

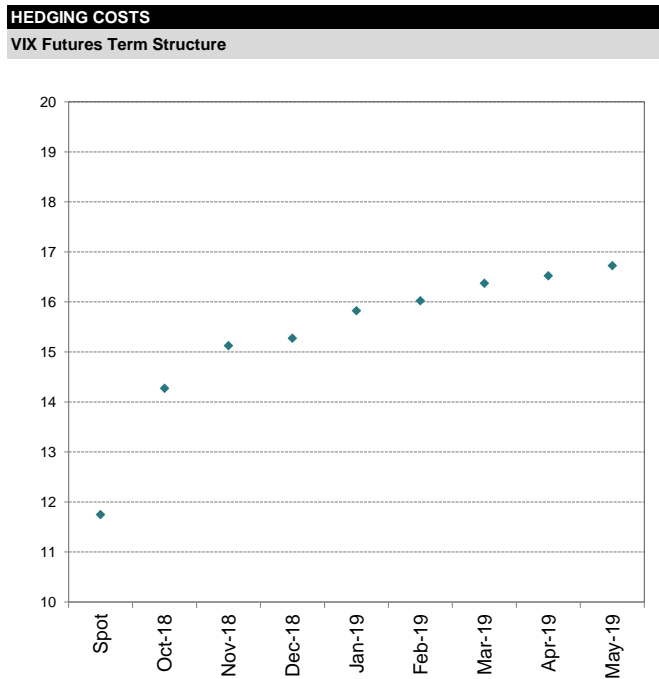
# S&P Dow Jones Indices

A Division of **S&P Global**

## INDEX INVESTMENT STRATEGY

Index Dashboard: Risk & Volatility September 19, 2018

VOLATILITY MEASURES				
Implied Volatility Measures	VIX	1m ±	200D Ave	Realized 1Yr
Cboe Volatility Index® (VIX®)	11.75	-0.50	14.79	12.54
Cboe Short-Term Volatility Index (VXST)	11.45	0.68	14.37	12.54
Cboe 3-month Volatility Index (VXV)	14.65	-0.43	16.19	12.54
Cboe 1-Year Volatility (VIX1Y)	16.99	-0.21	18.07	12.54
Cboe DJIA Volatility Index (VXD)	12.34	-0.41	15.49	13.76
VSTOXX® (V2X)	13.53	-0.32	15.21	10.56
S&P/ASX 200 VIX (A-VIX)	12.07	-0.20	12.63	8.71
S&P/TSX 60 VIX (VIXC)	13.32	0.03	13.57	8.38
HSI Volatility Index (VHSI)	19.38	0.39	19.21	17.38
Cboe/CME FX Yen Volatility (JYVIX)	7.41	-0.31	8.02	6.11
Cboe/CME FX GBP Volatility (BPVIX)	9.34	1.10	8.29	7.19
Cboe/CME FX Euro Volatility (EUVIX)	7.36	-0.61	7.52	6.72
Cboe / CBOT 10Yr US Tsy (TYVIX)	3.54	-0.26	3.98	3.53
Cboe Interest Rate Swap (SRVIX)	70.01	-1.04	71.03	56.47
S&P/JPX JGB VIX® (SPJGB)	1.31	-0.23	1.49	1.20
Cboe Gold ETF Volatility Index (GVZ)	10.81	-1.00	11.67	9.77
Cboe Oil ETF Volatility Index (OVX)	26.35	1.63	25.80	23.48
Cboe VIX of VIX (VVIX)	88.18	-7.54	101.90	143.85
Investable Volatility	1m ±	YTD	12m ±	
S&P Daily Inverse Short-Term VIX	6.13%	-94.16%	-91.59%	
S&P 500 VEQTOR Switch Index	1.78%	5.60%	13.42%	
S&P 500 Dynamic VEQTOR Index	1.36%	10.30%	16.38%	
S&P Dynamic VIX Index	1.29%	-15.80%	-16.82%	
Cboe S&P 500 Buy-write Index	0.87%	7.12%	10.60%	
Cboe S&P 500 Put-write Index	0.83%	6.21%	9.05%	
S&P VIX Mid-Term Futures Index	-1.09%	-1.55%	-17.85%	
S&P VIX Short-Term Futures Index	-6.58%	-3.33%	-33.93%	
<b>S&amp;P 500</b>	1.77%	10.29%	18.26%	



VIX Futures Indices Roll Costs (Monthly)	
Short-term futures	5.95%
Mid-term futures	1.43%

REALIZED MEASURES			
S&P 500 Correlations (Month-end)	1 Year	3 Year	10 Year
S&P Europe 350	0.58	0.69	0.88
S&P 500 Bond	0.35	0.22	0.30
S&P GSCI Commodity	0.20	0.31	0.62
U.S. Dollar Index	-0.41	-0.21	-0.58
S&P 500 Single Stocks	21-Day	12M Ave	3Y Ave
Dispersion (annualized)	16.30%	19.46%	19.16%
Volatility (annualized)	17.29%	21.20%	20.94%
Correlation (pairwise)	0.10	0.21	0.23

### COMMENTARY

*"Look beneath the surface; let not the several quality of a thing nor its worth escape thee."* – Marcus Aurelius

- Generally speaking, most of our reported volatility measures have declined since the last report. The S&P 500 has not registered a daily move greater than 1% since June, while VIX continues to bump along at low levels, closing last night at 11.75 – its lowest closing level since August 9th.
- Risk in individual equities is at moderate levels, but unusually low correlations are creating a strong diversification effect in the benchmark. As the Stoic emperor advised, we might be wise to look beneath the surface.
- Notable exceptions to the decline in volatility include the pound sterling - which has risen along with the intensity and focus returning to Brexit negotiations in recent weeks - and crude oil. Energy prices gained momentum and volatility well before the hurricane season began, but the weather might better explain the recent pickup in uncertainty. Meanwhile, the market's close attention to international trade spats and the resultant focus on the U.S. dollar continues to generate a high correlation between benchmark and currency returns.
- Nevertheless, the shallow curve observed in VIX futures, and the low level of the "VVIX" measure of VIX volatility, suggest that - complacently or correctly - the market is anticipating little in the way of potential surprises in the near term future.

**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 September 19, 2018. **Volatility measures:** respective VIX and changes in those levels August 22 to September 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. **Stock Correlations, Dispersion and Volatility** based on index-weighted averages as of September 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](http://www.spdji.com)

#### About the VIX® Network

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