Plenty has been achieved in the field of **OTC derivatives processing** in the last few years, particularly with credit derivatives. However, more progress still needs to be made across the major derivatives asset classes, as **Simon Boughey** explains

All part of the process

A quick glance at the Markit quarterly metrics report for December 2007 indicates that significant progress in the world of trade processing for the three major derivatives asset classes has been accomplished. Nevertheless, a lot remains to be done as well.

The New York Federal Reserve Bank first turned its spotlight upon the credit derivatives industry in September 2005. It was here that the worst dangers of counterparty risk through unconfirmed trades appeared to lie.

Privately, regulators were horrified by the stories of vast amounts of paper tickets floating around the back offices of banks with no-one laying claim to them for months. Should a credit event occur at one counterparty before hundreds of trades with another were confirmed, the industry was in for a whole lot of pain.

In the two and a half years since that meeting between the New York Fed and the representatives of the leading credit derivatives banks, trade processing has changed enormously. These 18 banks, now known as the G18, have introduced electronic confirmation and processing on a wide scale and the backlog of unconfirmed trades has reduced greatly – although there was a blip last autumn when trade volumes went through the roof as the sub-prime crisis blew its gale through the financial markets.

The proportion of credit default swap (CDS) trades that were confirmed electronically was 90% of the overall total at the end of 2007, compared with only 50% in September 2005. Moreover, almost 100% of all deals were electronically eligible; that is to say, they could be processed electronically.

But it is very different in equity derivatives. Only 20% of the overall deal volume was confirmed electronically at the end of 2007, although this number had doubled over the previous eight months.

Perhaps more worryingly, only 40% of equity derivative trades were eligible for electronic processing and only 50% of those trades were confirmed electronically. The average electronic deal volume was 1000 trades per month, while 5000 non-electronic trades were going through – and it had been up to 7000 in October.

The problems of the equity derivatives world were first highlighted by the New York Fed in one of its meetings with the G18 in November 2006. The reduction of the trade backlog and the adoption of electronic processing appeared to be going well in CDS, so the regulators swung their guns round on to equity derivatives.

The banks once again agreed to get their house in order. They noted in a letter to New York Fed president Timothy Geithner that "equity derivatives show the longest elapsed time between trade date and confirmation execution for any derivatives asset class". Among other things, they pledged to reduce the backlog of unconfirmed trades by 25% by 31 January 2007.

But a note of concern could be detected in the statement the Fed made in May 2007. "There remain significant

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challenges to automating equity derivatives infrastructure. Both executing industry standard master credit agreements (MCAs) and transporting fully to electronic platforms require significant time and resources," it said, also noting that the reduction in backlogs achieved in January 2007 was not maintained.

In October 2007 the G18 and the Fed agreed to a new three-phase plan to clean up the industry. Six new MCAs would be published by 31 August 2008, new and existing MCAs would be executed between dealers and high volume clients, and – importantly – at least 50% of eligible trades with top-20 clients would be confirmed electronically by 31 March 2008.


Gina Ghent, first vp, equity derivatives business development, Depository Trust and Clearing Corporation (DTCC)

At the time of writing, it is unclear whether this last target will be hit. "Those are aggressive targets for such a complex market to automate. Everyone's going to have to work really hard to get there," admits Gina Ghent, first vp, equity derivatives business development at the Depository Trust and Clearing Corporation (DTCC), the electronic trade matching service.

Tom Mahoney, coo, equity derivatives, Americas at BNP Paribas, is a bit more bullish. "Well, BNP will make that number, for sure. Overall, I think the 50% figure will be hit. These targets usually are. They are only set after a lot of discussion with the Fed, and sometimes the Fed comes back and says they are too aggressive," he says. Further, Chip Carver, ceo Swapswire, comments: "Since the introduction of the three-phase plan in October 2007, the take up of Swapswire for equity derivatives has accelerated and we are seeing a lot of momentum in the market."

Structural differences

But, even if this number is met, there are clearly structural differences between the equity derivatives market and the credit derivatives market that makes the adoption of electronic trade confirmation more problematic in the former. "Equity derivatives is much more diffuse, with many more dealers. There is much more dealer-client dealing, there is a lot of Asian business, there are fewer standard documents and there have been fewer electronic tools," summarises Jeff Gooch, evp and head of valuation and processing at Markit.

