VOLATILITY: A "TAIL EVENT" 2017

Today, you cannot walk very far in central Stockholm or any other financial center before you find yourself in a discussion about the "strange markets". Few, if any, seem to understand the market environment we have experienced for quite a few months now. The low volatility in the stock markets seems to raise most questions about what is going on.

New York Fed's president and CEO, William Dudley, recently said that the low volatility was difficult to explain, especially in the light of the significant - especially geopolitical - uncertainties now prevailing. The state of the world motivates a significantly higher volatility, he said. Not everybody agreed. Uncertainty creates low volatility, say Dudley's critics. Uncertainty means that there is no consensus among market participants around the world. There is no dominant scenario. Different perceptions of the state of the world and where it is heading, mean that buyers and sellers can easily agree, which in turn leads to low volatility. Both buyers and sellers are (more than) satisfied with the closing price. It is when one idea, one scenario, begins to dominate that prices move and volatility increases. *Consensus creates volatility, uncertainty reduces it.*

There is no doubt that volatility in financial markets - especially stock markets - has been extremely low this year. Low volatility has historically not been beneficial for CTAs, and this year is no exception.

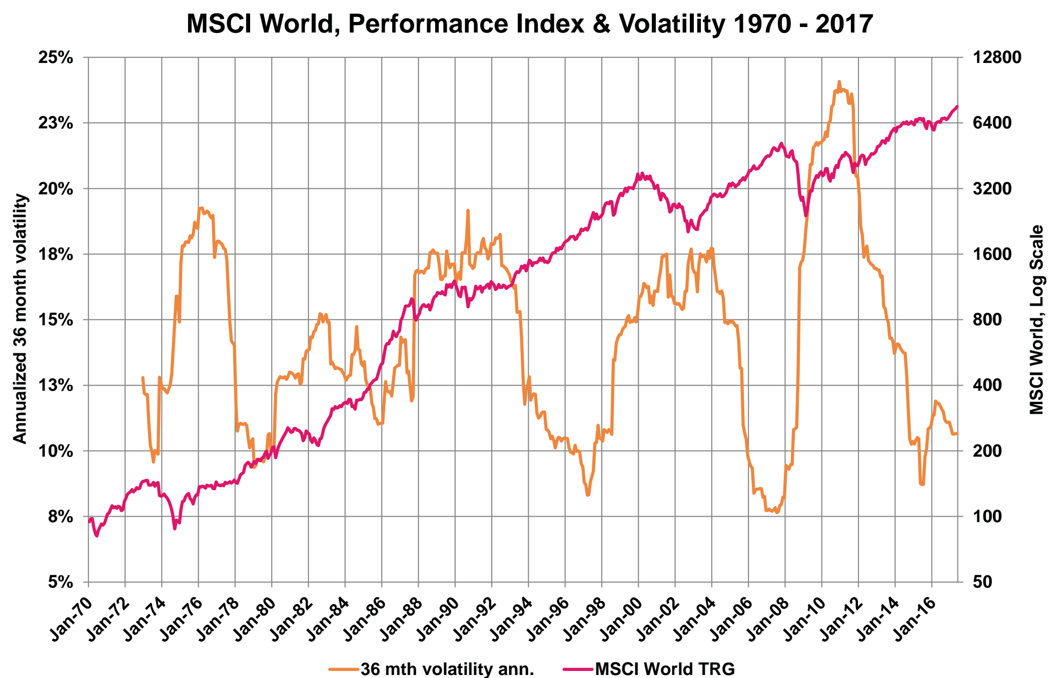
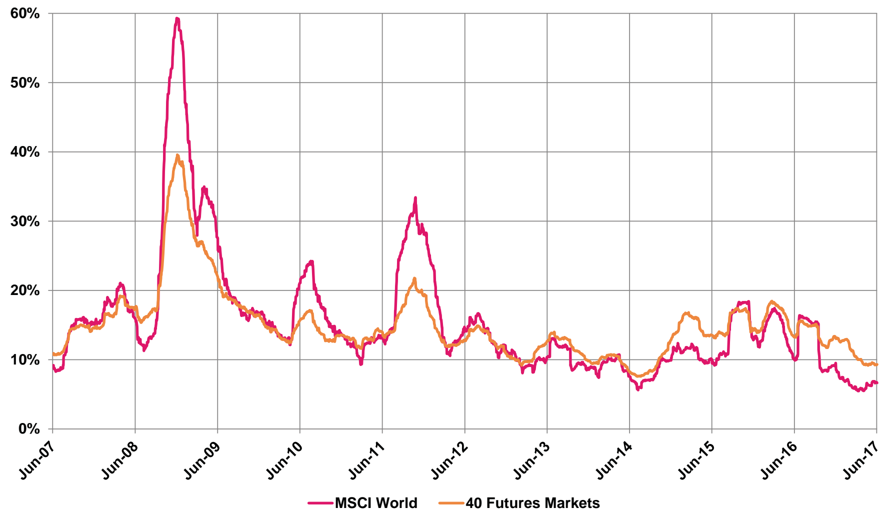


