Multi Asset

Some normality for volatility

Goldilocks economy showing cracks, volatility on the rise – but not too sharply. Time for the right volatility strategies.

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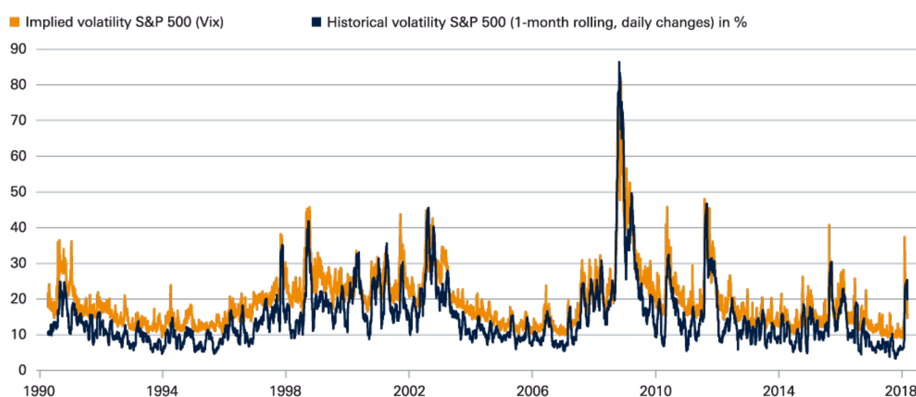
In a nutshell

- At the end of January, after a break of more than a year, volatility has made a comeback with an overdue market correction.
- Less easy central-bank policy, protectionism, and concerns about inflation should prevent a return to the volatility lows we've seen previously.
- We still don't want to pursue aggressive low-volatility strategies, but have identified more elegant ways to benefit from the late-cycle environment.

Proclaiming the end of the low-volatility phase was of little use in recent years for gaining fame. The markets repeatedly found ways to fluctuate even less. The way they kept up their spirits despite all the political headlines takes the Zen philosophy to a whole new level. But now, only a few months into 2018, we've seen an end to the volatility valley, and the lows of the past seem a distant memory. A short recap of some of the details: On February 8, after more than 400 days, the S&P 500 ended its longest stretch to date without a 5% correction. This year, the S&P 500 has already experienced 16 fluctuations of more than 1.0%, twice as many as during all of 2017. And then of course, there is the mother of all volatility indicators, the Vix, which represents the implied volatility of short-term options on the S&P 500. On February 5, it rose more sharply in a single day than ever before, both in percentage and in absolute terms – by 20 points or 116% based on closing prices. Another fact that illustrates the peculiarity of 2017: There were 55 days, in which the Vix stayed below 10 points, as the chart below shows. In the entire time between its inception in June 1990 and the end of 2016, it had barely managed 10 of these sub-10 days. And initially, this year looked like a seamless continuation of last year, with the Vix trading below 10 points on seven out of eight trading days.

Volatility in the S&P 500: trend reversal in February?



Sources: Thomson Reuters Datastream, Deutsche Asset Management Investment GmbH; as of 3/13/18

At the end of January, however, the calm came to an end, and investors were abruptly woken out of their one-year hibernation. There was a great frenzy as the first doomsday scenarios were brought up. And yet, in retrospect, it was only a brief scare. Having slipped below its beginning-of-the-year level for the first time on February 5, it took the S&P 500 only eight trading days before returning back to positive territory. The MSCI AC World was down for only four days thanks to the relative strength of some emerging markets.

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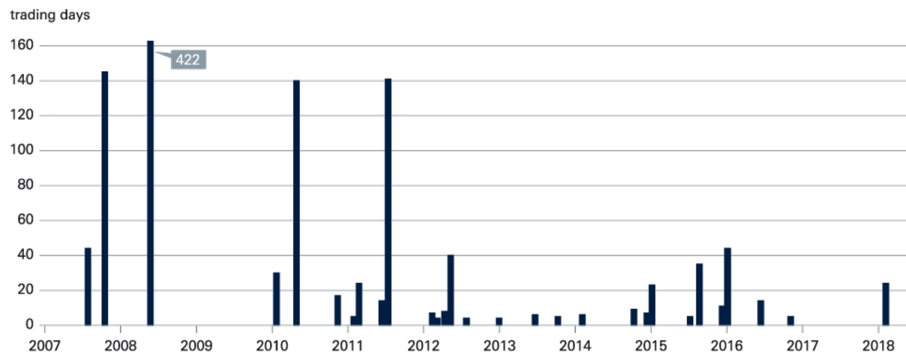
Reasons for the rapid recovery

Even though stock markets recovered quite quickly, volatility remained elevated somewhat longer. If high volatility is defined as being above a threshold of 20, the most recent high-volatility period lasted for 21 trading days. As the chart illustrates, based on this definition, there was not a single day of high volatility in 2017. To find a longer period, you'd even have to look back to the beginning of 2016.

