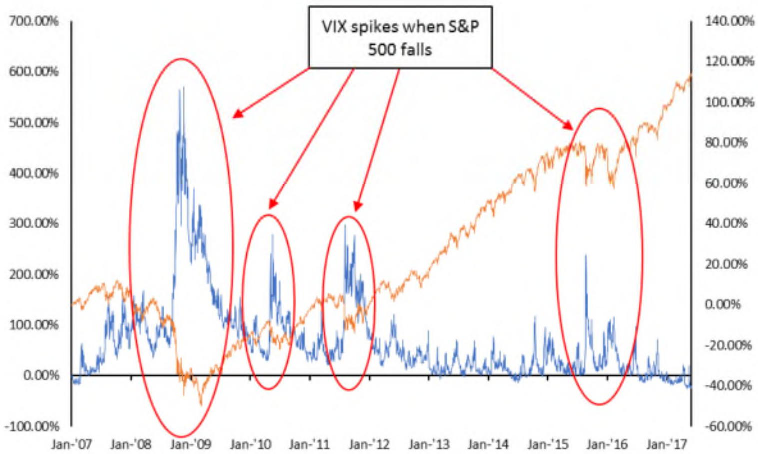
After the twin surprises last year of Brexit and Trump, most investors hoped that 2017 would be a quieter year from a political perspective. That is now looking like wishful thinking. Seemingly whilst last year was all about the breaking news, this year's focus is on the implementation of that news. In the UK, voters have been asked to return to the ballot box for the third consecutive year whilst over the pond the odds continue to shorten on Donald Trump not seeing out his full first term as President. With this uncertain political backdrop, it might come as a surprise to learn that the stock market's most commonly used measure of uncertainty and fear – the VIX index – recently touched its lowest level for 20 years. In this overview, we explain the concept of the VIX index and consider its relevance in judging the risk inherent in equity markets along with its usefulness in protecting portfolios against the volatility that it measures.

What is the VIX index?

The VIX is the stock market trading symbol for the 'Chicago Board Options Exchange Volatility Index'. It reflects the expected annualised change of the S&P 500 index over the next 30 days. The level of the index is calculated through the measurement of options prices on the S&P 500 and estimations of how volatile these options will be from the current date to the date that they expire. If that sounds like gobbledygook, consider instead that the VIX index simply measures how much the S&P 500 goes either up or down and is a gauge of the expected volatility of this market over the coming month. It is partly a reflection of what option traders believe the markets might do during the next 30 days.

The VIX index has in the past ranged from lows of about 8 to highs of about 80 but typically anything over 30 is a sign of significantly increased fear and below 15 reflects a period of calm. A rising VIX index means that investors are nervous and a falling index means that they are confident. The VIX currently sits at just under 10.

Since the index measures and interprets movements in the markets both on the way up and the way down, it should be expected that the VIX will rise when the S&P 500 is moving either in a positive or negative direction. However, the chart below shows that the largest moves in the VIX have occurred when the S&P 500 has fallen significantly, rather than when it has spiked upwards. In fact, nearly 80% of the time between Jan 2000 and Sept 2012, the S&P and VIX index moved in opposite directions.



VIX and S&P 500 return profile since 2007

This is attributed to the fact that most investors are heavily invested in equities when markets are rising and tend to be bullish about the future, sometimes irrationally so. As a result, generally positive market sentiment means that investors typically don't bother buying protection that the market may fall. However, when markets are falling, and falling rapidly, investors not only sell more aggressively in response but they also want to buy protection against further falls. The cheapest way to obtain protection? Buying and selling options. This feeds directly into the level of the VIX index.

Source: Bloomberg

Snapshot of inverse correlation between the S&P and VIX (2012)

Why has the VIX fallen to 20-year lows?

The table below shows that the S&P 500 has moved by more than 1% in a day on only three occasions this year, versus 61 in the average calendar year.

