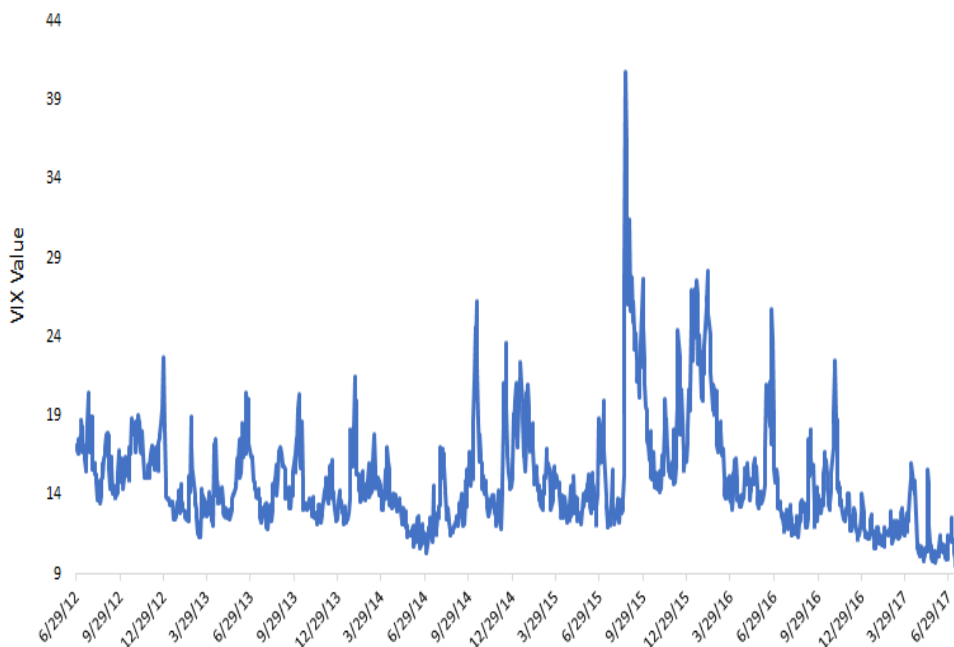


# WATCHING THE VIX

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One of the signatures of the [bull market](#) in U.S. stocks over the past five years has been its incredible complacency. One way to visualize the lack of fear in equity markets is to examine the [CBOE Volatility Index \(the VIX\)](#). The VIX, currently trading around 10, scraped a 20-year low of 9.36 on July 21. This is well below its average of the last 20 years, which is about 20.

Figure 1: CBOE Volatility Index, 7/29/12 –7/29/17



Sources: WisdomTree, Bloomberg. Past performance is not indicative of future results.

The VIX is important because it governs the pricing of options and the premiums investors can collect when writing them on the [S&P 500 Index](#). For most of the last five years, the VIX has averaged about 15, a 25% [discount](#) to its historical average. But in recent weeks it has traded between 9 and 11. During periods of unusually low fear in the market, it is not unusual to see investors bidding up stocks to new highs. The current [low-volatility](#) environment reminds me a little of the period between late 2004 and May 2006, when the world was also awash in [liquidity](#). Over that period, with [volatility](#) grinding ever lower, U.S. equity markets climbed 20% over 20 months, unaware that a historic financial crisis was waiting just around the corner.

These periods of unusually low volatility can continue for months or years, but typically they end with an unforeseen shock to markets that makes such complacency seem surreal in retrospect. For contrarian investors who view today's complacency as a prelude to an eventual (and highly volatile) [reversion to the mean](#), WisdomTree has a few

tools in its tool kit designed to help investors reduce volatility in their portfolios.

## Reducing Volatility While Collecting Premiums on the Market

One way to potentially collect [option premiums](#) on the S&P 500 Index is by investing in the [WisdomTree CBOE S&P 500 PutWrite Strategy Fund \(PUTW\)](#), which seeks investment results that, before fees and expenses, generally correspond to the performance of the [CBOE S&P 500 PutWrite Index \(PUT\)](#). PUTW invests in [one- and three-month Treasury Bills](#) and sells or “writes” S&P 500 Index [put options](#). The Fund writes monthly “[at the money](#)” [European-style options](#), and the number of put options sold is chosen to ensure full [collateralization](#). The option premiums the Fund receives from selling puts can help mitigate the negative effects of investing only in investment vehicles that track the S&P 500 Index.

Now that PUTW has nearly a year and a half of real-time history, we can measure how it has performed during a period of historically low volatility in the market. As we can see in figure 2, during this period, when the S&P 500 Index advanced 21% on an annualized basis, PUTW was still able to generate 13% [annualized returns](#)—even though it did not own stocks during this period. Notably, over the last year, the combination of owning Treasury Bills and collecting option premiums on the S&P 500 generated returns that exceeded those posted by the [MSCI USA Minimum Volatility Index](#), an equity index, which advanced 8.30% over the same period.

