Need for liquidity throws spanner in quant models

By Deborah Brewster

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Quantitative investing, a rapidly growing strategy that uses complex computer models to make trading decisions, has taken a blow to its reputation in the current markets troubles.

The strategy is used by some of the smartest and best regarded investors, such as James Simons, the former maths professor whose Renaissance funds have produced extraordinary returns over the past decade.

Now the quants, as they are called, appear to be on the back foot.

Even Mr Simons's fund has taken a hit, along with AQR, a quantitative manager, Goldman Sachs's heavily quant-driven hedge funds and a clutch of others.

But not all quants have done badly. First Quadrant, a fund firm that manages about $38bn in mostly quant strategies, has posted solid returns on several of its funds in the year to date.

Deutsche Asset Management is believed to have achieved a return of more than 20 per cent so far this year on the $21bn managed in its global tactical quant strategy, in spite of a small drop during the month of July. The strategy, which includes a $2bn hedge fund, has no credit exposure but invests across equities, bonds and currencies.

Quant strategies have become widespread in the past decade across both traditional asset managers and hedge funds.

Though no one knows for sure exactly how much is managed in such funds, they are reckoned to account for a significant minority of assets under management and to be disproportionately active in financial markets, because of their rapid trading.

Fund managers on Tuesday said a wave of deleveraging was behind much of the difficulties for quant funds. As highly leveraged investors cut debt, they have unwound positions, often buying stocks to close out short positions.

Their trading has been driven by their liquidity needs rather than their view about what is a good investment. This throws out the mathematical models that quants use.

James Norman, a managing director in Deutsche Asset Management's quantitative strategies group, said: "Investors have become very risk-averse. When that happens, there is indiscriminate selling, driven more by macro markets and liquidating positions rather than stock selection.

"Quants are valuation-driven, and when there is a lot of selling, valuations don't matter."

He said that quantitative equity strategies, which have been particularly hard hit, also tend to do better when there is a wide spread between the best and worst performing stocks. In the current climate, that gap has shrunk so that it is harder to make money.

Max Darnell, the chief investment officer for First Quadrant – which manages hedge funds, mutual funds and institutional accounts – said that most quants used purely historical models that extrapolated past patterns into the future.

Mr Darnell said such models often worked but risked being unable to adapt quickly to changing market conditions. "Our approach has worked better because it is more tactical and opportunistic," he said.

However, he said that First Quadrant had also been hurt by some of the big waves in selling.

"We are leaning towards stocks with good cash flow. That is a typical quant strategy. But stocks with good relative value have declined. Big selling volume has driven them down in the past few days. That has hurt most quants."

The broader issue was that highly leveraged funds were reducing their borrowing, and trying to exit often illiquid sectors of the markets, he said.

"The pressure to generate returns in what was a low-return environment has without doubt caused investors to go into less liquid spaces. In the past those less liquid parts of the credit markets had mostly long-term investors in them. Now they are mostly short-term investors, who are facing a liquidity crisis."

Pioneers of quantitative techniques

Some of the earliest quantitative investment methods included the successful identification by Benoit Mandelbrot, the Yale mathematics professor, of patterns in cotton prices in the 1960s, writes Anuj Gangahar.

Quant techniques were adopted generally by financial markets in the early 1970s. Tracker funds were early examples of quant. In 1971 Wells Fargo launched a quantitative mutual fund to track 1,500 stocks on the New York Stock Exchange. But actively managed quant funds have been the real boom story of recent years.

Two men are widely acknowledged as the pioneers of quant hedge fund investing and are credited with the explosion of such strategies in the past two decades.

David Shaw, a PhD from Stanford, and founder of DE Shaw, was once described as the "most mysterious and intriguing force on Wall Street" due to its reliance on complex quant models.

James Simons, a PhD from the University of California, Berkeley, founded the respected Renaissance Capital that last week admitted fund difficulties.

It is thought to have recovered much of the losses.