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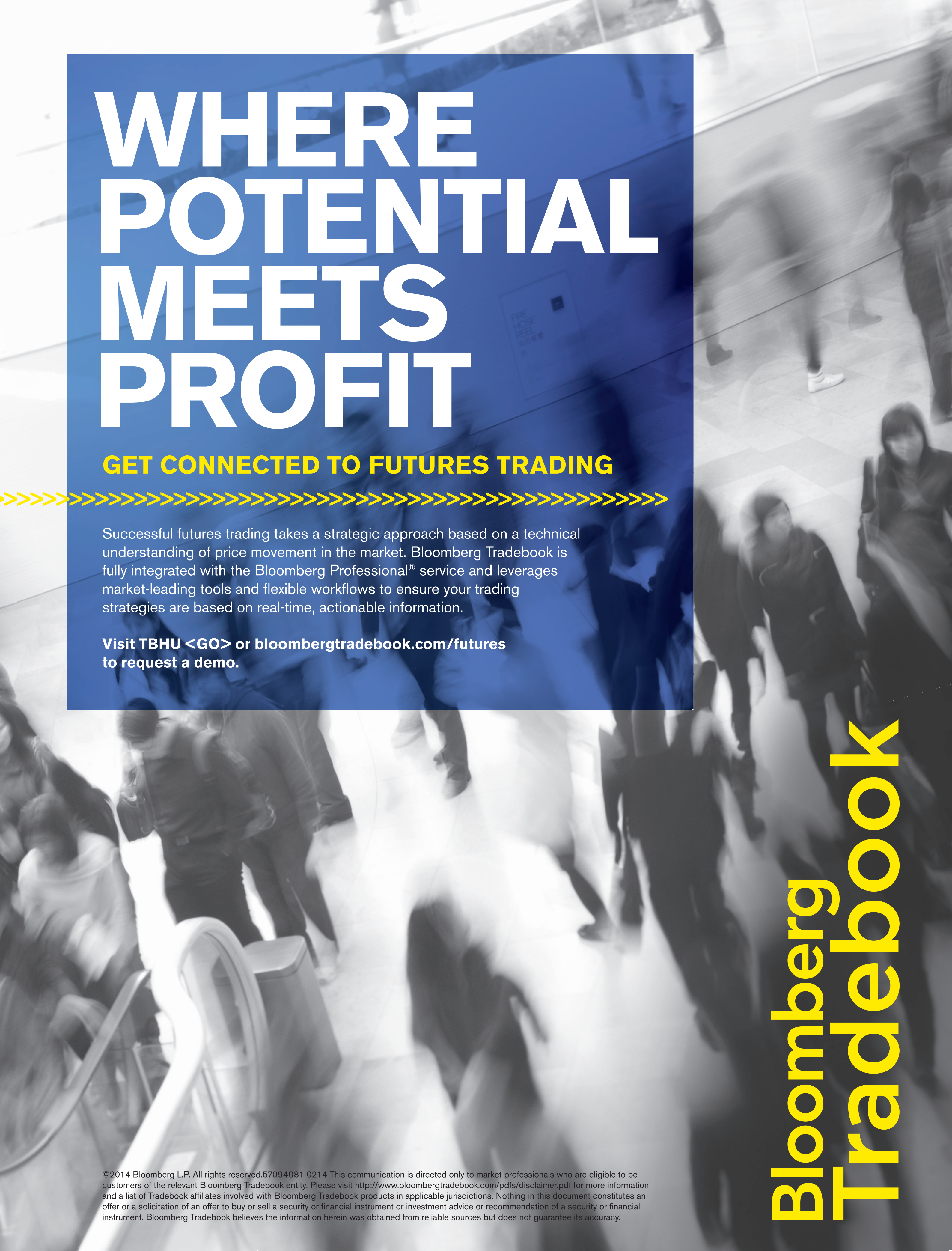
# Derivatives Clearing 2014

## Risks of complexity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Bloomberg Tradebook

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## Contributors

**Dan Barnes** is a freelance writer on the subject of global cash and derivatives trading who has previously worked for *The Banker* and *Banking Technology.*

**Christian Baum** is the founder and managing director of Riverdale Associates Ltd, a consultancy specialising in the transition of OTC derivatives trading to the post Dodd-Frank/EMIR world.

**John Beck** is a freelance writer with broad experience in financial markets and infrastructure and was previously *The Banker's* trading and technology editor.

**Oliver Dearie** is an associate in the Financial Regulatory Group at Clifford Chance LLP, London, with experience advising financial institutions as well as market infrastructure providers on EMIR compliance.

**David Field** is executive director at Rule Financial, an independent, global provider of business, IT and strategic consultancy to financial institutions.

**Walt Lukken** is president and chief executive officer of FIA and CEO of FIA Global, the confederation of associations comprising FIA, FIA Europe and FIA Asia, which aims to provide a global voice and reach for the global cleared derivatives industry.

**Richard Metcalfe** is director of regulatory affairs for wholesale and capital markets at the Investment Management Association.

**Mark Mills** concluded a 30-year career at Merrill Lynch, most recently as European head of operations and global head of client services, derivatives, for Merrill Lynch Bank of America. He is currently consulting on a range of post-trade issues, including for FIA Europe.

**Hirander Misra** is founding CEO of GMEX, which provides product, venue and technology solutions for global markets in the new regulatory environment. Previously he was founding COO of Chi-X.

**Will Mitting** was editor and is now publisher of FOW, one of the world's leading titles on the subject of derivatives and financial markets.

**John Parry** is a freelance writer and editor on markets infrastructure, clearing, commodities and derivatives.

**Simon Puleston Jones** is chief executive of FIA Europe (previously the FOA). He joined in March 2014 from Barclays' Investment Bank, where he was head of European legal coverage for futures and OTC clearing and a lead lawyer on regulatory change.

**Anna Reitman** is a journalist specialising in global macroeconomics, markets infrastructure, energy and natural resources.

**Tim Reucroft** is director of research at Thomas Murray Ltd, which provides advisory and consultancy services on a wide range of financial markets infrastructure issues, including OTC clearing.

**Monica Sah** is a partner at Clifford Chance and as part of the Financial Regulatory Group, advises institutions on financial regulatory developments. Previously, she was a managing director at Morgan Stanley and head of legal for International Wealth Management (Asia, EMEA and Australia).

**Chris Skinner** is something of a guru in banking and financial services, advising on future developments and change. He is a writer and broadcaster commenting on banking matters and chairman of the Financial Services Club.

**Steve Sparke** is chairman of FIA Europe (previously the FOA). He is also chief operating officer of Marex Spectron.

**Galen Stops** is currently markets editor of *Profit & Loss* based in New York and was previously senior reporter at *FOW*.

