# S&P Dow Jones Indices

A Division of S&P Global

INDEX INVESTMENT STRATEGY

**Index Dashboard: Risk & Volatility December 19, 2018**

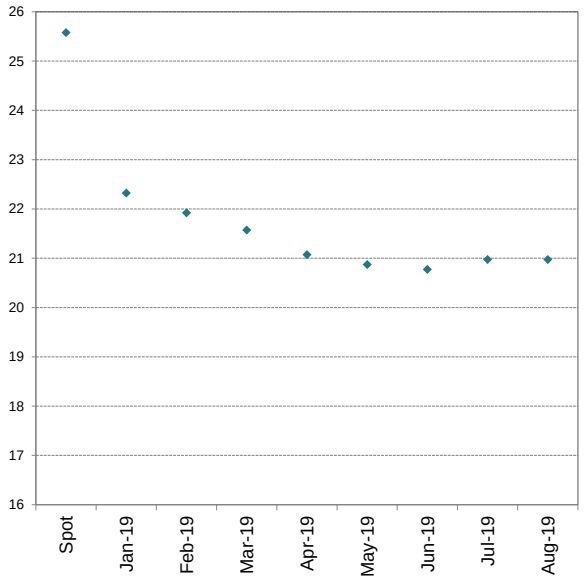
## VOLATILITY MEASURES

| Implied Volatility Measures | VIX | 1m ± | 200D Ave | Realized 1Yr |
|---|---|---|---|---|
| Cboe Volatility Index® (VIX®) | **25.58** | 4.78 | 16.15 | 15.98 |
| Cboe Short-Term Volatility Index (VXST) | **26.65** | 6.79 | 16.10 | 15.98 |
| Cboe 3-month Volatility Index (VXV) | **24.02** | 2.70 | 17.36 | 15.98 |
| Cboe 1-Year Volatility (VIX1Y) | **23.20** | 1.78 | 18.78 | 15.98 |
| Cboe DJIA Volatility Index (VXD) | **23.98** | 3.40 | 16.81 | 16.79 |
| VSTOXX® (V2X) | **19.60** | 1.36 | 16.01 | 12.50 |
| S&P/ASX 200 VIX (A-VIX) | **17.61** | -0.36 | 13.56 | 11.08 |
| S&P/TSX 60 VIX (VIXC) | **20.07** | 1.63 | 14.62 | 10.40 |
| HSI Volatility Index (VHSI) | **22.83** | -1.97 | 20.92 | 19.86 |
| Cboe/CME FX Yen Volatility (JYVIX) | **7.10** | -0.05 | 7.67 | 5.98 |
| Cboe/CME FX GBP Volatility (BPVIX) | **11.64** | -2.02 | 9.21 | 7.87 |
| Cboe/CME FX Euro Volatility (EUVIX) | **6.78** | -0.82 | 7.51 | 6.77 |
| Cboe / CBOT 10Yr US Tsy (TYVIX) | **3.83** | -0.49 | 3.93 | 3.56 |
| Cboe Interest Rate Swap (SRVIX) | **71.46** | -1.75 | 71.78 | 47.23 |
| S&P/JPX JGB VIX® (SPJGB) | **2.18** | 0.76 | 1.43 | 1.17 |
| Cboe Gold ETF Volatility Index (GVZ) | **11.40** | -0.72 | 11.58 | 9.65 |
| Cboe Oil ETF Volatility Index (OVX) | **50.86** | -0.93 | 30.02 | 29.06 |
| Cboe VIX of VIX (VVIX) | **105.05** | 4.78 | 99.37 | 157.58 |

| Investable Volatility | 1m ± | YTD | 12m ± |
|---|---|---|---|
| S&P Daily Inverse Short-Term VIX | -14.44% | -96.77% | -96.82% |
| S&P 500 VEQTOR Switch Index | -3.21% | -3.62% | -3.85% |
| Cboe S&P 500 Put-write Index | -4.49% | -5.11% | -5.00% |
| Cboe S&P 500 Buy-write Index | -4.58% | -4.07% | -3.96% |
| S&P 500 Dynamic VEQTOR Index | -2.20% | -0.71% | -0.91% |
| S&P Dynamic VIX Index | 2.32% | -9.02% | -10.43% |
| S&P VIX Mid-Term Futures Index | 5.29% | 28.14% | 26.04% |
| S&P VIX Short-Term Futures Index | 12.94% | 55.87% | 58.04% |
| **S&P 500** | -5.23% | -4.43% | -4.66% |

## HEDGING COSTS

**VIX Futures Term Structure**




| VIX Futures Indices Roll Costs (Monthly) | |
|---|---|
| Short-term futures | -1.79% |
| Mid-term futures | -0.16% |

## REALIZED MEASURES

| S&P 500 Correlations (Month-end) | 1 Year | 3 Year | 10 Year |
|---|---|---|---|
| S&P Europe 350 | 0.73 | 0.68 | 0.85 |
| S&P 500 Bond | 0.50 | 0.32 | 0.27 |
| S&P GSCI Commodity | 0.25 | 0.30 | 0.50 |
| U.S. Dollar Index | -0.52 | -0.32 | -0.53 |

| S&P 500 Single Stocks | 21-Day | 12M Ave | 3Y Ave |
|---|---|---|---|
| Dispersion (annualized) | **18.20%** | 20.28% | 19.56% |
| Volatility (annualized) | **46.74%** | 25.18% | 21.76% |
| Correlation (pairwise) | **0.31** | 0.27 | 0.23 |

## COMMENTARY

- A fourth rate hike from the U.S. Federal Reserve resulted in another day in the red yesterday for the S&P 500, which has now declined seven times in the last ten sessions. VIX closed last night at 25.58, its highest since February.
- While average single-stock volatility for S&P 500 constituents has risen above 40%, index volatility has remained dampened in comparison as pairwise stock correlations have remained relatively low.
- Rather than simply selling or buying the market, it appears that market participants are picking winners and losers; the S&P 500 Utilities sector is up 3.5% so far in the fourth quarter; versus the Energy sector's 22.5% decline.
- Crude Oil prices have been on the move throughout this year. With the Cboe Oil ETF Volatility Index closing last night a little over 50, it looks like volatility in the energy markets is set to continue in the near term.
- Outside the U.S., the outlook for equity volatility is more mixed. Our indicators for Canada and Europe gained this month, while those for Hong Kong and Australia declined. In currencies, the BPVIX pound sterling measure has pulled back over the past month, but remains relatively high compared to historical norms.

**Sources:** S&P Dow Jones Indices LLC and/or its affiliates, Cboe, U.S. Federal Reserve (Dollar index and 10Yr Swap Rate), all as of December 19, 2018. **Volatility measures:** respective VIX and changes in those levels November 21 to Deccember 19, 2018. 200D Average is the moving average based on trading days, colour coded by whether current respective VIX is above or below average. 1 year realized volatility calculated according to previous 1 years daily returns, annualised. **Investable Index performance** based on total return. **Index Correlations** of monthly returns between total return indices, in USD to month-end November 2018. **Stock Correlations, Dispersion and Volatility** based on index-weighted averages as of December 19, 2018. VIX futures **monthly roll costs** are expressed as the weighted sum of the percentage difference in price between each future and the future next closer to expiry, expressed as a fraction of that futures price and weighted according to that future's weight in the either the S&P VIX Short-Term Futures Index, or the S&P VIX Mid-Term Futures Index, as appropriate. Charts and graphs are provided for illustrative purposes. Past performance is no guarantee of future results. For more information, please visit our website at www.spdji.com

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