# Volatility in the Crosshairs: Hedge Funds Poaching Profits with Low VOL Strategies

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## Overview

With the instability of the new White House administration, North Korea launching missiles all over the Pacific Ocean and an unsettled global economic picture, you would think market participants are enjoying substantial volatility in all markets. The opposite, however, seems to be true. Volatility is near historic lows in the U.S. stock market. Moreover, the lack of volatility is not confined to equities—it has spread across asset classes to gold, treasuries, and crude oil as measured by WTI.

Figure 1 below shows implied volatility percentile rankings for some major options on futures contracts. Take, for example, E-mini S&P 500 futures options. At the Money (ATM) volatility is currently 7.57%. This "ranks" it in the third percentile…i.e., volatility is higher 97% of the time. Low volatility usually brings low options premiums. Higher volatility generally translates into higher premiums.

Therefore, these historically low volatility levels allow traders to purchase options or enter into long option strategies at levels we have not seen since the early 1990s. Rarely do we see options premiums this low. Options on Gold futures and Treasury futures also are in single-digit percentile rankings, offering hedge fund portfolio managers exceptionally cheap long options opportunities.

### Figure 1: Cheap vs. Expensive Premium

**Implied Volatility Percentile Rankings, Various CME Group Products, 3-years ending 7/27/2017**

| Percentile Ranking | E-mini S&P 500 | Crude Oil | Euro FX | US Treasury Notes | Gold |
|---|---|---|---|---|---|
| High | 35.72 | 78.94 | 13.87 | 9.20 | 23.26 |
| 90th percentile | 18.12 | 52.06 | 12.07 | 5.94 | 18.21 |
| 75th percentile | 15.06 | 44.22 | 11.02 | 5.53 | 16.33 |
| 50th percentile | 12.98 | 36.76 | 9.63 | 5.00 | 14.75 |
| 25th percentile | 11.15 | 29.31 | 8.44 | 4.71 | 13.07 |
| 10th percentile | 9.50 | 24.74 | 7.38 | 4.35 | 11.34 |
| Low | 7.38 | 14.82 | 4.56 | 3.49 | 9.11 |
| *Current Volatility as of 7/27/17* | *7.57* | *28.85* | *8.33* | *3.90* | *10.49* |
| *Current %tile Rank as of 7/27/17* | *3rd %tile* | *23rd %tile* | *24th %tile* | *4th %tile* | *8th %tile* |
| *Cheap/expensive* | *Very Cheap* | *Cheap* | *Cheap* | *Very Cheap* | *Very Cheap* |

## Benefits

Hedge fund volatility strategy managers can enjoy several benefits to trading equity index options on futures:

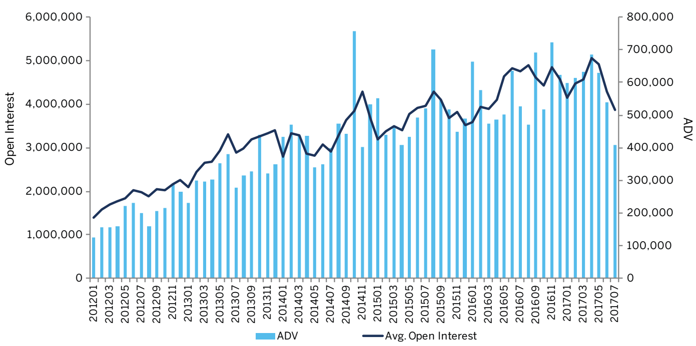
- **24-hour trading:** Hedge fund PMs/traders can manage risk and initiate or offset positions around the clock, and liquidity is excellent as well. The evening after the BREXIT vote saw 475,000[1] options trade in CME Group markets. The night of the U.S. elections saw 655,000[2] options trade overnight. When markets move, you can transact after hours with confidence.
- **Capital efficiencies/Margin offsets:** Capital is precious, and traders with futures and options positions can enjoy a potential margin reduction of 69-72 percent[3], depending on the position.

  **Exceptional volume/OI growth: Average daily volume** on the E-mini S&P 500 options on futures alone has grown from 125,000 contracts a day in 2012 to 575,000 a day in 2017—a growth rate of 27% per annum[4]. Figure 2 below illustrates how investors continue to make CME Group their preferred choice for equity options on futures.

*1, 2, 3, 4 CME Internal Database*

- **Extensive range of expiration choices.** From quarterlies to weeklies to Wednesday and Monday expirations, hedge fund PMs can fine tune options strategies. European and American style expirations are also available.
- **Seamless delta transition.** Options on futures expire into a futures contract—allowing you to establish a continuous position in the market should you choose to exercise. Cash equity index options cash settle, and therefore require re-establishment of positions after expiration.

### Figure 2: E-mini S&P 500 Options on Futures ADV and OI




*Source: CME Internal Database*

## Impact on Strategies

Figure 3 below shows the significant impact of volatility on options premiums. If volatility were to advance from the current historic lows we are witnessing now and revert back to only the 50th percentile...the ATM straddle would increase dramatically from $2,190 to $4,100 (assuming all other options inputs remain the same)

### Figure 3: E-mini S&P 500 Volatility Percentile Ranking Impact on Strategies

### 3-years ending 7/27/2017

| Percentile Ranking | ATM Impl. Vol Level | ATM Straddle* in premium terms | ATM Straddle* in dollar terms |
|---|---|---|---|
| High | 35.72% | 237.6 | $11,880 |
| 90th percentile | 18.12% | 117.2 | $5,860 |
| 75th percentile | 15.06% | 96.2 | $4,810 |
| 50th percentile | 12.98% | 82.0 | $4,100 |
| 25th percentile | 11.15% | 69.6 | $3,480 |
| 10th percentile | 9.50% | 58.2 | $2,910 |
| Low | 7.38% | 43.8 | $2,190 |

** ATM straddle is S&P 500 2475 straddle, September 17 expiry*

## About the Author

Dave Lerman is a member of our education team at CME Group. In his 28 years at CME Group, David has played a key role in numerous product launches including the E-mini S&P 500. In addition, he has traveled around the globe on behalf of the CME, giving seminars and workshops to all audiences including: pension funds, corporations, banks, active traders and brokers on trading/risk management using futures and options. Mr. Lerman is also the author of Exchange Traded Funds and E-mini Stock Index futures (published by John Wiley and Sons). He has also authored numerous articles in the Equity Derivatives field.

Mr. Lerman was a member at the Chicago Board of Trade, where he traded futures and options on U.S. Treasury Bonds. Mr. Lerman was also Sr. Portfolio Manager at Zavanelli Portfolio Research, a Park Ridge, IL investment management firm. David taught investment management at Harper College and has lectured at the Northwestern University Kellogg Graduate School of Management. He received his B.A. degree in Biochemistry from the University of Chicago.

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