WHAT IS VIX TELLING INVESTORS?

Gaurav Sinha – Associate Director, Asset Allocation and Modern Alpha
06/14/2018

I have written on the jump in the VIX that occurred in February, taking investors by surprise. While there was a precursor to this unprecedented surge in the VIX (a compression of spreads between implied minus realized volatility), it was subtle and the move was very sudden. VIX moves are important due to their strong negative correlation to equities.

In this blog post, I will highlight another relatively more stable signal we have been following and the one that has been flashing red for some time, the VIX futures curve. I will also talk about strategies that can cushion market corrections that typically follow periods of heightened volatility.

VIX Futures Curve: A Signal to Watch

The VIX is indicative of one-month implied or forward volatility. When there is a spike in the VIX, it simply means investors anticipate higher volatility in the future.

Now, most investors are aware of term-structure curves in relation to commodity futures curves. Similarly, VIX can also have a futures curve where different points in the curve imply investors' anticipation of implied volatilities at that time.

Under normal circumstances, as one moves further out in the future on the curve, corresponding values should be higher, partly because six months have more uncertainty than, say, one month.

In other words, usually six-month minus one-month VIX futures spreads should be positive. Commodity traders refer to this upward sloping nature of a futures curve as being in "contango," and it also implies a roll cost every month—why investors structurally long in volatility-hedging products face a strategic headwind.

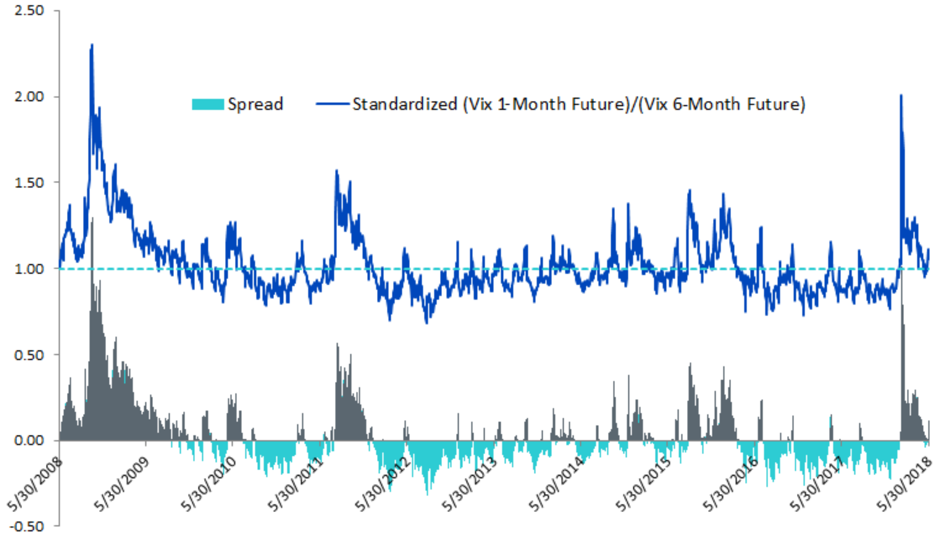
The exhibit below shows a standardized series of VIX one-month and six-month futures contracts going back 10 years. Out of about 2,610 trading days, there were about 1,193 days (46% of time) when the one-month standardized VIX was higher than the standardized six-month VIX.

To put it simply, VIX one-month futures surged faster than VIX six-month futures (highlighted in gray on the lower chart). It happened during the **financial crisis of 2008–09** and during the **Greek default and euro-contagion in 2011, and most recently this inversion started on January 29,** right before a big spike in VIX on February 5 ahead of the substantial decline in equities in the weeks that followed.

An acceleration in the near-term over medium-term VIX can thus be a strong signal of heightened volatility and possible market corrections.

What can take investors by surprise is that with an occurrence rate of almost 50% (1,193 days out of 2,610 days), this acceleration is not uncommon!

VIX 1-Month Volatility Surpasses VIX 6-Month



Sources: CBOE, Bloomberg, WisdomTree, as of 5/31/18. Period covered: 5/30/08–5/31/18. Past performance is not indicative of future results. You cannot invest directly in an index. Index performance does not represent actual fund or portfolio performance. A fund or portfolio may differ significantly from the securities included in the index. Index performance assumes reinvestment of dividends but does not reflect any management fees, transaction costs or other expenses that would be incurred by a portfolio or fund, or brokerage commissions on transactions in fund shares. Such fees, expenses and commissions could reduce returns. WisdomTree, its affiliates and their independent providers are not liable for any informational errors, incompleteness or delays or for any actions taken in reliance on information contained herein.