Figure 2: Risk and Return Data for PUTW, 2/24/16–6/30/17

Fund/Index	Ticker	Gross Exp. Ratio	Net Exp. Ratio	WT Inception Date	Cumulative Returns as of 6/30/17		Average Annual Return as of 6/30/17			
					YTD NAV (%)	YTD MKT (%)	1-Year NAV	Since Fund Inception NAV	1-Year MKT	Since Fund Inception MKT
WisdomTree CBOE S&P 500 PutWrite Strategy Fund	PUTW	0.44%	0.38%	2/24/2016	6.27%	6.18%	11.85%	13.10%	11.99%	13.13%
CBOE S&P 500 PutWrite Index					6.43%	6.43%	12.30%	13.64%	12.30%	13.64%
MSCI USA Minimum Volatility Index					9.40%	9.40%	8.30%	15.32%	8.30%	15.32%
S&P 500 Index					9.34%	9.34%	17.90%	20.94%	17.90%	20.94%

Since Inception Risk Statistics						
Fund/Index	Std Dev	Beta	Sharpe Ratio	Tracking Error	Information Ratio	Correlation
WisdomTree CBOE S&P 500 PutWrite Strategy Fund	5.53%	0.49	2.19	5.77%	-1.36	0.85
MSCI USA Minimum Volatility Index	8.15%	0.70	1.80	5.33%	-0.98	0.84
S&P 500 Index	9.71%	1.00	2.05	0.00%	0.00	1.00

Sources: WisdomTree, Bloomberg, Zephyr StyleADVISOR, as of 6/30/17. The Net Expense Ratio reflects a contractual waiver of 0.06% through December 31, 2017.

Performance of less than one year is cumulative. 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 is available at [www.wisdomtree.com](http://www.wisdomtree.com).

WisdomTree shares are bought and sold at market price (not NAV) and are not individually redeemed from the Fund. Total Returns are calculated using the daily 4:00pm EST net asset value (NAV). Market price returns reflect the midpoint of the bid/ask spread as of the close of trading on the exchange where Fund shares are listed. Market price returns do not represent the returns you would receive if you traded shares at other times.

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.

When we drill down to review the [standard deviation](#) and [beta](#) of the fund based on daily price data over the period, we also noticed that PUTW exhibited much lower volatility than either of the equity indexes, with a beta that was less than half of the S&P 500. This resulted in a [Sharpe ratio](#), a measure of [risk-adjusted return](#), that was higher than the S&P 500 or the [MSCI USA Minimum Volatility Index](#). While these risk-return numbers reflect this particular time period and may not be representative of what investors may

experience in a downward trending equity market, it is worth noting PUTW's potential to generate attractive returns per year, with low volatility, in a period where overall VIX levels were subdued.

## Conclusion

Equity investors have enjoyed a period of unusually low volatility in U.S. equity markets. This period of prolonged calm in the market has coincided with an extended upward climb in U.S. stock prices. While these periods of relative complacency can continue for months or years, they can also turn suddenly, because of unforeseen market shocks. PUTW, which has performed well in a period of relative calm in equity markets, has also historically provided a way for investors to lower the overall volatility compared to traditional equity exposures.

## Important Risks Related to this Article

Double-digit returns were achieved primarily during favorable market conditions. Investors should not expect that such favorable returns can be consistently achieved. A fund's performance, especially for very short time periods, should not be the sole factor in making your investment decision. There are risks associated with investing, including possible loss of principal. The Fund will invest in derivatives, including S&P 500 Index put options ("SPX Puts"). Derivative investments can be volatile, and these investments may be less liquid than securities, and more sensitive to the effects of varied economic conditions. The value of the 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.

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](#)

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## DEFINITIONS

**Bullish**: a position that benefits when asset prices rise.

**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.

**Discount**: When the price of an ETF is lower than its NAV.

**Low volatility**: Characterized by lower standard deviation of price over time. This term is also associated with the Low Volatility Factor, which associates lower volatility stocks with better risk-adjusted returns vs the market over time.

**Liquidity**: The degree to which an asset or security can be bought or sold in the market without affecting the asset's price. Liquidity is characterized by a high level of trading activity. Assets that can be easily bought or sold are known as liquid asset.

**Volatility**: A measure of the dispersion of actual returns around a particular average level.&nbsp;.

**Mean reversion**: The concept that a series of returns has a tendency to return to its average level over longer periods, even if shorter periods can exhibit wide swings.

**Option premium**: The current price of any specific option contract that has yet to expire.

**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.

**1-3 month U.S. Treasury Bill**: A short-term debt obligation backed by the U.S. government with a maturity of less than 3 months.

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

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

**Collateral**: something pledged as security for repayment in the event of a loss.

**Average Annual Returns**: Mean of annual yearly returns for the historical period

**MSCI USA Minimum Volatility Index**: Aims to reflect the performance characteristics of a minimum variance strategy applied to the large and mid cap USA equity universe.

**Standard deviation**: measure of how widely an investment or investment strategy's returns move relative to its average returns for an observed period. A higher value implies more "risk", in that there is more of a chance the actual return observed is farther away from the average return.

**Beta**: A measure of the volatility of a security or a portfolio in comparison to a benchmark. In general, a beta less than 1 indicates that the investment is less volatile than the benchmark, while a beta more than 1 indicates that the investment is more volatile than the benchmark.

**Sharpe ratio**: Measure of risk-adjusted return. Higher values indicate greater return per unit of risk, specifically standard deviation, which is viewed as being desirable.

**Risk-adjusted returns**: Returns measured in relation to their own variability. High returns with a high level of risk indicate a lower probability that actual returns were close to average returns. High returns with a low level of risk would be more desirable, as they indicate a higher probability that actual returns were close to average returns.