**Kathleen Traynor** is the sole principal of Traynor Consulting Ltd and was formerly the executive director of regulation at the FOA.

**Richard Wilkinson** is currently senior associate at Contango Operations and has spent several decades in a range of post-trade positions with a number of financial institutions.

# About us

The mission of FIA Europe (formerly the FOA) is to be the global and regional thought leader, advocate and educator for centrally cleared derivatives. Representing some 175 firms, the Association is principally concerned with financial and commodity exchange traded and centrally cleared derivatives and seeks to assist its members through the cycle of regulatory change.

FIA Europe works with its members to maintain constructive dialogue with government and regulatory authorities and deliver high standards of industry practice. It submits formal position papers and responses to regulatory discussion and consultation papers, facilitates an exchange of views and resolves issues between members and others through committees and member meetings. It represents members by engaging proactively with parliamentary groups in the UK and Brussels and issuing industry guidelines, publications and legal opinions.

An extensive documentation library helps reduce members' costs through initiatives that involve the pooling of member resources in order to meet regulatory requirements and/or common commercial objectives such as facilitating commercial dealings or addressing areas of risk. Currently, these subscription services include a comprehensive set of Client Terms of Business documentation, as well as Netting Analyser, an enhanced legal opinions library which helps firms to maximise their regulatory capital efficiency, reduce the amount of required collateral, effectively mitigate credit risk by funded credit collateral and ensure that collateral posted with CCPs is bankruptcy remote.

FIA Europe last year formed an affiliation with FIA under a new structure – FIA Global. Under this arrangement, FIA, FIA Europe and FIA Asia have strengthened their influence on cross-border issues, substantially increasing the coordination and information flow between regions and providing a powerful global voice to express the views of their members. The organisations preserve their ability to deal with legislative, regulatory and market issues in their respective time-zones and continue to operate with their own leadership and staff, separate boards of directors and distinct memberships.

**To find out more, contact:**

**Emma Davey**
Director, membership and member services
**Tel:** +44 (0)20 7090 1348
**Email:** davey@foa.co.uk

**Editor** John Parry
**FIA Europe editorial** Emma Davey, Philippa Hanman
**Sub-editor** Howard Gossington
**Design** David Cooper, Nicola Macro
**Sales director** Mo Rami
**Sales** Alex Ford, Cristina Peñalba Vilches, Ed Robinson
**Operations** Geraldine Brennan
**Publishing director** Claire Manuel
**Publisher** Hugh Robinson
**Chairman** Anthony Hilton

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The Leathermarket, London SE1 3ER
Tel: +44 (0)20 3327 3730
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On behalf of FIA Europe
2nd Floor, 36-38 Botolph Lane,
London EC3R 8DE
Tel: +44 (0)20 7929 0081
Fax: +44(0)20 7621 0223
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# A new world

By **Steve Sparke**, chairman, FIA Europe

A year ago, the cleared derivatives industry was still trying to determine how it was going to deal with the massive change in market structure that lay ahead, as well as the revolution in operational processes that this would bring. While Dodd-Frank rules were already beginning to take effect, the details of the implementation of the European Market Infrastructure Regulation (EMIR) were still not clear.

FOA's affiliation with FIA under the banner of FIA Global is part of the process of helping the business through such a challenging time. As FIA Europe, we continue to provide the invaluable services required by our members with the added advantage of being part of an organisation that allows us to provide a broader, global perspective to our regional challenges.

The Association and its members spent much of 2013 developing a coordinated strategy for complying with ESMA's requirements to report all derivatives transactions, both OTC and listed. This work has continued into 2014, up to and beyond the deadline to start reporting, on 12 February.

> **The old model is a thing of the past. The difficulty is in agreeing what the new business model will be**

## Further pressures

Many had been predicting disaster – especially when the request to postpone the obligation to report listed derivatives by one year was rejected by the powers that be in Brussels. Descriptions such as 'car crash' and 'train wreck' were frequently used to forewarn of the trouble ahead.

Early indications show a mixed result as the various links in the exchange traded derivatives business chain – from end user, though executing broker, clearing member and on to central counterparty (CCP) – struggled to meet their obligations on time. The chances of regulators ending up with accurate and meaningful data with which to monitor systemic risk – as was their objective – seem slim, at least in the short term.

As well as the invaluable support on the transaction reporting project, members have played a crucial role in another initiative: the programme to address the segregation and portability requirements under EMIR. This is another area in which FOA has worked hard to facilitate dialogue between members and CCPs, to put forward the most practical solutions to meeting the demands to enhance client asset protection. And as CCPs made their applications for regulatory authorisation under EMIR, the Association has been assessing the various models for segregation of client accounts.

As well as these issues, of course, the industry faces further pressures from increased capital costs and amendments to international accounting standards. These cumulative costs and complexities are leading to a reassessment of the business model for those active in the cleared derivatives space. If and when the first major bank-clearer pulls out of this business due to the new capital rules combined with spiralling costs, it will send a shockwave through the entire industry.

Now, in 2014, many in the industry have accepted that they are operating in a new world. The old model is a thing of the past. The difficulty is in agreeing what the new business model will be. Many firms have been so focused on getting to the EMIR starting line that they have yet to work out whether the reduced returns available are sufficient to stay in the game. ■

# Success or tragedy?

By **Simon Puleston Jones**, chief executive officer, FIA Europe

Welcome to the 2014 Clearing Report, which forms an important part of FIA Europe's mission to be the global and regional thought leader, advocate and educator for centrally cleared derivatives.

Before moving our minds and resources towards MiFID II / MiFIR advocacy, education and implementation, now is the perfect time to take stock of what has been achieved to date in implementing the G20 commitments arising from the 2009 Pittsburgh summit. What lessons have been learned and can be applied when looking forward to MiFID II/R? Have the stated aims of those commitments been achieved and what may the future hold?

The journalist and author Christopher Booker advocated in his 2004 book that all stories can be narrowed down to seven basic plots: the quest, voyage and return, overcoming the monster, rags to riches, comedy, tragedy and rebirth. As we consider the progress and future of the global implementation of those G20 commitments, it has yet to be determined which of these plots will ultimately transpire with respect to today's regulatory change agenda.

## Perhaps a (successful) quest...?

The G20's quest is to establish and maintain safe, secure markets, in which risk is appropriately shared and the fallout from future crises is mitigated by three combined requirements: those exposed to risk must hold sufficient collateral; banks must hold enough capital; and effective recovery and resolution planning must be in place at both banks and CCPs to ensure their orderly resolution or wind down upon default.