	# of Trading Days	
Year	**>1%**	**>2%**
2009	117	55
2010	76	22
2011	96	35
2012	50	6
2013	38	4
2014	38	6
2015	72	10
2016	48	9
2017	3	0
Long-Term Avg	**61**	**14**

A 10-year data snapshot currently indicates that the VIX index has been higher than today's levels 99.4% of the time. This low level of volatility represented suggests that investors are calm and confident about the outlook for the future, at least in the very short-term. In fact, the general trend in the level of the VIX, save for a few short-term spikes, has been downwards over the past 9 years. This is because we've had very strong equity markets since the financial crisis in 2008 and therefore, despite a few blips, it should be expected that volatility is at a low level, given the explanation as above about investors not wanting protection when markets are rising. The very recent movement in the VIX towards all-time lows can be attributed to the relief felt in markets when Emmanuel Macron triumphed over Marine Le Pen in the French presidential elections.

However, whilst the VIX is now close to 20-year lows, we have recently seen some short-term spikes in the index over the past few weeks, most notably when Donald Trump sacked FBI Director James Comey. The S&P 500 fell 1.7% after this announcement and the VIX index spiked up by 18%.

The question now is whether volatility will spike up again in the face of further uncertainty in the second half of the year. However, arguably there are several reasons why volatility may actually remain at low levels for the foreseeable future. These include:

Central Banks' monetary stance

There has been a concerted effort by central banks globally to provide monetary stimulus over the past decade through low interest rates and significant asset purchases (Quantitative Easing). Whilst the US has started to normalise monetary policy through rate rises it has clearly signposted each step-change and the Federal Reserve are treading very cautiously. Predictable and sensible monetary policy puts investors at ease. Bond yields therefore remain at historic lows and thus equities have remained an attractive asset class.

Benign macro-economic environment

Whilst there have been several 'macro' shocks in recent years none are currently dominating the headlines, as US growth is strong and the UK economy has not yet suffered as a result of Brexit. There is now no longer the same level of concern about a low oil price, capital flight from China, or the demise of the € (European elections have stabilised the ship). Investors are just not that concerned about the macroeconomic environment and this therefore makes for low volatility and a low level of the VIX.

Strong corporate earnings

As monetary conditions have tightened, companies have produced stronger earnings than forecast, thus dampening volatility and helping push shares higher across the globe. For the first quarter of 2017 the blended earnings growth rate for the S&P 500 was 13.9%, the strongest rise since 2011 (+16.7%). European corporate earnings are also anticipated to come in at around circa 13.9%.

Low sector correlation

Market sectors have been moving more independently of each other and they have become more uncorrelated over the last few years. 'Sector rotation' has been the buzz phrase (in other words investors have been jumping between defensive and cyclical sectors, with no clear sign of leadership). This to-and-fro creates volatility in the underlying sectors but tends to balance out the general direction of the market, thereby dampening volatility.

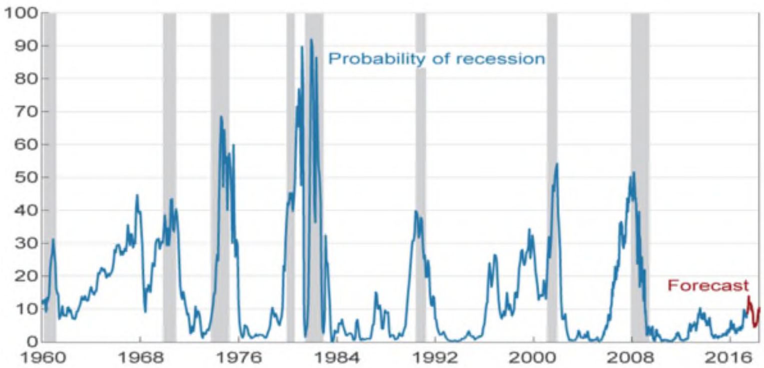
No imminent recession

Traditionally a sustained rise in the VIX occurs towards the end of an economic cycle, during a recession. At this point investors are ground-down by sustained poor economic news and seek protection from further losses – stock market options offer that protection. However, as when investors wrongfully forget about the need for protection during jubilant markets, they often buy protection at the wrong time just as the markets are heading towards their lowest point.

At present the New York Fed's 12-month indicator showing the 'probability of a recession' is at just 10.4% and markets show no signs of capitulation. This could imply that VIX will stay lower for longer.