How WisdomTree Can Help?

Can investors mitigate these periods of high volatility?

In 2016, WisdomTree launched its first option-selling strategy, the WisdomTree CBOE S&P 500 PutWrite Strategy Fund (PUTW), which tracks the Cboe S&P 500 PutWrite Index (PUT).

This cash-collateralized strategy sells at-the-money (ATM) monthly put options on the S&P 500 Index and collects premiums. Therefore, by generating monthly income by selling put options, this strategy aims to offset losses in a declining market while still providing positive returns during rising markets.

Given PUTW’s popularity and track record, we also launched a small-cap version of the same strategy, the WisdomTree CBOE Russell 2000 PutWrite Strategy Fund (RPUT), which tracks the Cboe Russell 2000 PutWrite Index (PUTR) and sells cash-collateralized monthly ATM options on the Russell 2000 Index.

The table below highlights the relative cumulative outperformance of these option-selling strategies against their respective equity benchmarks during above-discussed periods when short-term volatility surged.

	Large Caps		Small Caps	
	# Days	Total Outperformance of PUT Index Over S&P 500 Index	# Days	Total Outperformance of PUTR Index Over Russell 2000 Index
When VIX 1 Month future picked up faster than Vix 6 Month furture	1193	51%	190	12%

Sources: Bloomberg, CBOE. Period Covered (Large Caps) 05/31/2008 – 05/31/2018. Period Covered (Small Caps) 11/30/2015 – 05/31/2018. Past performance is not indicative of future results. You cannot invest directly in an index. Index performance does not represent actual fund or portfolio performance. A fund or portfolio may differ significantly from the securities included in the index. Index performance assumes reinvestment of dividends but does not reflect any management fees, transaction costs or other expenses that would be incurred by a portfolio or fund, or brokerage commissions on transactions in fund shares. Such fees, expenses and commissions could reduce returns.

For definitions of terms in the chart, please visit our glossary.

Taking it one step further, I also show the five longest instances in which VIX one-month futures constantly traded higher than VIX six-month futures, for large- and small-cap universes.

Large Caps

PUT Index vs S&P 500 Index

Period Start	Period End	Period Length (# Trading Days)	PUT Tr. Index	S&P 500 Tr. Index	Total PUT Excess Return
5/30/2008	7/20/2009	297	-16.4%	-30.0%	13.6%
7/26/2011	12/14/2011	102	-1.4%	-8.2%	6.7%
1/26/2018	5/9/2018	74	-0.5%	-5.6%	5.1%
12/4/2015	3/10/2016	70	-2.9%	-4.3%	1.4%
5/3/2010	7/8/2010	49	-10.0%	-10.6%	0.6%

Small Caps

PUTR Index vs Russell 2000 Index

Period Start	Period End	Period Length (# Trading Days)	PUTR Tr. Index	Russell 2000 Tr. Index	Total PUTR Excess Return
12/7/2015	3/10/2016	69	-5.8%	-8.6%	2.9%
1/26/2018	4/16/2018	57	-0.8%	-2.8%	2.0%
4/17/2018	5/8/2018	16	0.7%	0.4%	0.3%
6/10/2016	6/22/2016	9	0.3%	-1.3%	1.6%
4/7/2017	4/19/2017	9	0.7%	0.2%	0.5%

Sources (both tables): Bloomberg, CBOE. Past performance is not indicative of future results. You cannot invest directly in an index.

Options selling strategies did what they were designed to do: outperform their respective equity indexes, which were mostly trading negative for those days when volatility had spiked.

Conclusions

Short-term investors try to time markets by developing and watching various signals to time risk on or off, while long-term investors go by a simple rule: Time spent in the market is more important than timing the markets. What connects the two investing themes: To grow your portfolio, your asset allocation should be able to survive the cyclicality of markets' booms and busts.

Strategies designed to help reduce volatility, such as WisdomTree's PUTW and RPUT, deserve attention to help stay the course without introducing unique stock selection risk of other low-volatility investment strategies. By incorporating option strategies, investors could outperform not only during periods of stress but also potentially on a longer-term risk-adjusted basis. Additionally, option-selling strategies have the potential to generate higher income for an investor's portfolio during periods of heightened volatility. We believe PUTW and RPUT are compelling candidates for any risk-sensitive equity asset allocation.