This nirvana would also feature well regulated, competitive, trading and clearing venues, through which the vast majority of the global derivatives market is traded and cleared.

Maximum pre-/post-trade transparency, equivalence and substitute compliance will ensure regional regimes work in global harmony towards a common goal. Technology will maximise efficiency, without bringing undue systemic risks. Highly standardised and liquid derivatives will be used for 'real' reasons, rather than merely as a source of profit through speculation, through legal entities that are separate from, and do not 'contaminate', pure retail banking operations.

## Or a tragedy?

The industry's worst fears would be realised if instead the plot of today's regulatory change agenda transpired to result ultimately in tragedy. What could tragedy look like? Excessive use of standardised derivatives that fail to properly hedge the risks to which end users are exposed. Today's clearing members ceasing to continue to act as such, as a result of being stuck with a loss-making business model that cannot be turned profitable, primarily, but not exclusively, due to regulatory capital costs and liquidity constraints.

This would lead to a further narrowing of the points of access for end users to clear their derivatives and, ultimately, a collapse of the G20's new world order that was predicated on the assumption that there would be enough banks interested in and capable of acting in the role of an execution broker and/or clearing broker. Risk would also be concentrated in a handful of leading clearing houses who, when they fail, cause a domino of defaults across the industry that in turn pulls the 'real' economy into another deep recession.

Localisation of regulation would lead to subsidiarisation of the industry. A figurative, as well as physical, ocean would exist between the US and EU pools of liquidity, with even smaller pools of liquidity existing within the EU and in various pockets in Asia. Significant erosion of value of moms' and pops' pension funds would occur due to the extremely high costs of the effect of implementing this wave of regulatory change being fully passed on to end users.

Finally, regulators would fail to see all this coming as they had insufficient resources to properly analyse the data that they received from trade repositories and elsewhere.

## Or something else?

You decide. For my part, I expect all seven plots to feature over coming years. In reality, the future will fall somewhere between the two polar outcomes described above, but quite where on that sliding scale is impossible to foresee.

The articles in this report are designed to shed light on the issues and educate the reader on the possibilities, and the dangers, brought by the new market infrastructure that we are collectively building.

We look forward to working with our members, regulators and other stakeholders this year and beyond to bring about the most positive outcome for all. ■


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# Whatever next?

G20 ministers agreed a single plan to deal with a global financial crisis, but regulators have sometimes gone different ways.
By **Monica Sah** and **Oliver Dearie**, Clifford Chance

Also in this section:



The potential for discrepancies, overlap and confusion inherent in any international reform effort became more acute as the Dodd-Frank and European Markets Infrastructure Regulation (EMIR) implementation timelines diverged.

In a positive move, on 11 July 2013, European Commissioner Michel Barnier and the chairman of the Commodity Futures Trading Commission (CFTC), Gary Gensler, agreed, notwithstanding the divergent timelines, to coordinate reforms and to work together to provide for appropriate substituted compliance relief and equivalence determinations (the Joint Announcement). Where are we now and what remains to be done?

## Clearing obligations

Dodd-Frank requires certain types of swaps to be cleared through a derivatives clearing organisation or a securities clearing agency (the Dodd-Frank clearing obligation). The obligation was phased in, in three phases, during the course of 2013.

Similarly, EMIR introduces a clearing obligation in respect of over-the-counter (OTC) derivative contracts pertaining to a class of OTC derivatives that has been declared subject to the clearing obligation.

EMIR defines an OTC derivative as 'a derivative contract the execution of which does not take place on a regulated market' (Article 2(7)). A regulated market for these purposes is an exchange that is regulated in the European Economic Area or a third country which has been deemed by the Commission to be equivalent. Currently no equivalency determinations have been made. Accordingly, all derivatives traded on third country exchanges constitute OTC derivatives for the purposes of EMIR.

The entry into force of the EMIR clearing obligation is conditional upon (i) a central counterparty (CCP) being authorised pursuant to EMIR and (ii) the endorsement by the European Commission of regulatory technical standard (RTS) subjecting the relevant class of OTC derivatives to the EMIR clearing obligation. The first CCP authorisation is expected to be granted in the first quarter of 2014.

This authorisation will trigger a six-month timetable for the European Securities and Markets Authority (ESMA) to produce and consult on the relevant RTS. Therefore, it is likely that the EMIR clearing obligation in respect of certain OTC derivatives (probably interest rate swaps and credit default swaps) will come into force in the summer of 2014.

## Frontloading

One important feature of the EMIR clearing obligation (which does not feature in Dodd-Frank) is that the obligation will apply not only to OTC derivatives which are entered into after the entry into force of the clearing obligation in respect of the relevant class of OTC derivative, but also to OTC derivatives which were entered into prior to, but are outstanding at, that date (the frontloading obligation).

The relevant RTS is required to specify a remaining maturity level above which the frontloading obligation will apply and the Commission has implicitly acknowledged that the frontloading obligation if applied too broadly has the potential to be unduly burdensome.

However, counterparties will need to wait for the first-draft RTS to assess the extent to which the Commission mitigates the impact of the frontloading obligation.

## Trading obligation

The trading obligation under Dodd-Frank is linked to the clearing obligation and in summary requires swaps which are subject to the clearing obligation and have been "made available to trade" by a regulated exchange or swap execution facility (SEF) to be executed on a regulated exchange or SEF.

On 14 January, after protracted negotiations, the European Parliament and Council reached an agreement in principle on proposals to replace the existing Markets in Financial Instruments Directive (MiFID) with a new restated Directive and a new companion EU Regulation (MiFID 2).

As part of the broad MiFID 2 reforms, in-scope OTC derivatives must be traded on a regulated market, multilateral trading facility, organised trade facility or third-country market.

There is considerable pressure to enact MiFID 2 prior to the May Parliamentary elections and for the European Commission to begin consultations on the necessary technical standards in advance or shortly thereafter.

However, given the need for consultation and national implementation it is unlikely that the first part of the EU trading obligation will come into force until 2016.

## Trade reporting

The trade reporting obligation pursuant to Dodd-Frank came into force during the course of 2013. The reporting obligation under EMIR will apply to all derivatives entered into on or after 16 August 2012 and to derivatives which were outstanding at that date but could only come into force when a trade repository (TR) had been authorised in accordance with EMIR.

The first TR approvals have now been granted and the trade reporting obligation in respect of OTC and listed derivatives was set to come into force on 12 February 2014 after the Commission rejected ESMA's proposal that the start date for the reporting obligation for exchange traded derivatives be postponed to 1 January 2015.

**"Given the need for consultation and national implementation, it's unlikely that the first part of the EU trading obligation will come into force until 2016**

## Repapering

The timely confirmation, documentation, portfolio reconciliation and compression, dispute resolution and disclosure obligations under both Dodd-Frank and EMIR are in force and repapering is underway.

