A history of VIX spikes in three charts

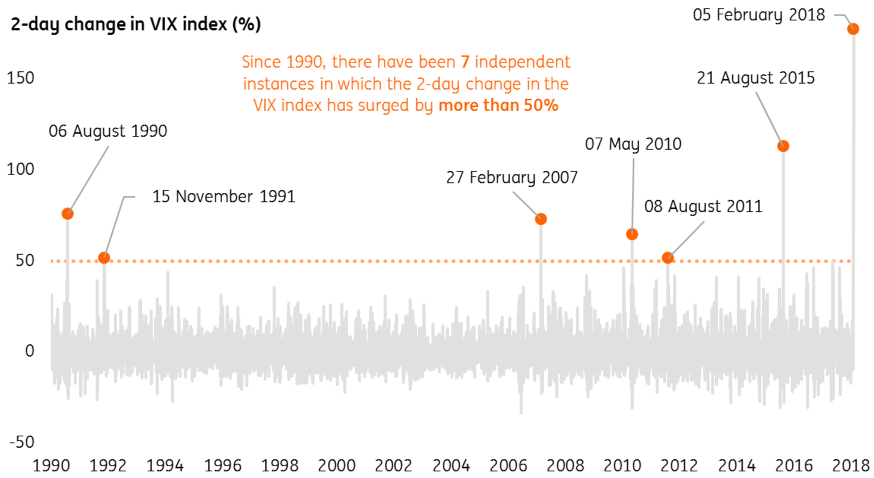
Volatility is surging but what can history tell us about such spikes and what does it mean for risky assets? We take a look

Source: Shutterstock

Historical VIX spikes

Since 1990, we identify seven independent instances where the two-day change in the VIX index has increased by more than 50%. Such occurrences capture unexpected sell-offs in risky assets and a sharp transition from what has previously been a fairly benign global market backdrop.

Chart 1: 7 instances where the VIX index has spiked by more than 50% since 1990

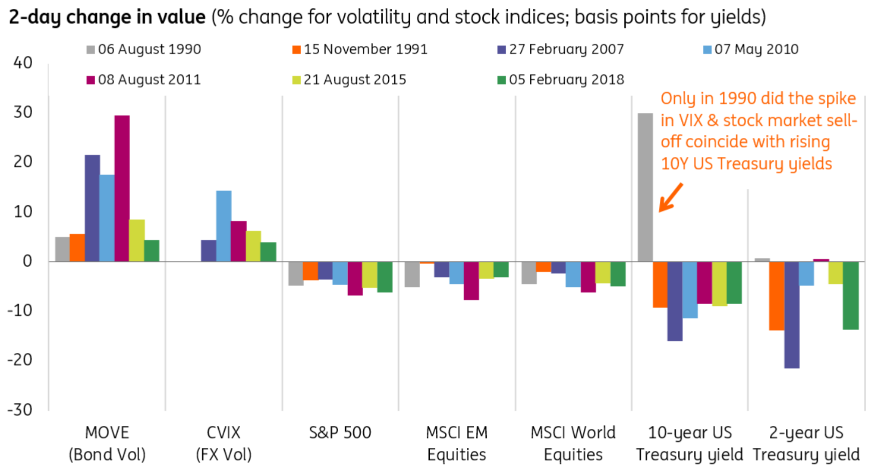


Source: ING estimates, Bloomberg

Most spikes accompanied by lower stocks, higher bond prices

The majority of episodes - including the current market sell-off - have seen the typical 'risk-off' pattern in global markets. Only during the August 1990 episode - around the time of the Gulf War - did we see the stock market sell-off coincide with a bond market sell-off (and a sharp rise in 10-year US Treasury yields). The other six episodes have seen the typical 'risk-off' pattern of lower stocks and lower bond yields - indicating a rotation out of risky assets into safe-haven bonds by global investors. This also tentatively shows that the current market sell-off is not one driven by rising US bond yields (and a bond market sell-off) – rather, the causation stems from equity markets.

Chart 2: Majority of episodes saw the typical 'risk-off' pattern in global markets



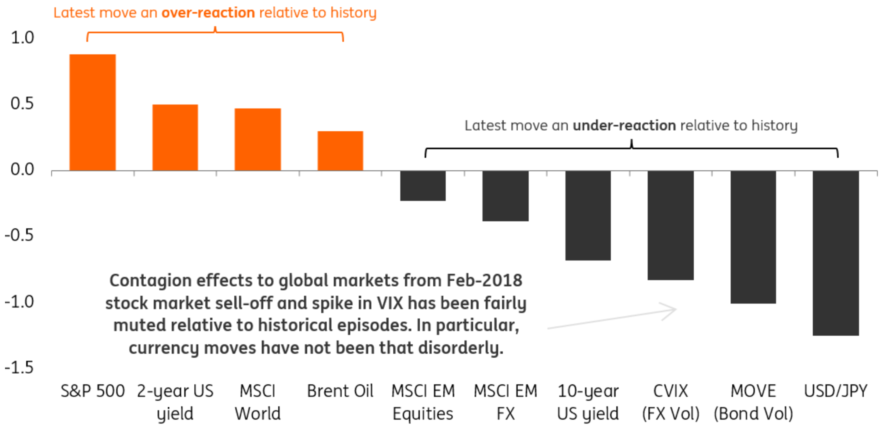
Source: ING estimates, Bloomberg

The contagion effect

The contagion effects to other asset markets from the current stock market sell-off has been relatively muted compared to historical episodes**.** In particular, we note that moves in currency markets - notably USD/JPY - have not been as disorderly as had been the case in prior instances when the VIX has unexpectedly spiked; past episodes on average have seen USD/JPY move lower by around 1.2 standard deviations more than the current move (ie, USD/JPY should be trading closer to 107 based on the extent of the current VIX spike). Our initial takeaway from this is that the current equity market sell-off may be a result of prior over-exuberance for risky assets– which were not necessarily reflected in other asset markets. Therefore in an environment where we continue to see a non-fundamental stock market correction, the spillover effects to other asset markets (namely bonds and currencies) may continue to be limited in size and extent.

Chart 3: Contagion effects to other asset markets from the current stock market rout has been muted compared to history

February 2018 reaction versus historical average of prior episodes of spikes in VIX index (z-scores)



Source: ING estimates, Bloomberg. Note: Chart shows z-score deviations (which scales the difference between latest and historical by the standard deviation of changes)

FX implications

USD/JPY remains the preferred cross to monitor for any nascent signs of disorderly FX markets - although the current stability around the 109 level, despite the ongoing equity market rout, supports the argument that this may not be the typical 'risk-off' currency market backdrop (especially relative to historical VIX spikes). As we noted earlier, there may be only a few relative value opportunities in the currency space to position for any stabilisation in the current stock market sell-off.