Important Risks Related to this Article

There are risks associated with investing, including possible loss of principal. These Fund will invest in derivatives, including Russell 2000 Index put options ("RUT Puts") and S&P 500 Index put options ("SPX Puts"). Derivative investments can be volatile, and these investments may be less liquid than other securities, and more sensitive to the effects of varied economic conditions. The value of the RUT Puts and SPX Puts in which the Fund invests is partly based on the volatility used by market participants to price such options (i.e., implied volatility). The options' values are partly based on the volatility used by dealers to price such options, so increases in the implied volatility of such options will cause the value of such options to increase, which will result in a corresponding increase in the liabilities of the Fund and a decrease in the Fund's NAV. Options may be subject to volatile swings in price influenced by changes in the value of the underlying instrument. The potential return to the Fund is limited to the amount of option premiums it receives; however, the Fund can potentially lose up to the entire strike price of each option it sells. Due to the investment strategy of the Fund, it may make higher capital gain distributions than other ETFs. Please read the Fund's prospectus for specific details regarding the Fund's risk profile.

The Cboe Russell 2000 PutWrite Index (the "Index") is a trademark of Frank Russell Company ("Russell") and has been licensed for use by WisdomTree Asset Management. The CBOE Russell 2000 PutWrite Strategy Fund is not in any way sponsored, endorsed, sold or promoted by Russell or the London Stock Exchange Group companies ("LSEG") (together, the "Licensor Parties") and none of the Licensor Parties make any claim, prediction, warranty or representation whatsoever, expressly or impliedly, either as to (i) the results to be obtained from the use of the Index (upon which the CBOE Russell 2000 PutWrite Strategy Fund is based), (ii) the figure at which the Index is said to stand at any particular time on any particular day or otherwise, or (iii) the suitability of the Index for the purpose to which it is being put in connection with the CBOE Russell 2000 PutWrite Strategy Fund. None of the Licensor Parties have provided or will provide any financial or investment advice or recommendation in relation to the Index to WisdomTree or to its clients. The Index is calculated by Russell or its agent. None of the Licensor Parties shall be (a) liable (whether in negligence or otherwise) to any person for any error in the Index or (b) under any obligation to advise any person of any error therein.

The Cboe S&P 500 PutWrite Index is a product of S&P Dow Jones Indices LLC or its affiliates ("SPDJI") and Cboe and has been licensed for use by WisdomTree. Standard & Poor's® and S&P® are registered trademarks of Standard & Poor's Financial Services LLC ("S&P"); Dow Jones® is a registered trademark of Dow Jones Trademarks Holdings LLC ("Dow Jones"). These trademarks have been licensed for use by SPDJI and sublicensed for certain purposes by WisdomTree. Cboe® is a trademark of the Chicago Board Options Exchange, Incorporated, and has been licensed for use by SPDJI and WisdomTree. The

WisdomTree CBOE S&P 500 PutWrite Strategy Fund is not sponsored, endorsed, sold or promoted by SPDJI, Dow Jones, S&P, their respective affiliates or the Chicago Board Options Exchange, Incorporated, and none of such parties make any representation regarding the advisability of investing in such product(s), nor do they have any liability for any errors, omissions or interruptions of the Cboe S&P 500 PutWrite Index.

For standardized performance and the most recent month-end performance click here NOTE, this material is intended for electronic use only. Individuals who intend to print and physically deliver to an investor must print the monthly performance report to accompany this blog.

For more investing insights, check out our Economic & Market Outlook

View the online version of this article here.

IMPORTANT INFORMATION

U.S. investors only: Click here to obtain a WisdomTree ETF prospectus which contains investment objectives, risks, charges, expenses, and other information; read and consider carefully before investing.

There are risks involved with investing, including possible loss of principal. Foreign investing involves currency, political and economic risk. Funds focusing on a single country, sector and/or funds that emphasize investments in smaller companies may experience greater price volatility. Investments in emerging markets, currency, fixed income and alternative investments include additional risks. Please see prospectus for discussion of risks.