A coordinated industry-led effort has resulted in the preparation of compliant standard-form documentation, including:

- International Swaps and Derivatives Association (ISDA) protocols (Dodd-Frank and EMIR) and standard-form amendment agreements;
- the FOA and ISDA Client Cleared OTC Derivatives Addendum;
- ISDA/FOA EMIR Reporting Delegation Agreement.

## Margin and capital requirements

On 2 September 2013 the Basel Committee on Banking Supervision and the International Organisation of Securities Commissions published their final report on margin requirements for non-centrally cleared derivatives.

The requirement to collect and post initial margin on non-centrally cleared trades allows for an initial margin threshold of €50 million below which a firm would have the option of not collecting initial margin.

The requirement will be phased in over a four-year period, beginning in December 2015 for the largest, most active and most systemically important derivatives market participants. While the US regulators have published rules in light of the report, the EU's response is awaited.

## Substituted compliance

In their Joint Announcement the US and EU acknowledged that a failure to provide for appropriate substituted compliance and equivalence relief risked creating legal uncertainty, promoting regulatory arbitrage and hindering the international derivatives market.

In a hopefully indicative step, the Joint Announcement confirmed that the daily mark to market valuation, timely confirmations, portfolio compression and reconciliation, and dispute resolution requirements are essentially identical under both Dodd-Frank and EMIR.

However, there are a number of areas in which counterparties are still waiting for formal equivalence/substituted compliance relief. In particular:

- ESMA has completed its equivalence assessment in respect of the equivalence of the US rules on CCPs and TRs but the European Commission has not yet set out a timetable for the adoption of these assessments.
- The CFTC has clarified that where a swap is executed on an anonymous and cleared basis on a foreign board of trade the counterparties will be deemed to have met their transaction-level requirements, including the CFTC's trade-execution requirement, but it remains unclear what (if any) relief will be provided for untraded swaps given the delay in the implementation of the EU trading obligation.

While progress is being made, there is still a long way to go. ■

# Pressure points

Barely any aspect of the exchange traded derivatives business remains untouched by EMIR, which requires a huge response from the industry. By **Mark Mills** and **John Parry**

The old adage "If it ain't broke don't fix it" is being largely ignored as sweeping changes to exchange traded derivatives (ETD) practices spill over from G20 efforts to reform over-the-counter (OTC) markets.

Major efforts to bring transparency to and mitigate risk in OTC markets are deferring to the ETD model. But a standardised regulatory approach means the ETD markets are also having to conform to regulatory requirements, which many see at best as superfluous and at worst complex and disruptive.

By the time this report is published the trade reporting requirements of the European Markets Infrastructure Regulation (EMIR) will have been implemented in mid-February. Clearly important for bringing transparency to OTC markets, its added value in ETD is not easy to discern, given the transparency function of exchanges.

Trade reporting issues are described in more detail on page 54, but the over-involved approach of EMIR is evident from its stipulation that trade reporting must be carried out by both sides of a trade. Even Dodd-Frank does not go this far, requiring one side only.

The next challenge facing the market stems from the need to protect client assets better by segregating them from potential default risk by other clients or the clearing broker.

All clearing members of European futures and options markets must prepare themselves to offer their own clients the client account options provided by those central counterparties (CCPs) of which they are a member. For clarity, the option will allow the client access to either an individual account, or to remain within an omnibus account.

This will affect many strands of clearing member activity, including: account documentation and the relationship with the client; the core operations; money flow and treasury management; as well as the impact on technology and the change to statements.

Preparations for this huge burden of work are limited because the final, detailed offering of these new account structures by the CCPs are dependent on their re-authorisation, which was not expected before April 2014. However, a lack of uniformity in the design of these structures will add considerably to the work involved.

## Documentation and the client link

Clients must therefore be prepared to receive from their broker documentation that looks for the client's choice of account, whether to remain in the standard omnibus or elect an individually segregated account (ISA). All clients will need to give written instructions to their broker regarding the choice. One can be sure the brokerage


community will not arrange an industry-wide mailing nor will there be a universal timely response. In some cases exchanges may require additional documentation to support an ISA (not dissimilar to a current non-clearing member documentation where it is used).

Key aspects of the broker's documentation must indicate the benefits of segregation and cost between the two models. It is clear that a significant re-write of documentation is required. The management of the outflow and inflow of documents will be required as well as the establishment of secure procedures to maintain and monitor the client choices. Clients may also change their selection, as well as selecting different models on different markets and for different sub-clients – for example, funds.

Banks would do well to consider the impact of this task on their sales and marketing teams who may have a major role in explaining the choices to the client.

Larger clients must also be prepared to make choices and deal with these increased demands from their broker community. In the FOA's analysis of workload required to comply, one major bank reported a perceived need to double their documentation staff to manage this flow. Irrespective of the ultimate number of clients who choose an ISA, this preliminary work will need to be carried out. Brokers should note the information collected on the client's choice will also need to be fed into all their operations groups.

## Money flow

When a client selects an ISA there will be an absolute link between the client's balance on the broker's books and that of the ISA for the client at the CCP. The need for this balance to be reported, reconciled and managed is perhaps the most significant effect of this legislation.

Today, when a client pays a broker, that sum is recorded on a statement once it is received at the broker's bank, but in reality that sum has only the loosest of links to the single sum a broker may have already settled with a CCP for an omnibus account.

In the new environment the broker must record each CCP client balance individually on its own books. So rather than maintain a single client euro balance, for example, the broker's statement will need to reflect euros held at ICE, Eurex, LCH and all other CCPs. That could be as many as 15 balances instead of one. Additionally, margin requirement and profit and loss must also be replicated in this way.

Technology providers will need to make changes to the money line part of the statement. Both clients and brokers need to consider the impact to their files of these changes, especially those that reconcile to each other.

No one should underestimate the work required here. It is certainly the case that CCPs are endeavouring to make little change to the physical payment between clearing members and themselves, but it could be assumed that brokers may impose tighter cut-off times on clients wishing to withdraw and place cash.

As a result of the change to the way client balances are managed, clearing members would be well advised to consider the impact on their client money calculations, as well as the impact on the balance sheet.

## Core operations

This fragmentation of positions and balances at a CCP will demand firstly more accuracy of posting and allocation of an execution on trade date, and secondly, accuracy and speed of delivery for the reconciliations of that data.

As a consequence of this new position management by ISA clearing firms will have to consider a compensating collateral move for any ISA position move. The number of reconciliations will be increased by the number of ISAs, the number of CCPs and then by currency.