FIGURE 1 - MSCI World TR och the 36 month annualized volatility. Source: Bloomberg

If Dudley's critics are correct, then the question is what happens when uncertainty - real or perceived - starts to give way to a consensus view. Historical patterns (see graph above) indicate that it may be time for that. Do we get a scenario as in the latter half of the 1990s with rising stock markets (and commodity prices) and increasing volatility or a 2008 scenario where increasing volatility is driven by falling stock markets? In any case, an emerging consensus and subsequently elevated volatility should be beneficial for CTAs - regardless of the direction of the stock market. The volatilities of the stock and futures markets are closely related as indicated in Figure 2, which is calculated on daily data over the past ten years.

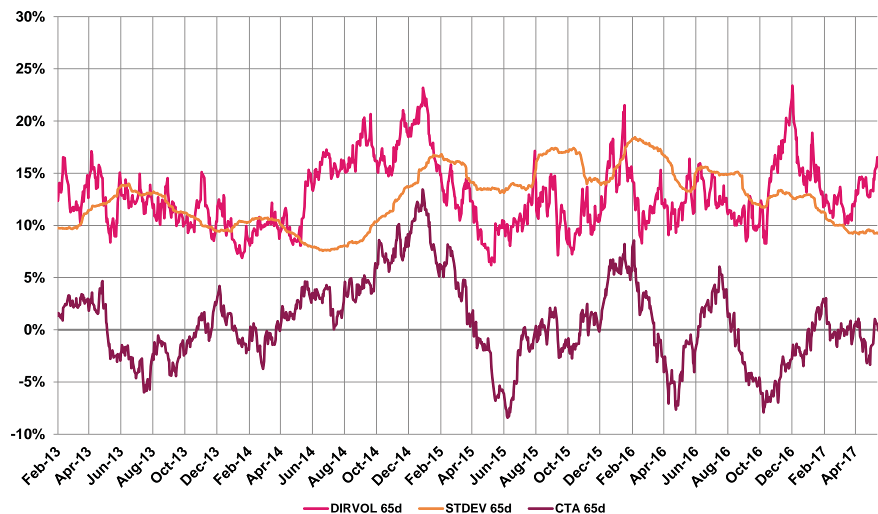
FIGURE 2 - Rolling 65-day volatility of the MSCI World and 40 different future markets. Source: Bloomberg



Today's low volatility levels have not occurred since the years immediately following the European debt crisis, when central banks around the world were most active with various support programs. This regime ended when the Federal Reserve terminated Quantitative Easing program (QE) in the spring of 2014. Prior to that, it was just before the big financial crisis when we saw similarly low levels. Today, central banks' activities should not have the same dampening effect on market volatility as in 2012-2014. Instead, the low levels of volatility should be attributed to geopolitical uncertainties - and most of them - to the Trump administration's activities or lack thereof.

Volatility is usually measured as the standard deviation of daily or monthly percentage price changes in an asset, index, or fund. However, the measure is far from comprehensive in explaining CTA returns. High volatility may be due to major directional price changes - trends - but may also be due to choppy, directionless markets. For this reason, it may be interesting to study how much - on average - of the total daily price movement of the markets is explained by a net movement up or down over a given period.

FIGURE 3 - Rolling 65-day directional volatility, average volatility and CTA returns. Source: Bloomberg, BarclayHedge



The red curve in Figure 3 illustrates such a measure. *Right now, we can observe that "directional volatility" shows an increasing tendency, while standard market volatility is falling.* The markets thus show low volatility, but that volatility has increasingly expressed itself in directional price moves lately. Whether this signals that a consensus is emerging, as ahead of the second half of 2014, is difficult to say, but it is in any case a positive indication.

Since the turn of the year, most indices measuring CTA performance are in negative territory. Although there are exceptions, most trend-following managers seem to find it difficult to profit in this low volatility environment. The same applies to short-term CTAs whose index currently shows a loss of over 6% YTD. Fundamentally driven managers seem to have done somewhat better. In short, it has been a rather difficult period - no drama, but quite challenging market conditions. In a broader and slightly longer perspective, however, we note that hedge funds and stock markets have generally performed quite well - at least since the summer of 2016. CTAs have done worse. Look another year back and conditions and performance were the opposite of today's. So, in this sense, the conditions are normal and diversification works in line with theory, i.e. *convergence strategies (hedge funds, e.g. L / S Equity) are enjoying the market environment with falling and low volatility we have experienced since last summer while divergence strategies (CTAs) thrive in the opposite environment that prevailed in the period before.*

We cannot predict the future – nor can anyone else. But if one looks at similar periods in history, it seems reasonable to imagine that today's low volatility environment will soon be replaced by a period of stronger price movements. And indeed, it's easy to agree with Dudley. Intuitively, high volatility is more than motivated in the light of the political and economic challenges the world is currently facing. But it's only when market participants' perception of the state and direction of the world begin to converge, that we can expect increased price movements and volatility. And when that happens, it usually accelerates quite fast - like, for example, in 2014, when the Fed's transition to a more neutral stance enabled players to agree that the US dollar was undervalued.