Percentage Probability of a US Recession – Calculated from the Yield Curve

The shaded areas represent previous US recessions:



All of these are good reasons to believe that volatility may stay low, at least for now. Yet there are also other factors that could easily upset the apple cart and push the VIX higher.

What might lead to a jump in the VIX?

Given the conservative strategy of most central banks, the biggest shock would probably be a surprise macroeconomic 'event' led by Janet Yellen, such as a surprise rate rise or perhaps worse, a rate cut due to a deteriorating US economy (highly unlikely…. famous last words!). This would be a major catalyst for a short-term jump in the VIX but whether this might lead to a sustained move above the long-term average of the index is far from certain.

Examples of major previous historic moves in the VIX and their associated causes are shown below:

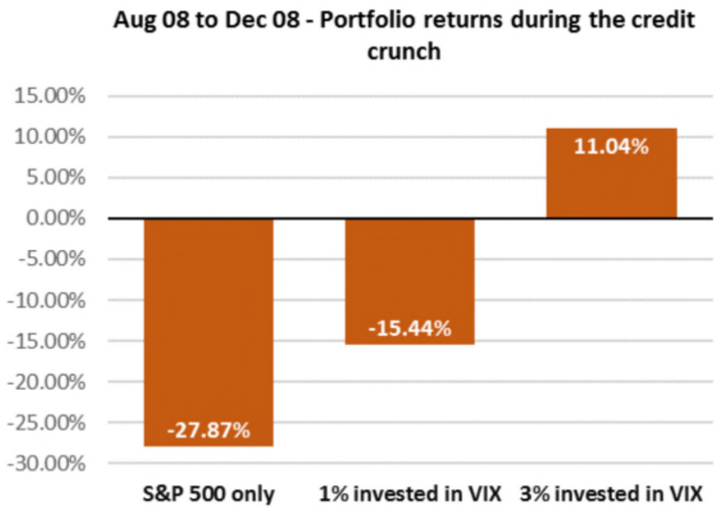
Date	VIX Increase	S&P 500 Fall	Catalyst
23/07/1990	52%	-2%	Worries about economic growth and computerised trading
03/08/1990	41%	-2%	Iraq invades Kuwait
15/11/1991	52%	-4%	Worries about economic growth and govt cap on credit card rates at 14%
04/02/1994	42%	-2%	US Federal Reserve surprise rate hike
27/02/2007	64%	-3%	Shanghai Composite falls 9%
29/09/2008	34%	-9%	Congress rejects $700billion bank bailout
08/08/2011	50%	-7%	Greek Debt Negotiations
15/04/2013	43%	-2%	Boston marathon bombing
21/08/2015	46%	-3%	Chinese Yuan Devaluation
24/08/2015	45%	-4%	Chinese Yuan Devaluation
24/06/2016	49%	-4%	Brexit Referendum
09/09/2016	40%	-2%	ECB refrain from further QE stimulus

How does lower volatility affect portfolio returns?

Looking back over the last 20 years, typically an environment such as this, with lower and falling volatility as measured by the VIX, has either led to or been caused by rising stock market valuations as measured by price to earnings.

A lower volatility environment will impact on specific elements of a portfolio more than others. For example, simple structured products tend to have less attractive pricing and are not as alluring when volatility is low. Also, the challenge facing investors with significant cash weightings in a low volatility market is to try to find an appropriate entry point. Canny investors will look to make investments at a time when the market has been sold off aggressively and when they feel that valuations have become attractive; however, in a period of benign volatility these 'buy the dip' opportunities are usually rare.

History teaches us that when volatility is sustainably low, markets may be close to reaching an inflection point. Investing in assets that give exposure to the VIX can help to protect portfolios at these times yet the timing is very important and the index is incredibly volatile. The chart below shows how buying VIX at the right time during the credit crunch could have made a big difference to investment portfolio returns:



This is all well and good with hindsight. However, get it wrong and the VIX can still hurt you by staying lower for longer than expected. Buying volatility is therefore not for the feint hearted but used wisely can help to protect at times of major market stress.