HEDGING MARKET UNCERTAINTIES IN 2020

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Well, the stock market crashed.

The <u>S&P 500</u> reached <u>bear market</u> territory when it dropped to 2,702 on March 11. And so far, the pain hasn't stopped. It is currently changing hands at 2,300.

What now?

We have a potential hedge for those who want to creep into stocks but don't want full market exposure.

Five Years vs. Five Months

The Cboe Volatility Index (VIX) had been calm. Now it's exploded—it reached 2008 mortgage crisis levels in recent days:

Volatility Index (VIX)



Sources: Bloomberg, Cboe. Period covered: 12/31/2014-12/31/2019 (left chart), 10/31/2019-3/11/2020 (right chart) 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.

Will Volatility Stay High?

The VIX futures curve is particularly interesting right now.

Normally, volatility expectations for the future are higher than they are for the present, because we know more about today than tomorrow. For example, you probably have a better idea of today's lunch than what you'll eat tomorrow, so the "lunch VIX" for tomorrow is usually higher. The same concept applies to all forecasting. Don't you have a better idea of the winner of the presidential race for 2020 than for 2024?

All this means that the VIX quote for autumn is usually higher than for March or April.

But sometimes it's not.

That's called "contango"—with the normal condition called backwardation. Just as it would be with the lunch example, contango is rare.

The left side of figure 2 shows the one-month VIX quote divided by the six-month VIX in the months before the market went crazy.

Out of 1,260 trading days, only 8% witnessed near-term volatility that was higher than six-month volatility. When it did, it was generally when the market panicked. That's what we see on the right side for the past few weeks.





Sources: Bloomberg, Clove. Period covered: 12/31/2014–12/31/2019 (left chart), 9/30/2019–3/11/2020 (right chart). Past performance is not indicative of future results. You cannot invest directly in an index.

Writing Puts When No One Else Is Writing Puts

Can investors mitigate high volatility?

Sometimes avoiding high volatility by selling put options—giving the buyer the right to sell a security back to you at a predetermined price—can be fruitful for investors concerned about wild markets.

Here's how it works.

Suppose the S&P 500 is at 2,500.

An investor can sell—or "write" —<u>put options</u> that expire a month from now with the preset strike price also at 2,500. Selling those <u>at-the-money</u> puts allows the seller to pocket a <u>premium</u>.

When volatility is high, the premium is high. Say the VIX is sky high, like it is today, and the premium is worth 5% of <u>notio</u> <u>nal capital</u>. If the S&P stay flat for a month and closes at 2,500, great—the options seller pockets our 5%. If it goes up, we don't participate in the gain, but we still have our 5%.

The way money is lost is if the market goes down. Suppose we write the puts, pocket the 5%, and then a 1987-style stock market crash of 22% occurs in one session. In that case, we're down 17%, because we still get to keep our 5% premium. So it's still better than the market's return.

When Normalized VIX 1-Month is Greater Than Normalized VIX 6-Month

	Total Number of Days	Total Outperformance of PUT Index Over S&P 500 Index	
When Normalized VIX 1-Month > Normalized VIX 6-Month	101	11%	

Sources: Bloomberg, Cboe. Period covered: 12/31/2014–12/31/2019. Past performance is not indicative of future

In the table below I show the five longest periods of "front-month" VIX quotes that were higher than ones that are six months out.

In all those periods, the Cboe S&P 500 PutWrite Index (PUT) outperformed the S&P 500.

We're in that situation again. Fortunately for investors, they now have the ability to potentially capitalize on these market dislocations via the <u>WisdomTree CBOE S&P 500 PutWrite Strategy Fund (PUTW)</u> which tracks the PUT Index before fees and expenses.

	Annualized Returns		
	1 Yr	3 Yrs	Since Inception
WisdomTree CBOE S&P 500 PutWrite Strategy Fund (NAV)	13.0%	5.2%	6.9%
WisdomTree CBOE S&P 500 PutWrite Strategy Fund (MKT)	13.3%	5.1%	6.8%
PUT Index	13.5%	5.8%	7.5%
S&P 500 Index	31.5%	15.3%	16.7%

Source; Zephy, as of December 31, 2019.

Performance is historical and does not guarantee future results. Current performance may be lower or higher than quoted. Investment returns and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Performance data for the most recent month-end on the PUTW fund page. PUTW has an Expense Ratio of 0.44%



Will PUTW outperform? Maybe, maybe not.

But on S&P puts written right now, the option seller is in a market as volatile as on "Bloody Friday," October 24, 2008, the worst month of the global financial crisis. PUT closed that session at 737.96, grinding down to 647.73 on March 9, 2009, the day the S&P 500 bottomed. It then rallied for a decade.

Make no mistake: when the market declines, PUTW will decline as well. But the question is: how much? Let the premium be your guide.

Outperformance by PUT during Worst 5 VIX Inversion Periods and Current Periods

Period Start	Period End	Period Length (Days)	PUT Total Retun	S&P 500 Tr. Index	Total PUT Excess Return
12/31/2015	3/2/2016	44	4.70%	-6.00%	1.30%
12/7/2015	12/28/2015	15	-0.90%	-1.30%	0.40%
4/7/2017	4/21/2017	10	1.70%	1.10%	0.60%
3/3/2016	3/10/2016	5	0.10%	-1.10%	1.20%
6/10/2016	6/17/2016	5	0.10%	-1.60%	1.70%
2/24/2020	3/24/2020*	22	-23.12%	-23.99%	0.87%

Sources: Bloomberg, Cboe. Past performance is not indicative of future results. You cannot invest directly in an index.

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You cannot invest directly in an index.



DEFINITIONS

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.

Bear market: A sustained downturn in market prices, increasing the chances of negative portfolio returns.

Hedge: Making an investment to reduce the risk of adverse price movements in an asset. Normally, a hedge consists of taking an offsetting position in a related security, such as a futures contract.

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.

PUT Writing: Put writing is an essential part of options strategies. Selling a put is a strategy where an investor writes a put contract, and by selling the contract to the put buyer, the investor has sold the right to sell shares at a specific price. Thus, the put buyer now has the right to sell shares to the put seller.

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

Premium: When the price of an ETF is higher than its NAV.

Notional: The dollar value of the derivative contract.

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.