Finally, those who are interested in price distributions should study Figure 4 (and Figure 5). The clear red curve illustrates the distribution of all daily returns on the S&P 500 since 1988. Example: About 15% of all days ranged from 0.5% to 1.0%. The yellow bars describe the corresponding distribution for 2017 where, for example, approximately 44% of all returns were between -0.5% and 0%. The dark red curve is the normal distribution, generated from S&P 500's average daily return and standard deviation since 1988. As shown by the differences between respective distribution, there is ample room for a significantly increased volatility without breaking any long-term historical patterns.

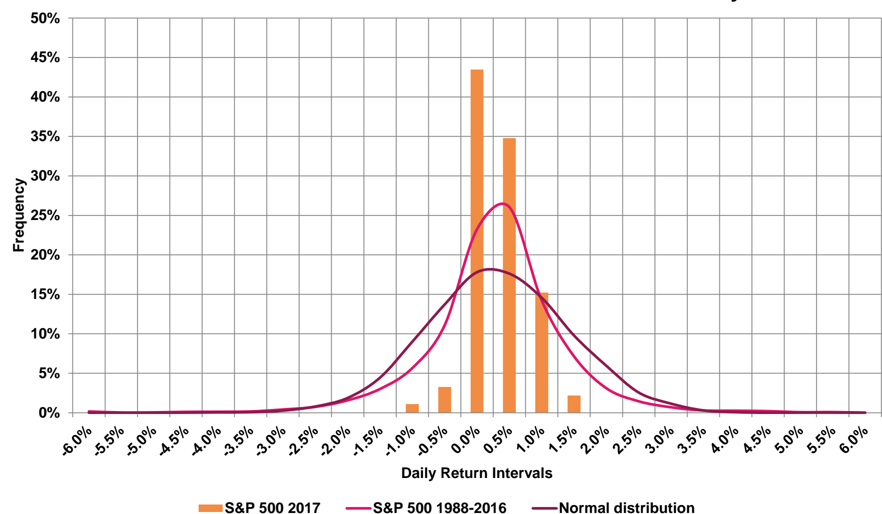
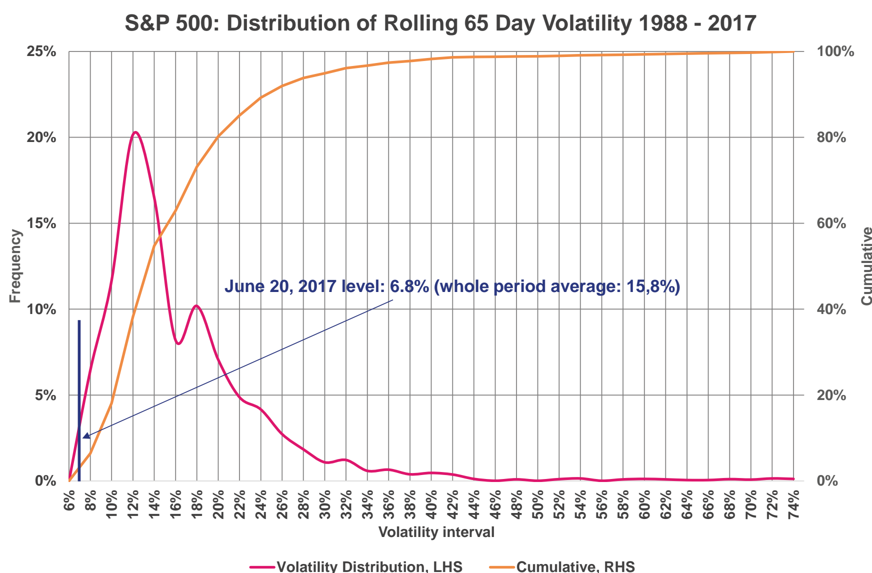


FIGURE 4 - Return distribution for the S&P 500 for the periods 1988-2016 and for 2017. Source: Bloomberg.

And a chart plotting the volatility distribution looks even more extreme. “Tail events” are usually associated with high volatility and significant losses. Now we have the opposite. But still a tail event. *Only 2% of all the 7,500 observations are at today’s level.*

FIGURE 5 - Volatility distribution (rolling 65-days) for the S&P 500 Index 1988-2017. Source: Bloomberg.



With wishes for a developing consensus, low weather volatility and a very nice summer!

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