Length of periods in which the Vix traded above 20*



Source: Thomson Reuters Datastream, Deutsche Asset Management Investment GmbH; as of 3/13/18
* A high-volatility period ends when the Vix closes below 20 on more than four consecutive days.

Meanwhile, the Vix has been sitting below the 20-point threshold for a few days. We've identified the following four reasons for the most recent correction being so short-lived:

- The pullback followed an unusually strong start to the year: Before January came to a close, the MSCI AC World had increased by 7.3%. Some regional indices had already surpassed or were close to our 12-month targets by that time. The correction could also be viewed as a "reset" after an overly euphoric start to the year.
- The correction happened during a period of continued abundance of positive economic data and equally optimistic company reports. U.S. companies, in particular, responded to Trump's tax cuts relatively early on. As expected, these drove net profits and share buyback plans, and also led to an increase in analysts' capex estimates.
- The third factor cannot be unequivocally classified as a consequence or cause. In any case, the market was spared a major, self-perpetuating downward spiral, and the short duration of the correction may have been both symptom and cause. What do we mean by that? According to the usual patterns of market psychology, falling share prices are perceived as a negative signal, which exacerbates skepticism and thus leads to further selling. However, there are completely unemotional trading strategies that ultimately move in a similar direction, too. For example, there are strategies primarily based on following existing trends, often referred to as CTAs (commodity trading advisors). Or funds that seek to achieve a certain target level of volatility across the entire portfolio (target-volatility strategies). And finally, there are funds that allocate their assets according to the risk contribution of

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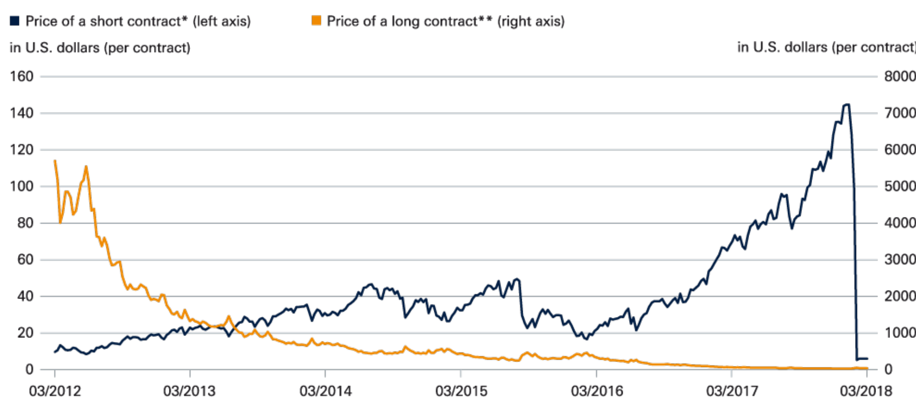
an asset class (risk-parity strategy). The common theme for these strategies is the strong pro-cyclical traits they tend to exhibit. That is why they are readily used as scapegoats if market corrections turn into a downward spiral. However, all three strategies tend to be far less rigid and inflexible than many people believe – many CTAs base their momentum-driven strategies on longer periods, and human intervention is possible with the other two strategies mentioned.

- A very unique accelerant of this correction – short-volatility strategies and, in particular, short-volatility instruments – suggests that investors can indeed attribute the correction to technical rather than fundamental reasons. We will briefly discuss these strategies below.

Maximum volatility through volatility avoidance

The most aggressive way to bet on low volatility is to sell volatility short. For this reason, such financial instruments are called short[1], or inverse, volatility products. They stopped being niche products a long time ago - the two leading funds (one of them being the VelocityShares Daily Inverse VIX Short-Term ETN exchange traded note from Credit Suisse, or Xiv for short) had accumulated almost four billion dollars under management. It was, however, only as a result of the recent market turbulence that they became known to the broader public. The Xiv in particular became (in)famous virtually overnight, after its collapse on February 5 triggered its liquidation. We had warned of just that scenario in our report in June 2017 "Volatility – why we play it safe".

Long volatility: long period without profits, short volatility: profits gone in a short period of time.



Source: Thomsons Reuters Datastream; as of 3/13/18
* VelocityShares Daily Inverse VIX Short-Term ETN
** Barclays iPath S&P 500 VIX Term Future ETN

Even though many investors generated decent returns during this note's seven-year history, that is cold comfort for those who invested near the end and lost everything. On the other hand, although investors in instruments betting on rising volatility doubled their investments at the beginning of February, this paled into insignificance compared to the previous years of losses (see chart). However, conclusions from the Xiv cannot be applied directly to all other short-volatility instruments, because it was one of the

[1] Short selling means selling a financial instrument that you do not own but only borrowed. On the other hand, going long means you own the instrument.