The ability to offer clearing at an average price – now easily completed within the omnibus structure – will not carry across ISAs where the CCP does not offer average price for execution and clearing. This is an issue for both clearing members and clients.

Further, it is possible that exact reconciliation of initial margin requirement per client may be needed, especially if brokers attempt to anticipate cash flow. This is because a key requirement of the new rules is that excess margin will remain at the CCP and not be returned as today.

Clients and brokers should be clear on how excess funds are to be managed, especially where a client uses more than one CCP with a single broker. It is this management of the excess that could lead to the need for brokers to exactly match the CCP's initial margin calculation and sums.

> **The huge and fundamental changes necessary for clearing members to meet the CCP models is a multi-year project load that has to be delivered in possibly a six- to seven-month timeframe**

## IT innovations

While technology exists to help swift and accurate allocation of trades, the industry presently lacks similar technology to aid the management of account balances at the CCP. This significant gap was identified in the work carried out by the FOA over the summer of 2013.

Initially, therefore, brokers will need good manual processes to manage the flow until they can organise the correct technology. The major software providers are aware of the changes and are working towards the delivery of programmes including, for example, those that recognise the fragmentation of client money balances. The industry is still reliant, however, on a small number of vendors creating a dependency on these key participants.

## Priority at go-live

The huge and fundamental changes necessary for clearing members to meet the CCP models is a multi-year project load that has to be delivered in possibly a six- to seven-month timeframe. The estimate of changes to clearing systems and processes alone has been calculated at 18-36 months. There will be a demand for skill and knowledge to implement these plans.

Assuming the delivery to the standard is achieved, we are then facing the fight for priority for go-live. Each broker will need to consider how they transition clients from omnibus accounts to ISAs. Each CCP will need to consider how they schedule the changes requested by their clearing members.

Will clients demand immediate change or be satisfied to wait their turn? What would be the effect of a significant market event on these transfers? For those CCPs who will require additional documentation per ISA, do they have enough staff to process?

All these questions are open at the moment and the impact will, of course, depend upon the scale and speed of uptake. These operational issues are demanding enough, but the ultimate purpose of EMIR and Dodd-Frank is to reduce market risks, and the question of how a major client or clearing broker default will be managed adds huge additional burdens to a seriously stretched business. ■

# Smooth operator

Dodd-Frank's implementation has been relatively smooth. What are the implications for Europe? By **Galen Stops**

Major changes to the market structure of the derivatives industry in the US have taken place with the introduction of mandatory trade reporting and central clearing, swap execution facilities (SEFs) and the Volcker Rule under Dodd-Frank.

US trade reporting rules state that only one counterparty involved in each transaction is responsible for reporting. There is a hierarchical system for determining who is responsible for reporting, starting with swap dealers, then major swap participants, then a US person and then finally a non-US person.

If both parties are of the same status, then the SEF determines the reporting party and they are then compelled to report on an ongoing basis. Some uncertainty continues to plague the international definition of US/non-US, but otherwise the implementation is proceeding smoothly.

Originally the Commodity Futures Trading Commission (CFTC) said that for equity and credit reporting, firms must use event method reporting; and for foreign exchange and interest rates, snapshot method reporting. However, they subsequently changed it so that any asset class could use either method. This caused additional complexity with regards to how firms configured their systems for reporting.

"Many firms chose to report every data element every day in case the reporting method got modified. They at least had to do a report on the valuation every day so they just configured their system to report on the trade every day as well," says Stewart Macbeth, CEO of DTCC Derivatives Depository and chief product development officer DTCC Deriv/SERV.

Once mandatory SEF trading is implemented it will force a much broader segment of market participants to report, meaning new firms will have to get to grips with the reporting obligation and more cases where end users that are equal in the reporting hierarchy are trading together.

Reporting under Dodd-Frank and the European Markets Infrastructure Regulation (EMIR) will differ in one vital way. In Europe, both sides of each transaction will be required to report, as of 12 February. This will generate much more reporting traffic and require many more firms to report their transactions than in the US. Some of the smaller buy-side firms in Europe have only recently begun to understand that they will be subject to these rules.

In the US, the SEF is responsible for ensuring trades are reported.

Under EMIR, firms can delegate the operational aspect of the reporting, though they cannot delegate the legal responsibility for it.

### Stages implemented

All three stages of the clearing mandate have now been implemented in the US. The introduction of mandatory clearing went smoothly and did not create the liquidity crisis predicted by some. In the swaps markets the deadlines were met, with no significant fall in volumes or migration of trading from over-the-counter (OTC) swaps to futures.

Both CME and LCH SwapClear are now processing large numbers of swap transactions, in an automated daily process requiring all firms to post initial margin and variation margin. At this stage it seems that the US futures commission merchant community has been the most impacted by the clearing mandate. New rules require them to hold a significantly larger amount of capital in reserve. Additionally, they must run pre-trade credit checks on their clients.

This is requiring the development of new infrastructure in the form of the creation of a central credit hub from firms such as Traiana. That technology companies are providing industry utilities at a competitive level is, in itself, an interesting development for the industry.

The Dodd-Frank clearing rules will inevitably impact the final clearing rules in Europe. Regulators will want Dodd-Frank and EMIR to work in harmony so as not to unbalance cross-border trading.

### Connecting to SEFs

Thus far the impact of SEFs on the US derivatives markets has been limited because trading on them has not been mandatory. In February 2014 the Made Available to Trade (MAT) and impartiality of access rules were due to start and these will have a big impact. More firms will need to be connected to the SEFs, they will have to agree and adhere to their rulebooks, and be in a position to report and clear their trades if necessary.

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**Regulators will want Dodd-Frank and EMIR to work in harmony so as not to unbalance cross-border trading**

It could be that the swap dealers are the group most impacted by mandatory SEF trading. They have a whole range of business conduct rules to adhere to, in addition to the Volcker Rule, and there has been a perceptible movement of traders from investment banks to hedge funds as a result.

“Everybody looks at equity markets and wonders if that’s where derivatives are going. This is where the dealers are just the gatekeepers, they’re not providing liquidity, just access to the market,” says Chris Ferreri, head of e-commerce at ICAP.

“We’re making significant changes both to our technologies and the physical location of our brokers. There has to be impartial access to the SEF and since the SEF rules provide for voice broking, our SEF brokers can’t be within earshot of any brokers that aren’t on the SEF,” he adds.

### OTF equivalent

The EMIR equivalent to SEFs, organised trading facilities (OTFs), will be very similar in terms of reporting requirements, conduct and conduct supervision, how much clients need to submit to the SEF and pre-trade credit checks.

