Risk

Old dispersion product signals new vol regime

Return of pre-crisis, ‘theta-flat’ trades an early sign of shifting volatility expectations

Dealers say theta-neutral structures have become more attractive as equity market volatility has returned

Helen Bartholomew

20 Feb 2018

A jump in US equity market volatility is sparking interest in pre-crisis dispersion structures that ditch the long-volatility bias found in the trade in recent years.

Sustained demand for the trade would be a sign of changed volatility expectations, dealers say – the so-called theta-flat product makes most sense in a higher-volatility environment. Its vega-flat alternative had become standard in the post-crisis years when **volatility was low**.

“If we see a widespread shift to theta-flat dispersion, it suggests investors think volatilities have entered a new regime where they are floored at a higher level. People were scared by the recent vol reaction so I’d expect volatilities don’t drop back to those levels, which could mean the period of vega-flat dispersion is over,” says Stephane Mattatia, global head of product strategy, equities and derivatives at Societe Generale Corporate & Investment Banking in Paris.

Two dealers claim to have seen old-style structures trading since the start of the year, albeit in small sizes. One of the dealers says client enquiries around the trade have increased since **volatility surged** at the start of February.

The broad consensus among dealers and investors, though, is that market conditions will not yet support a major take-off in volumes.

“Trades have happened, but we don’t see it as a trend. Most clients want to see more vega-flat structures with more diversified baskets and illiquid names,” says an equity derivatives head at one European bank.

Equity dispersion trades see investors short the volatility of an index against its constituent stocks, as a bet that individual stock volatility profiles will diverge from the index average, and have largely been structured in vega-flat format since making their post-crisis comeback six years ago.

The structure sees equal vega amounts traded on the long and short legs, which gives the trade a long-volatility profile because increases in single-stock volatility will normally be accompanied by a smaller increase in index volatility – reflecting the fact that correlation between stocks is less than 100%. Put simply, gains in the long single-stock volatility leg are only partially offset by the short index volatility position.

The theta-neutral alternative corrects this mismatch by selling a larger amount of index volatility – in vega terms – when compared to the long stock volatility position. As a

result, the performance of the trade is determined solely by the way correlation realises versus implied levels – dealers describe it as a "cleaner" way to trade correlation than the vega-flat structure, where performance is determined by realised levels of both volatility and correlation.

These differences have made the theta-neutral structure relatively more attractive as volatility has picked up, dealers say. The CBOE's Vix index of volatility on the S&P 500 more than doubled to hit 37 on February 5, and since February 14 has generally been close to 19 – that's roughly double the levels seen for much of January.

Spreads on vega-flat dispersion trades narrowed by one point on the S&P 500 and half a point on the Euro Stoxx 50 in response to the market turbulence as single-stock volatility failed to keep pace with surging index volatility. The mark-to-market impact on outstanding vega-flat S&P and European dispersion trades may have been as **high as** $100 million, according to trading desk estimates.

At the same time, 10-month (December 2018) implied correlation on the European benchmark was bid at 62, up from 47 in mid-January and settling back at 57 by February 13 – one week after the turbulence hit.

If we see a widespread shift to theta-flat dispersion, it suggests investors think volatilities have entered a new regime where they are floored at a higher level

Stephane Mattatia, Societe Generale Corporate & Investment Banking

"For around the same spread of volatility – 6.5 on Euro Stoxx 50 – the bid of correlation increased by 10 points. If you want a trade driven by correlation, then you need to make it theta-flat," says Mattatia.

Small clips of dispersion are understood to have traded with a short volatility bias since the February 5 rout, particularly on the S&P 500 where implied correlation briefly edged towards one. The most attractive levels were untradeable, however, due to a dearth of liquidity in the eye of the **volatility storm**.

"For the first time in a while, vols in the US were high enough for theta-neutral trade

weighting to actually make sense, but this was very short-lived," says Pete Clarke, head of equity derivatives strategy at UBS.

"People have generally stuck to the vega-flat approach, particularly outside of the US where the relative vol spike was a lot less significant, and even then investors have generally needed to be selective with names and run a bit of tracking error to get an attractive entry point," he says.

For many investors the moves were not enough to justify any widespread shift away from long-vol dispersion.

"With implied correlation below 60 it doesn't make sense to do theta-flat in terms of risk-reward," says Benjamin Clerget, chief investment officer of BTG Pactual's Global Derivatives Opportunities fund. "We are seeing a longer-term shift in the volatility regime and the correlation regime, but to implement a correlation carry position, I think you have to be a bit more patient."

He says the fund closed most of its dispersion positions prior to the recent bout of volatility to focus on more active trading of single-stock volatility via the options market.

JP Morgan derivatives strategist Peng Cheng believes longer-dated volatility would need to reset higher for the theta-neutral trade to make sense, as dispersion is typically traded with a maturity of one to three years.

"If you look at the volatility term structure, the front end has shot up substantially but longer-dated levels haven't really moved, so we don't see the attractiveness of theta-neutral at the moment," says Cheng.

That was reflected in Vix futures traded on the CBOE Futures Exchange. Front-month contracts almost doubled from 15.625 to 33.225 between February 2 and February 5, while October 2018 expiries moved by just over two points, from 16.45 to 18.975.

"If anything, now that we're seeing a higher level of realised volatility, we think it makes sense to be long volatility, which makes vega-neutral dispersion more attractive," says Cheng.
