S&P Dow Jones Indices

A Division of S&P Global

Index Dashboard: Risk and Volatility

September 21, 2017

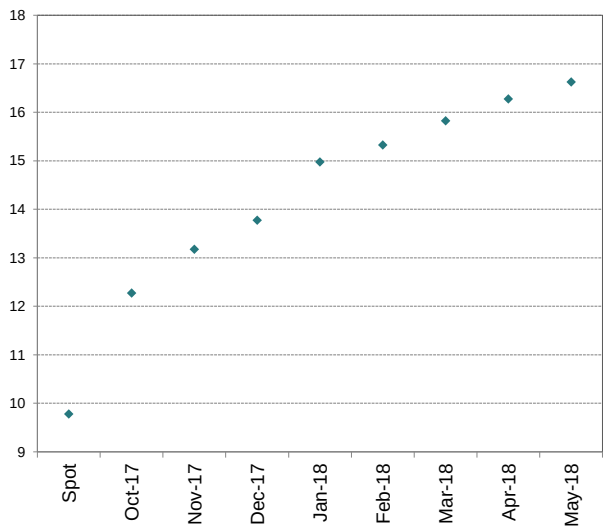
VOLATILITY MEASURES

Implied Volatility Measures	VIX	1m ±	200D Ave	Realized 1Yr
CBOE Volatility Index® (VIX®)	**9.78**	-3.41	11.50	8.06
CBOE Short-Term Volatility Index (VXST)	**8.95**	-3.53	10.32	8.06
CBOE 3-month Volatility Index (VXV)	**12.66**	-2.33	13.86	8.06
CBOE DJIA Volatility Index (VXD)	**9.83**	-2.70	11.30	7.74
VSTOXX® (V2X)	**11.79**	-6.76	15.53	9.66
S&P/ASX 200 VIX (A-VIX)	**11.95**	-2.88	12.55	11.02
S&P/TSX 60 VIX (VIXC)	**11.86**	-2.07	12.21	8.79
HSI Volatility Index (VHSI)	**14.67**	-2.45	14.08	12.35
CBOE/CME FX Yen Volatility (JYVIX)	**10.38**	+ 0.57	10.36	9.66
CBOE/CME FX GBP Volatility (BPVIX)	**9.31**	+ 1.55	8.73	9.11
CBOE/CME FX Euro Volatility (EUVIX)	**8.24**	-0.16	8.36	7.52
CBOE / CBOT 10Yr US Tsy (TYVIX)	**4.08**	-0.31	4.82	3.98
CBOE Interest Rate Swap (SRVIX)	**73.24**	-0.69	81.80	65.64
S&P/JPX JGB VIX® (SPJGB)	**1.87**	+ 0.16	1.86	1.41
CBOE Gold ETF Volatility Index (GVX)	**12.32**	-0.69	13.21	11.34
CBOE Oil ETF Volatility Index (OVX)	**26.99**	-1.78	30.11	29.44
CBOE VIX of VIX (VVIX)	**90.91**	-10.48	88.30	120.03

Investable Volatility	1m ±	YTD	12m ±
S&P Daily Inverse Short-Term VIX	22.41%	101.43%	179.14%
S&P 500 VEQTOR Switch Index	3.59%	14.02%	20.35%
S&P 500 Dynamic VEQTOR Index	2.21%	10.12%	13.34%
S&P 500 Stock Covered Call Index	1.56%	9.52%	13.53%
CBOE S&P 500 Buy-write Index	2.33%	10.35%	12.98%
S&P Dynamic VIX Index	1.13%	-15.84%	-19.59%
S&P VIX Mid-Term Futures Index	-5.81%	-39.31%	-46.86%
S&P VIX Short-Term Futures Index	-19.67%	-59.68%	-72.96%
S&P 500	1.57%	10.50%	14.33%

HEDGING COSTS

VIX Futures Term Structure



VIX Futures Indices Roll Costs (Monthly)	
Short-term futures	7.33%
Mid-term futures	2.74%

REALIZED MEASURES

S&P 500 Correlations (Month-end)	1 Year	3 Year	10 Year
S&P Europe 350	0.20	0.77	0.89
S&P 500 Bond	-0.01	0.15	0.36
S&P GSCI Commodity	0.36	0.25	0.54
U.S. Dollar Index	0.04	-0.14	-0.51

S&P 500 Single Stocks	21-Day	12M Ave	3Y Ave
Dispersion (annualized)	**15.51%**	17.84%	18.80%
Volatility (annualized)	**16.43%**	17.75%	20.90%
Correlation (pairwise)	**0.29**	0.18	0.26

COMMENTARY

- The evidence for a new, lower volatility regime is mounting. A closing level of VIX below 10 used to be a rare event, occurring only once every three years or so. This year it has become commonplace - last night's close of 9.78, coming after the Federal Reserve announced that it will soon start to shrink its balance sheet, was the 19th such occurrence in 2017.
- As with the U.S., so with European equity volatility. A closing level of VSTOXX below 12 has occurred only five times since 2005. Last night's close of 11.79 was the second this week; the other three occurred earlier this year.
- Unsurprisingly given the continued declines in VIX, the S&P Daily Inverse Short-Term VIX Index retained its top spot among our investable volatility indices, with a total return of 22.41% over the last 30 days.
- Relative to what one might expect for such a low VIX, the VIX futures curve has a relatively shallow incline and VVIX (the implied volatility of VIX) is extremely low. Overall, the potential rewards for selling volatility, should things remain the same, are diminished compared to historical norms.
- Not all our reported VIX measures are in the doldrums. Currencies have remained a flashpoint in these politically-charged times; both our yen and pound sterling volatility measure are up since the last report. Volatility measures for Japanese government bonds remain above their 200-day trailing average, similarly for the Hang Seng Index.
- U.S. benchmark volatility remains low; average single-stock correlation increased and dispersion fell as the S&P 500 posted steady gains this month.

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 20, 2017. **Volatility measures:** respective VIX and changes in those levels August 21 to September 20, 2017. 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 August 2017. **Stock Correlations, Dispersion and Volatility** based on index-weighted averages as of September 20, 2017. 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

About the VIX® Network

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