“Given the choice, European authorities will want OTFs to be as close to SEFs as possible so that they get cross-border compliance and substituted trading,” says Alex McDonald, CEO of the Wholesale Markets Brokers’ Association (WMBA).

However, there are some important distinctions between SEFs and OTFs. “An SEF is a capitalised legal entity with its own board, its own compliance rules and infrastructure. As currently proposed, an OTF will not be a separate capitalised legal entity,” says David Clark, chairman of the WMBA.

“This makes a massive difference. It means that you won’t get this fiasco around non-EU and EU persons, because it will be part of the same entity that they’re already dealing with in Europe.”

The Volcker Rule will prevent commercial banks from using deposits to trade on the bank’s own accounts. One consequence is that US banks will be forced to sell off their investments in hedge and private equity funds.

The main potential impact of the Volcker Rule in Europe will be whether US regulations sweep up the European banks under its jurisdiction. In the meantime, Europe is developing its own rules that will change the structure of investment banking in the form of the Vickers Report in Britain and the Liikanen Report submitted to the European Commission.

One area where these reports appear to have learnt from the US regulations is over the definition of proprietary trading. US regulators have struggled with this while the Vickers proposals sidestep this question by avoiding a ban on banks’ prop trading and by giving them some flexibility as to whether they could put certain risky activities inside the retail fence or not. ■

# Unexpected outcomes

Established market franchises are under threat as new regulations force change. By **David Field**, Rule Financial

Far-reaching changes to the world of over-the-counter (OTC) derivatives will impact not just the infrastructure of individual firms, but the shape of the industry itself, as it starts to adopt exchange traded practices.

A torrent of regulation including the Dodd-Frank Act, the European Markets Infrastructure Regulation (EMIR), the Markets in Financial Instruments Directive, Basel III and the rest is forcing the industry to adopt three major changes:

- trading on exchanges rather than OTC;
- mandatory clearing;
- openness and transparency through trade reporting.

Each of these looks sensible at face value, yet each has proved fraught with difficulty in practice, not least because the detailed regulations are different in the US and Europe.

In the US, certain categories of interest rate swaps and credit default swaps first became tradable on swap execution facilities (SEFs) in October 2013. They were due to become mandatory in the first quarter of 2014. But it's a different story in Europe, where the equivalent organised trading facility (OTF) concept is still a long way from regulatory clarity, let alone implementation.

Better progress has been made with mandatory clearing, where a central counterparty (CCP) steps in via trade novation to become the seller to the buyer and buyer to the seller. Each OTC party is now exposed not to the original counterpart but to the CCP, which should reduce risk because of the large amounts of collateral collected by the CCP.

Again, faster progress has been made in the US, where most swaps are already mandated to be cleared. Europe is catching up, following applications in 2013 by CCPs to be regulated under EMIR, which should result by March 2014 in notifications to clear, with mandatory clearing itself following six months later. This should give traders of most OTC derivatives the same degree of counterparty risk mitigation enjoyed in the exchange traded world.

But this comes at some cost. Because OTC trades have much longer maturities than exchange traded derivatives (ETDs), the collateral required to cover the risk is much greater. Estimates of how much extra collateral the industry needs vary widely, but the amount will be measured in trillions of dollars, not billions.

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### Not enough cash

This is triggering significant change and innovation among all market participants. The buy-side is just beginning to grapple with the forthcoming need to stump up much more collateral than before. There is a growing realisation that there won't be enough cash collateral to meet margining needs without liquidating assets, which reduces fund performance. So many expect a shift towards non-cash collateral.

This will require more sophisticated infrastructure to keep track of collateral pledged, enabling it to be recalled rapidly and securely if it can be put to better use. The investment required over the coming year is not yet clear, but the additional cost of collateralising OTC derivatives is prompting many firms to consider whether ETD may be more affordable than OTC, even if they can't deliver the same precision of market exposure or hedging effectiveness.

But while OTC volumes may drop, they will not disappear. This has prompted much innovation among the banks that provide clearing services. Many have developed connectivity to multiple CCPs, custodians and triparty agents to help move clients' collateral quickly, cheaply and securely, adding valuable liquidity, credit, collateral transformation and optimisation services.

The challenge for the sell-side is how to make a profit from client clearing.  Many clearing services are expected to be delivered at little or no cost as part of the broader client relationship, leaving only value-added services to provide fee earning opportunities. This has been the established exchange-traded model.

The next two years will establish the winners: the banks with the broadest, most flexible services combined with cost leadership. This requires substantial investment in technology and automation that not all can afford, so we anticipate shifts in the industry as some players withdraw from markets they can't make money in to focus scarce investment on their core franchise.

Yet there is money to be made in the industry. Clearing houses have long recognised that there are substantial revenue streams to be made, not just from clearing fees but from the re-investment of collateral held on behalf of members.

New regulations may effect some realignment in the clearing industry. Historically, while many exchanges cleared cash instruments themselves, both ETD and OTC clearing were often outsourced to established clearing houses. But in recent times we have seen NYSE Liffe and LME terminate their outsource arrangements to establish their own clearing facilities.

Last year, London Stock Exchange took a majority stake in LCH.Clearnet, and the ICE acquisition of NYSE Liffe will undoubtedly impact on those clearing arrangements. Meanwhile, new European clearing houses such as CME Europe are being established in anticipation of mandatory clearing. Nobody knows whether all CCPs will survive in all the asset classes they are preparing to clear, but we can be sure the shape of the industry will evolve in the coming years.

### Threat to custodians

Innovation is also underway in the traditionally slow-moving world of custody and securities depositories. An unexpected outcome of EMIR article 47.3 is that clearing houses will not be able to hold their assets at custodians, but instead must hold assets at securities settlement systems, otherwise known as CSDs. This poses a threat to custodians who do not themselves operate CSDs, as buy-side clients will have little choice but to move assets they are using to margin OTC business to venues which are more convenient for CCP collateral allocation.

The major beneficiaries of this regulation may be custodians who already operate as securities settlement systems, such as Euroclear and Clearstream.

Other custodians are making strategic moves to position themselves for this new environment. For example, BNY Mellon has decided to launch its own CSD in Belgium, while JP Morgan is partnering London Stock Exchange, itself setting up a new CSD in Luxembourg based on its Monte Titoli infrastructure.

We will of course see further huge changes in European CSD infrastructure as participants gear up in 2014 for the advent of T2S in 2015, which promises radical restructuring and cost reduction for cross-border securities settlement.

Finally, we turn to the third area where the OTC world is moving towards the exchange traded model, via mandatory trade reporting.