All these issues have presented hurdles to the widespread adoption of electronic processing platforms, but none is perhaps more troublesome than the predominance of dealer-client trading in equity derivatives. In credit derivatives, dealer-dealer trading occupies a greater percentage of overall volume and, moreover, only a relatively small number of dealers hold sway.

Significantly, around 90% of electronically eligible trades are confirmed electronically in equity derivative trading among the G18 banks. It is when clients are added to the mix that the percentage drops drastically, both in terms of the proportion of deals that can be processed on an electronic platform and the number that actually follows this route.

"Dealers have a wide disparity of fragmented reporting capabilities. The lack of consistent standards forces the buy-side and hedge fund clients to deploy their own very limited technology and operations resources to fill these gaps," says Ron Tannenbaum, co-founder of GlobeOp Financial Services. "As the long-term resource investment demands remain unknown and as these areas are not core fund competencies, many funds turn to third-party outsourced service providers and fund administrators."

Equally, clients' monthly deal volume does not always justify the extra expenditure that taking on their own processing would entail. Overall, DTCC's Ghent says: "The equity derivatives market presents more challenges for the industry. There is a vast array of different products and multiple global regions in a market with high client participation. The buy-side may face additional challenges of resource and technology constraints, which can lengthen the time it takes to execute a confirmation."

Mahoney agrees that the willingness of clients to cooperate with the pledges made by the G18 to progress towards an electronic solution varies, and that this is problematic. It is also a completely global business, and a New York bank sometimes has difficulties persuading a client outside the US that they should step up to the plate.

"Some of the banks have large global client bases beyond the jurisdiction of the New York Fed and some clients located in Europe or Asia feel no pressure to make the investment. There's not a lot you can do about this," he explains.

Mahoney adds that some banks have discussed a cessation of trading with clients that refuse to play ball, but that there is not a great deal of willingness to take this step. "It only hurts you, as they go off and trade with someone else,"

Signs of progress

Nevertheless, there are some signs of progress in equity derivatives, insist bankers. They claim that the bigger clients are becoming increasingly cooperative and realise that the reduction of unconfirmed transactions will benefit them as much as anyone else.

"Getting clients on board is a big education process, but it reduces their potential for error. In the long run it will reduce their head count, as well as counterparty risk," says Adrian Valenzuela, head of investor sales at JPMorgan in London. His colleague Vivienne Fitzpatrick, vp in business development for equity derivative sales, claims clients are "putting a lot of dollars into technology because they see the potential for increased control and the obvious economic benefit of increasing automation and e-matching".

Only the next six to nine months will show whether clients are indeed committing resources to electronic trading. But the process is also stymied by other factors. The equity derivatives market has a much longer history than is the case in credit, there are many more participants and, crucially, it is far from plain vanilla.

Bespoke trading is still widespread, with complicated deals tailored to the needs of individual clients. This makes it entirely unsuited for the demands of electronic dealing. Documentation for different products and regions has to be established before electronic trading is even considered.

"We need to get more master agreements in place. In the short form (of documentation), trades can be automated. In the long form of documentation, this is not so," says Markit's Gooch.

But getting the documentation in place is a laborious task. Once again, the difficulty of attaining communion between dealers and clients delays what would be a labyrinthine process under the best of circumstances.

"Dealer-client negotiations around documentation are challenging. It's tough to attain an absolute symmetry of interest," says Katherine Darras, general counsel, Americas, at the International Swaps and Derivatives Association, the body responsible for drawing up market standard documentation.


Katherine Darras, general counsel, Americas, International Swaps and Derivatives Association

Darras explains that clients increasingly want to be included in the calculation agent selection process themselves, or have a source of redress if they don't agree with the outcome. This has been one of the most debated points in the process.

"Some traders and firms in general are more reluctant to give up various things like who will be the calculating party for the transaction (i.e., the calculation agent), which can slow down the process of executing Master Confirmation Agreements – a prerequisite for electronic matching," confirms Ghent.

Sources close to the process add that hedge funds are often the most recalcitrant in the negotiation process. The many caveats can hold up the process significantly.