Past performance is not indicative of future results. This material contains the opinions of the author, which are subject to change, and should not to be considered or interpreted as a recommendation to participate in any particular trading strategy, or deemed to be an offer or sale of any investment product and it should not be relied on as such. There is no guarantee that any strategies discussed will work under all market conditions. This material represents an assessment of the market environment at a specific time and is not intended to be a forecast of future events or a guarantee of future results. This material should not be relied upon as research or investment advice regarding any security in particular. The user of this information assumes the entire risk of any use made of the information provided herein. Neither WisdomTree nor its affiliates, nor Foreside Fund Services, LLC, or its affiliates provide tax or legal advice. Investors seeking tax or legal advice should consult their tax or legal advisor. Unless expressly stated otherwise the opinions, interpretations or findings expressed herein do not necessarily represent the views of WisdomTree or any of its affiliates.

The MSCI information may only be used for your internal use, may not be reproduced or re-disseminated in any form and may not be used as a basis for or component of any financial instruments or products or indexes. None of the MSCI information is intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such. Historical data and analysis should not be taken as an indication or guarantee of any future performance analysis, forecast or prediction. The MSCI information is provided on an "as is" basis and the user of this information assumes the entire risk of any use made of this information. MSCI, each of its affiliates and each entity involved in compiling, computing or creating any MSCI information (collectively, the "MSCI Parties") expressly disclaims all warranties. With respect to this information, in no event shall any MSCI Party have any liability for any direct, indirect, special, incidental, punitive, consequential (including loss profits) or any other damages (www.msci.com)

Jonathan Steinberg, Jeremy Schwartz, Rick Harper, Christopher Gannatti, Bradley Krom, Tripp Zimmerman, Michael Barrer, Anita Rausch, Kevin Flanagan, Brendan Loftus, Joseph Tenaglia, Jeff Weniger, Matt Wagner, Alejandro Saltiel, Ryan Krystopowicz, Jianing Wu, and Brian Manby are registered representatives of Foreside Fund Services, LLC.

WisdomTree Funds are distributed by Foreside Fund Services, LLC, in the U.S. only.

You cannot invest directly in an index.

DEFINITIONS

Implied volatility : The estimated volatility of a security's price. Implied volatility is a way of estimating the future fluctuations of a security's worth. It is backtracked from live option prices with a future maturity date.

Realized Volatility : The daily standard deviation of returns of an underlying asset, index, instrument, security, or ET.

Volatility : A measure of the dispersion of actual returns around a particular average level. .

VIX Future Curve : A futures curve is a curve made by connecting prices of futures contracts of the same underlying, but different expiration dates. VIX futures curve is made of prices of individual VIX futures contract.

Commodity Future Curve : A futures lcurve is a curve made by connecting prices of futures contracts of the same underlying, but different expiration dates. Commodity future curve is based on commodity future contract prices.

CBOE S&P 500 PutWrite Index (PUT) : Measures the performance of a hypothetical portfolio that sells S&P 500 Index (SPX) put options against collateralized cash reserves held in a money market account. The PUT strategy is designed to sell a sequence of one-month, at-the-money, S&P 500 Index puts and invest cash at one- and three-month Treasury Bill Rates. The number of puts sold varies from month to month but is limited so that the amount held in Treasury Bills can finance the maximum possible loss from final settlement of the SPX puts.

"At the money" : option's strike price is identical to the price of the underlying security.

Put options : an option to sell assets at an agreed price on or before a particular date.

S&P 500 Index : Market capitalization-weighted benchmark of 500 stocks selected by the Standard and Poor's Index Committee designed to represent the performance of the leading industries in the United States economy.

Put Premium : An option premium is the income received by an investor who sells or 'writes' an option contract to another party.

Small caps : new or relatively young companies that typically have a market capitalization between $200 million to $2 billion.

Cboe Russell 2000 PutWrite Index (PUTR) : An Index designed to track the performance of a hypothetical strategy that sells a monthly at-the-money (ATM) Russell 2000 Index put option. The written Russell 2000 put option is collateralized by a money market account invested in one-month Treasury bills.

Cash-Collateralized : When short put positions on S&P 500 are secured with cash (1 month and 3 month Treasuries) serving as a collateral for maximum possible hypothetical losse.

Russell 2000 Index : Measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 is a subset of the Russell 3000 Index representing approximately 10% of the total market capitalization of that index. It includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership.

Large-Capitalization (Large-Cap) : A term used by the investment community to refer to companies with a market capitalization value of more than $10 billion. Large cap is an abbreviation of the term “large market capitalization”. Market capitalization is calculated by multiplying the number of a company’s shares outstanding by its stock price per share.