Again the US has led the way, benefiting from its simpler, centralised infrastructure. Europe will catch up early in 2014 as the six EMIR-approved trade repositories (TRs) go live. However, the European regulations go much further in that all derivative trades must be reported, ETD as well as OTC. Also, both sides to the trade are accountable for reporting, unlike in Dodd-Frank. Furthermore, EMIR will require far more information to be reported, including, later in 2014, collateralisation of trades and portfolios.

> **Unforeseeable changes will arise as the winners and losers shake out, as every sector of the industry has no choice but to invest in infrastructure**

### Firms under-prepared

Perhaps because they thought the deadline might slip again, many firms have found themselves under-prepared for trade reporting and are now scrambling to be ready. With so many firms yet to establish or test connectivity, the major risk now is lack of on-boarding capacity.

Other concerns are not yet resolved, such as how the TRs will inter-operate to match trades reported to different TRs, and indeed how the regulators will practically be able to use the information gathered. Perhaps all will go well, but it seems likely that 2014 may be a bumpy ride for trade reporting.

In summary, regulators worldwide are seeking to make the perceived-to-be-risky OTC world behave more like the presumed-to-be-safer ETD industry, through introduction of exchanges, mandatory clearing and trade reporting. This is causing upheaval for all parts of the industry, as firms redesign their operating models, processes and technology to meet new regulations. These changes are relatively foreseeable.

Unforeseeable changes will arise as the winners and losers shake out, as every sector of the industry has no choice but to invest in infrastructure. Those with the clearest strategic vision will invest most wisely. Those with the largest volumes will spread their costs more thinly, achieving lower costs per trade.

Yet many banks have inherited infrastructure designed for a pre-crisis world they no longer inhabit, and which they can no longer afford. Revenues of the biggest firms are about a quarter below the peak in 2009. According to McKinsey, average return on equity for the largest firms fell to 8 per cent last year, and without deep cost cuts this will fall further to 4 per cent by 2019.

We anticipate that as the regulatory compliance deadlines fall into place during 2014, the winners will be those that embrace radical simplification. As banks prepare investment budgets for 2015 and beyond, plans that tinker at the edges to generate 10 per cent per annum cost savings will not be enough. Radical cost reduction programmes targeting 50 per cent cost reduction will be needed.

We anticipate polarisation of the industry as volumes gravitate towards flow monsters with zero-touch operations and ultra-low cost per trade, leaving others to retreat to a core franchise. Some will abandon global aspiration for geographical focus, outsourcing securities processing to others that operate more cheaply.

We will see the strengthening of service utilities that can process huge volumes, cross-asset class, cross-border. We see 2014 as the year for achieving regulatory compliance, but the wisest firms are already thinking about how the tectonic plates are shifting in the industry, and are turning their attention to the more radical change that is coming in 2015 and beyond. ■

# Dealing with the complexities of SEFs

**By Helen Lofthouse, global head of OTC clearing & EMEA head of clearing sales, prime services**

The first Swaps Execution Facilities have been in operation for barely six months – too little time to assess fully the impact of their mandate to trade standardised, centrally cleared swaps.

But one lesson is clear even at this early stage: SEFs' arrival creates demanding new levels of complexity for asset managers, corporates and others trying to navigate the new market structure in derivatives.

### Diversity

Fragmentation stands out as the most prominent feature of the SEF landscape. More than two dozen SEFs have been registered, and as many as 40 may eventually be formed. Observers have been quick to draw parallels with the development of the equity market, where the drive to promote competition led to a proliferation of trading venues with diverse models.

The SEF landscape features a diversity of product offerings and trading protocols. Under the new regulatory arrangements, SEFs propose the standardised products they intend to "make available to trade" in regulatory filings. The first of these MAT filings has received final approval from the Commodity Futures Trading Commission, and the first of these products are required to be traded on a SEF or exchange from 15 February 2014. The rules require SEFs to maintain a central limit order book, but as a group they feature a variety of trading environments, from streaming prices to request-for-quote, and a range of different trading rules.

### Different requirements

Accessing SEFs directly is no easy matter. Though SEFs are bound by the CFTC's open access rule, participants can find the on-boarding process challenging. Applicants must agree to and sign: 1) The SEF user licence agreement, which makes applicants directly liable for complying with CFTC rules; 2) the SEF rulebook, a document that can change over time; and 3) a clearing agreement.

Some established users of the market find it difficult to sign on for a number of governance and risk management reasons. In addition, participants also must take into account SEF requirements for pre-trade credit checks and the fine points of transaction reporting.

Strategically, market participants have to consider SEFs in the context of the full range of their options in the new market structure. Swap liquidity is not just being fragmented across many SEFs. The arrival of 'futurised' versions of swaps is splitting some trading off into the futures markets. Different regulatory regimes are causing a once-global pool of liquidity to split into separate pools accessible by different groups of clients.

Each of these options carries different legal, collateral and margin requirements. Non-cleared transactions may sometimes be cheaper than cleared transactions, and may offer more flexible margining regimes; however, the capital impacts of Basel III are rapidly eroding any pricing advantage, and mandatory clearing has removed the choice for many clients. Products traded on exchanges may offer significant margin efficiencies for certain types of portfolios, and use existing standardised methods for execution and clearing.

### Evolving landscape

This rapidly evolving landscape creates three broad challenges for derivatives users:

- Advanced electronic trading capabilities are critical to achieve "best execution" in a SEF environment that requires aggregating and accessing liquidity across many different types of trading platforms. Beyond aggregation, successful players in the new market structure need access to proven expertise in automated trading technology as the new electronic market structure grows in depth and sophistication.
- Simplifying operational complexity and streamlining workflow is a competitive necessity, key to managing operational risks and overall costs.
- Optimising collateral and margin commitments becomes a strategic priority. Market participants will have to make trade-offs between these costs and basis risk – how well their derivatives position tracks the underlying asset.

To help clients meet these challenges, UBS has leveraged its global experience in electronic trading, knowledge of derivatives and clearing, and extensive connectivity with exchanges to develop a new model. The UBS model offers:

- Simplified access to liquidity by using a single venue – Neo – to price and trade swaps, CDS and corporate bonds.
- Connectivity to multiple regulated trading venues and liquidity sources (e.g. SEFs, exchanges and – where regulations allow – other clients' liquidity) through a single screen or pipe.
- The ability to post bids and offers and dynamically apply preferences to internalise or route an inquiry to venues of choice to achieve best execution, where permissible.
- Easy onboarding with a single standard agency agreement providing market-wide access to liquidity.
- Access to cross-product clearing and intermediation on the firm's global clearing platform.

The arrival of SEFs is a central feature in a derivatives market transformation that will gather momentum quickly in the months ahead. The benefits will flow to those who have mastered the complexity of an increasingly electronic global market and, as a result, are in a position to make the most of innovations to come.