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most aggressive funds in that it focused on the short end of the volatility term structure. In addition, there are a number of similar instruments that are structured in a much more defensive way and only incurred losses in the low double-digits. According to Bloomberg data, around two trillion dollars had been invested in low- or decreasing-volatility strategies before the market collapsed. However, the distinction is anything but clear, as ultimately a direct investment in shares also benefits from falling volatility. The lines are blurred. Before discussing our preferred volatility strategies, we want to start by explaining our view of where volatility is headed in the medium term.

Where is volatility heading to?

The various scenarios of where market volatility is headed going forward could be endlessly debated, as for one thing, there are many subjective elements to the debate about which factors might suggest more nervousness in markets. Here are a few examples:

Factors suggesting higher volatility

- The U.S. economy is in a late-cycle phase and could show signs of overheating.
- With the departures of Gary Cohn and Rex Tillerson from the White House, advisers who call for more protectionism have gained in importance. Donald Trump doesn't seem to be too concerned about the dangers of possible trade wars.
- Increasing inflation rates.
- Central banks are cutting back on quantitative easing and are maintaining or already raising interest rates.
- The Italian election results (see A surprise, Italian style).
- Brexit. Even though Prime Minister Theresa May has recently struck a much more realistic tone, the timetable remains ambitious given the many agreements to be negotiated.

Factors suggesting lower volatility

- Synchronous global growth. Not too much, not too little. We expect 3.9% growth for both 2018 and 2019.
- The purchasing managers' indices will find it difficult to reach new heights, but we expect them to remain at levels indicating expansion.
- Investors are likely to continue to believe that central banks will lend support in the event of major upsets. In addition, there is broad agreement that no central bank would want to risk being accused of sounding the death knell for the economy by pursuing an interest-rate policy considered too aggressive.
- Inflation remains historically low.

As you can see, there are good arguments for both cases. We would draw the following conclusions from observations made over the past years and at the beginning of this year:

- The political arena has sprung a number of unexpected surprises in recent years. Generally, the impact on markets was

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significantly smaller than expected. For us, this means that from a market and volatility point of view, we don't want to overstate the importance of political events, unless they have tangible economic consequences. This is what we expect to see as a result of Brexit, and this could also be the case should Trump's protectionist rhetoric morph into a trade war.
- The market slump at the beginning of February demonstrated once again the concerns that dominate the market most – the risk of a sudden inflation explosion triggering interest-rate hikes.
- Market nervousness increases especially in times of disruptions. For example, when concerns about deflation turn into concerns about inflation. Or when the response pattern of new central-bank decision makers is not yet known.

Our market forecast....

Investors who invested their money in the third week of January and lost about ten percent shortly afterwards will be reluctant to agree, but we believe: the correction was healthy for markets. It corrected an overly brisk start to the year, an overly one-sided position, and an exceedingly relaxed risk tolerance. It also went some way toward rebalancing certain valuation mismatches.

We believe we saw the low point of volatility last year. However, the current interest-rate cycle and signs that the major central banks (Eurozone, Japan, United States) may start to reduce their balance sheets (latest in the fourth quarter of this year) have become too pervasive to be ignored by markets. We have identified the return of the Phillips curve as the main risk scenario for the next couple of years – as a worst-case scenario its nonlinear form (for more information see "Low and slow" does not equal "Never, ever"): the risk of a sharp rise in wage costs in the United States when the unemployment rate falls below a certain threshold.

However, this is not our base scenario. We still don't expect inflation and interest rates to push much higher in the current cycle. We believe that the US Federal Reserve could end its rate-hike cycle at around 3.0% already. We still do expect a more volatile year, as investors will have to come to terms with the issues of overheating and interest-rate cycles. At the same time, however, the synchronous global recovery continues to act as a safety net, which could extend the late-cycle glow for stock markets. Although average volatility is likely to rise only slightly, we still expect sudden volatility outbreaks.

...and how we position ourselves accordingly in multi-asset portfolio management

In the environment described above, we prefer equities to bonds in developed markets. Furthermore, we see a convincing risk-return ratio for equities, bonds and currencies in emerging markets.

As we expect further volatility outbreaks, we will still not pursue any aggressive short-volatility strategies either. In our opinion, there are more elegant ways of benefiting from volatility or changes in volatility. This includes, for example, exploiting price inconsistencies arising from volatility instruments' convexity.

