logica's Mike Green

Sequencing, Skew, and (Options) Strikes with Hari Krishnan

Seeking (VIX) Certainty with Certeza's Brett Nelson

Market Up/Vol Up, Market Down/Vol Down...Wtf Episode

Who Would Want to SELL Options with Mark Adams of Warrington Asset Management

Overheard at a Vol Conference – Breaking Down Global EQD Global 2020

Valuing VIX and Volatility with Joe Tigay

The Principles of VIX Trading with Alex Orus

Navigating Market Volatility

Wayne Himelsein: The Human Behind the Hedge Fund

Read

The Best Vol/Vix follows on Twitter

Blog Posts

When A VIX Spike Doesn't Equal Volatility

Event Vol And The Key Us Election Event(s)

Nowhere To Run... Nowhere To Hide

Just How Crazy Was September For VIX Traders?

Tail Risk Hedging, Part IV

Is It Too Late for Tail Risk Protection

The Great Tail Risk Debate

S&P Down, VIX Down – What Gives?

5th Biggest VIX Spike Past 20 Years?

Will We Ever Stop Talking About The VIX?

A Thoughtful VIXperiment

Throwback Thursday: VIXmaggaedon

Are We In A New (Higher) VIX Regime?

They're Baaacckkk – VIX Pops 8mos After Feb 5th

VIX: Not All 1,000 Pt Drops Are The Same

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We recommend investors visit the Commodity Futures Trading Commission ("CFTC") website at the following address before trading: https://www.cftc.gov/ConsumerProtection/EducationCenter/areyouabouttotrade.html

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