As the world of equity derivatives is so fragmented and diffuse, ISDA, in common with the leading banks, divides it into four regions – the US, Europe, Asia (excluding Japan) and Japan. Practices and customs in equity derivatives differ substantially from one region to the next.

For example, the drive to establish a greater commoditisation of equity derivatives post-trade processing has emanated chiefly from Europe, reports JPMorgan's Fitzpatrick, as perhaps 80% of the market is OTC-based and 20% is listed. In the US these proportions are reversed. "The European market is more fragmented and more segregated. There is more need here," she says.

ISDA on course

Despite the difficulties, Darras says ISDA is on course to have its six new MCAs in place by 31 August 2008, as pledged to the New York Fed. It has circulated to members a pre-publication draft for a US equity derivatives options MCA and is "close to finalising" an Asia (excluding Japan) swaps form. The next documents in the waiting room are a Japan options form, a European index swaps form and an Asia ex-Japan options form.

Sources in the market add that the French banks – which to a large extent invented the equity derivatives market in the late 1980s and early 1990s – have been reluctant to throw their weight behind a standardisation of the market, as it would curtail their competitive advantage.

This feature can be witnessed throughout the derivatives market, particularly where a few leading players dominate flow. The leading US banks have been reluctant, for example, to endorse electronic trading in CDS, with the result that it is much more developed in London than in New York. Equally, electronic trading of interest rate derivatives has only begun to show progress partly because the major dealers have decided to dilute their opposition to the process.

"The French banks have thought it was not in their interest to have the market standardised. They didn't want trades to be fungible, and have only acceded when the Fed insisted," says a source in New York.

"Some traders have been more reluctant to give up various things," concedes another source in trade processing.

Others disagree, however. "I don't think that the French banks have

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Jeff Gooch, evp and head of valuation and processing, Markit

dug their heels in. They occupy the middle ground. It will benefit them as much as anyone else, but if banks do lower-volume bespoke deals, there is less incentive to invest," says one senior banker.

The picture is further complicated by the parallel existence of two competing electronic processing platforms: the DTCC, the first electronic answer to Wall Street's paperwork crisis of the late 1960s; and SwapsWire, introduced in 2002 and owned by a consortium of 21 banks.

Essentially, DTCC is a lower cost, less complicated matching and trade confirmation solution that requires only one NQ (message) line. Most US shops are already connected to it for CDS trading.

SwapsWire is a more expensive, but more thorough system, which provides straight-through processing and is front-end rather than back office driven. In contrast, of course, it is more common in Europe. European dealers prefer it, and say that – with its acquisition by the data valuation group Markit in December 2007 – a lot more tools and features can be brought to the table.

But clients don't want to have to choose between two platforms. Still less do they want to have both. And the lack of an industry standard platform is another factor holding up the better development of electronic trading.

"Most banks would love just one platform," says Mahoney. Ghent, somewhat predictably, thinks the industry would be better served with just a single system as well. "One consistent theme from the buy-side is their desire for a single platform that would cover their needs," she says.

The existing frailties of trade processing systems in place in equity derivatives were highlighted as dramatically as is possible by the ability of Jerome Kerviel to lose €5bn at Société Générale before his bosses found out in January 2008.

"SG was really very impressive. It raises questions about the bank's internal control mechanisms. Perhaps they were in place, but they weren't prioritised? It seems Kerviel had access to all the systems previously but that access wasn't terminated when he became a trader," says a source in New York.

Though all the details are far from clear, it seems that Kerviel avoided risk checks by putting on fictitious hedging transactions that were thereafter cancelled. The fact that the trade confirmation system was so tardy allowed him to do this. "You could drive a truck through the gaps," comments a source in London.

"Post-SocGen, it is clear that you need to tie out trades with your counterparty and agent reconciliation needs to be in place," stresses Gooch of Markit.

Clearly there is work to be done in equity derivatives. But most in the industry remain confident that they will get their house in order.

Resource demand

The focus by the New York Fed and the SocGen mess has given operating groups at banks greater leverage to demand resources to fix areas of concern. The weight that a backlog of unconfirmed trades throws upon operating systems and those personnel that have to follow them up is becoming more greatly appreciated, say bankers.