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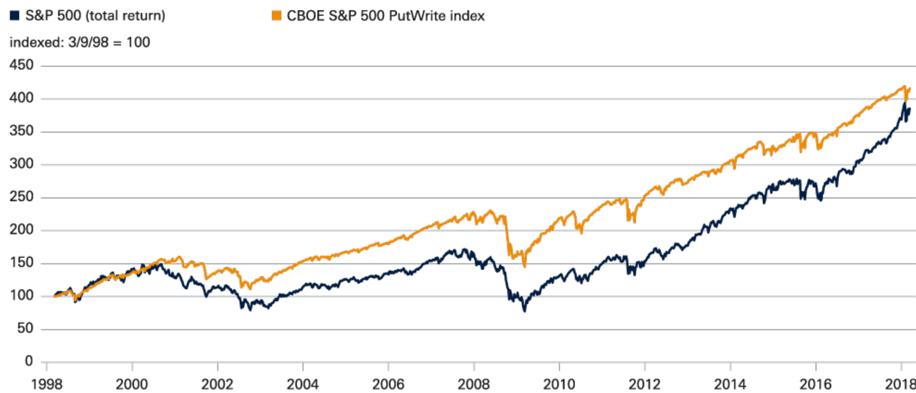
Another strategy, which in our opinion has become even more interesting following the slight increase in average volatility, is to write put options. The graph below shows an example of how an investment in an S&P 500 put option index would have performed, together with a corresponding cash amount invested in an interest-bearing instrument as collateral. The index performed similarly well to the S&P 500 over a period of 20 years, however with significantly lower volatility.

Selling S&P 500 puts versus buying the S&P 500: so far same result, but less stress



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Glossary

Barclays iPath S&P 500 VIX Short-Term Futures ETN

The **Barclays iPath S&P 500 VIX Short-Term Futures ETN** is an exchange traded note that traces the performance of the S&P 500 short-term Vix Futures TR index and therefore profits from increasing volatility in U.S. equity markets.

Brexit

Brexit is a combination of the words "Britain" and "Exit" and describes the possible exit of the United Kingdom of the European Union.

Capital expenditures (capex)

Capital expenditure (Capex) are funds used by a company to acquire or upgrade physical assets such as property, industrial buildings or equipment.

CBOE Volatility Index (Vix)

The **CBOE Volatility Index (Vix)** is a trademarked ticker symbol for the Chicago Board Options Exchange Market Volatility Index. It is a popular measure of the volatility of the S&P 500 as implied in the short term option prices on the index.

Collateral

In some transactions, **collateral** is used to protect the lender against the borrower's default. In case the borrower defaults on the interest or principal payment, the collateral can be used to offset the loan.

Commodity trading advisor (CTA)

A **commodity trading advisor (CTA)** is an individual or organization providing advice and services related to trading in futures contracts, commodity options and/or swaps.

Deflation

Deflation is a sustained decrease in the general price level of goods and services.

Emerging markets (EM)

Emerging markets (EM) are economies not yet fully developed in terms of, amongst others, market efficiency and liquidity.

Eurozone

The **Eurozone** is formed of 19 European Union member states that have adopted the euro as their common currency and sole legal tender.

Inflation

Inflation is the rate at which the general level of prices for goods and services is rising and, subsequently, purchasing power is falling.

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Momentum

Momentum refers to the rate of growth of an index or security's price. Momentum investors believe that strong growth is likely to be followed by further gains.

MSCI AC World Index

The **MSCI AC World Index** captures large- and mid-cap companies across 23 developed- and 24 emerging-market countries.

Phillips curve

In economics, the Phillips curve is a historical inverse relationship between rates of unemployment and corresponding rates of inflation.

Purchasing Managers Index (PMI)

The Purchasing Managers Index (PMI) is an indicator of the economic health of the manufacturing sector in a specific country or region.

Put option

A **put option** is a financial security which gives the owner the right, but not the obligation, to sell an underlying asset at a specified price at a specified time (European option) or during a specified time period (American option).

Quantitative easing (QE)

Quantitative easing (QE) is an unconventional monetary-policy tool, in which a central bank conducts broad-based asset purchases.

S&P 500

The **S&P 500** is an index that includes 500 leading U.S. companies capturing approximately 80% coverage of available U.S. market capitalization.

U.S. Federal Reserve Board (the Fed)

The **U.S. Federal Reserve Board**, often referred to as "**the Fed**", is the central bank of the United States.

VelocityShares Daily Inverse VIX Short-Term ETN

The **VelocityShares Daily Inverse VIX Short-Term ETN** is an exchange traded note that provides short exposure to the S&P 500 VIX Short-Term Futures Index and therefore profits from falling volatility in U.S. equity markets.

Volatility

Volatility is the degree of variation of a trading-price series over time. It can be used as a measure of an asset's risk.

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