"We've only really had a year. Initially there was a degree of confusion, but now the objectives are getting clearer. If you look at where we were a year ago, we have moved significantly. In the next 12 to 18 months we expect to see the real benefits on a global scale," predicts Valenzuela at JPMorgan.

With the spotlight clearly thrown upon equity derivatives in the last year, it seemed that problems in the credit derivatives space were melting away. It came as an unpleasant shock, therefore, when Markit released its credit metrics in October 2007.

The average number of CDS trades unconfirmed for 30 days or more had climbed from only 200 or 300 per bank in January to over 3500 per bank at the end of September. The total number of unconfirmed trades per bank at the end of August was around 10,000, the highest level since the Fed first turned attention to the issue in September 2005.

The trade processing systems in place in the credit derivatives market had been unable to cope with the great explosion of trading that occurred in the summer and autumn of 2007 as credit experienced a wholesale repricing. Dealers estimated that trading volumes during this period were roughly double what they had been during the correlation crisis of May 2005 and around three times what had been customary in the previous six months of 2007.

And, although a much larger percentage of credit derivatives trades are conducted electronically, not all are. For example, according to Creditex, the online CDS broker, while around 90% of trades it executes in the Markit iTraxx indices are done so electronically, virtually all interdealer trades in the US are voice executed.

Moreover, as in the equity derivatives market, most dealer-client trades are not accomplished electronically. There are holes in the system, and they were exposed in the second half of 2007.

The spike in unconfirmed trades has abated, according to Markit numbers published in December 2007. But the numbers have not come down to where they were before the sub-prime crisis.

The total number of outstanding unconfirmed trades has been reduced from 10,000 at the end of the third quarter of 2007 to 4000 by December 2007, but is still double what it was in December 2006. The number of outstanding confirmations older than 30 days has dropped from over 3500 to below 2000, but in December 2006 it was only a handful.

"As compared to the credit space, there is no clear winner in interest rate swap processing automation. Many on the client side are still hesitant to hitch their wagon to just one of the numerous providers."

The CDS market is not out of the woods yet. Indeed, Mahoney recalls that the regulators have become concerned about an increase in outstanding credit confirmations again. "CDS has come back into the frame. In the last figures, the number of unconfirmed trades has increased. The Fed had turned attention to what it considered the next problem area, but in October/November of last year it re-focused its attention to the credit space, as there was a significant increase in the level of outstanding confirmations," he says.

Swap suitability

The effort to introduce electronic trade matching and trade processing to the interest rate swaps market has had an even more chequered history. From one perspective, interest rate swaps are more suited to commoditisation and electronic trading than either equity or credit derivatives.

Documentation, for example, has been in place for years. Yet, until recently, every initiative has failed to get off the ground.

"As compared to the credit space, there is no clear winner in interest rate swap processing automation. Many on the client side are still hesitant to hitch their wagon to just one of the numerous providers. This has hindered uptake on the client side," observes GlobeOp's Tannenbaum.

The reason for this failure, according to market sources, was that dealing was largely concentrated in the hands of a few major dealers, like JPMorgan, Deutsche Bank and Citi. These shops made millions of dollars from their dominant presence in the market and traders saw no incentive to change the ways things had always been done.

Further, Tannenbaum says: "Due to the more customised nature of interest rate swaps, there was less incentive to squeeze profits out of middle and back office processing costs compared with the rapidly standardised and commoditised credit derivatives market."

Like equity derivatives and unlike credit, because the market has been around for years it has a great variety of products and contracts. As in all markets, it also faces the problem of moving clients onto electronic platforms.

But progress is under way and the percentage of trades confirmed electronically has been steadily increasing and is now over 40%. Over 70% of total volume is now electronically eligible.

Interest rate derivative dealers have not pledged to meet any concrete targets, but have assured the New York Fed that they will reduce the number of outstanding confirmations and move the industry onto electronic platforms. SwapsWire now has over 200 users, compared with only a handful a few years ago, sources say.

"We've seen distinct progress, but we'll want to see more, particularly on the client side. I don't think we'll ever see 90% online, as in CDS, but we could have 60%-70% online," notes Gooch. ■