# Regional challenges

When Dodd-Frank and EMIR began to diverge it opened the door to further variations in other regions. By **Will Mitting**

In 2009, it all seemed so simple. An agreement across the G20 to electronically trade and clear as many over-the-counter (OTC) derivatives as possible across the 20 largest economies in the world was struck by the leaders of the world's 20 largest economies.

The chasm between political will and regulatory reality, however, has since been exposed and now, as we approach the five-year anniversary of the Pittsburgh summit, it is clear that there will not be a harmonised global regulatory infrastructure for trading and clearing OTC derivatives.

"Being in a clearing seat at one of the major dealers right now requires you to understand regulation in a way that wouldn't be typical in a normal environment for what is fundamentally a revenue-generating role," says Silas Findley, head of OTC clearing for EMEA at Citi.

"When you look at everything we had to do for Dodd-Frank, the timelines were challenging but much more extended than is the case for the European Markets Infrastructure Regulation (EMIR). If it is tough for us to keep track of, it is extremely difficult for clients," he says.

"The speed and scope of the current regulatory changes is extremely difficult for clients," he continues. "The best thing we can do for our clients is ensure we provide them with timely and compliant solutions as mandated by EMIR."

Within the G20 nations, the two regions with the largest OTC derivatives trading activity are the US and Europe. While there are many similarities between Dodd-Frank and EMIR in clearing, there are significant differences in how client funds will be held.

Dodd-Frank prescribes a single model: legally segregated operationally co-mingled (LSOC). The decision to adopt this model was hailed as a pragmatic solution by the Commodity Futures Trading Commission (CFTC); the model is similar in some respects to how margin was traditionally held in the OTC markets and it was seen as striking the right balance in terms of security and levels of segregation against cost.

## Ambitious regulators

European regulators have been much more ambitious. EMIR section 39 requires central counterparties (CCPs) to offer both omnibus and individually segregated accounts (ISAs). The latter accounts enable clients to keep all their margin and positions in a separate account, whereas the omnibus account co-mingles client funds.

On the face of it, EMIR prescribes two options. However, CCPs across Europe are offering different models and different interpretations resulting in more than 12 different fund segregation models, broadly based on omnibus and segregated accounts but also mirroring the LSOC model.

The benefits of choice for the client are fast being outweighed by the complexity of navigating the different regimes and while the individually segregated option may be appealing to some firms, it is likely to come at a high cost. But until CCPs have completed their reauthorisation process later this year, the precise shape of their ISA offering, and their pricing structure, remain unknown.

"Moving from a bilateral to an agency relationship under US OTC clearing was a big lift for our clients," says Findley. "Now, understanding and conforming to the separate clearing requirements under EMIR – with the plethora of segregation models being offered by EU platforms – is a further challenge for them."

Dealers in Europe are also having to offer different documentation to clients with both the International Swaps and Derivatives Association documentation and CCP-specific documentation currently in use. The question of which documentation will be EMIR-compliant also remains unanswered.

Trade reporting mandates are also set to kick in throughout Europe in 2014 and there are differences between jurisdictions within the EU in terms of implementation.

But still greater differences exist between the US and Europe with the inclusion in Europe of exchange traded products in the reporting mandate. Additionally, in the US, just one designated firm reports, while in Europe both sides to the trade report as well as the clearing brokers, the CCP and possibly the executing broker as well.

In an attempt to mitigate the potential for regulatory arbitrage, the CFTC announced a substituted compliance programme in July last year. Under the regime, non-US entities are permitted to use compliance with regulations in their home jurisdiction as a substitute for compliance with the relevant Commission regulations.

> **The extraterritorial reach of Dodd-Frank and the all-encompassing scope of EMIR will mean that many firms will not be able to escape the clutches of regulatory reform for long**

### Slow progress

But progress has been slow. In December, the CFTC announced it had reached agreement with six jurisdictions for substituted compliance on certain rules. However, clearing was notably absent from the agreements and while the EU and Japan reached broad agreements on transaction-level rules, the others were at entity-level.

More substituted compliance agreements will be reached in due course, but hopes for a wholesale equivalence that would ease cross-border trading are not likely to be realised. Fast-growing hubs in Asia, most notably Singapore, could benefit from this as traders seek more amenable environments in which to trade.

The head of desk at one leading US futures commission merchant voiced such fears: "Asian regulators have never felt as incentivised or as motivated to undertake a top-to-bottom review of their financial institutions. There is an opportunity for some clients to trade predominantly in Asia as the requirements there could be much looser."

Japan, Singapore and Hong Kong are all moving forward with implementing OTC clearing mandates and CCPs in all three regions are up and running with OTC clearing services. Of these, Japan is the most advanced, with a mandate already in place, but regulators in Singapore and Hong Kong are also drawing up mandates.

Fears of a lighter-touch regime focus mainly on eligible products and thresholds of trade volume before firms are required to clear, but a greater issue is the possible fragmentation of liquidity as regulators could mandate that trades are cleared in domestic CCPs.

The aversion to trading with US counterparties from non-US firms in the swaps market; striving to fall below the CFTC's de minimis threshold; and the ease with which some corners of the market have diverted trades away from the US have added to fears that Dodd-Frank and EMIR could ultimately lead to a migration of trading to Singapore and other jurisdictions outside Europe and the US.

However, the extraterritorial reach of Dodd-Frank and the all-encompassing scope of EMIR will mean that many firms will not be able to escape the clutches of regulatory reform for long.

And as the rest of the G20 develops its regulatory regime for OTC clearing, regulatory advantages will subside. Complexity will increase as differing jurisdictions will need to be managed, but a wholesale shift of trading to Asia looks unlikely. ■

**Also in this section:**



# CCPs' new role

Central counterparties will have to accommodate new contracts, new risks and new customers. How will they cope? By **Christian Baum**

Efforts to have as many derivatives transactions as possible centrally cleared are fundamentally changing the importance and role of the clearing houses. The size alone of the over-the-counter (OTC) derivatives market compared to the listed derivatives market, the largest sector hitherto cleared by most central counterparties (CCPs), represents a considerable increase in risk to be managed.

According to the Bank for International Settlements (end of Q2, 2013), the total outstanding notional in OTC derivatives – and it is outstanding transactions and not turnover that determine risk – was $693 trillion. Most of this is interest rate derivatives ($577 trillion or 83 per cent of the total) of which eventually up to 90 per cent should be clearable. In comparison, the total outstanding notional of exchange traded derivatives at the end of Q2 2013 was $68 trillion.

In addition, both in the US and in the EU, the new regulations do not apply only to banks, but also to fund managers, pension funds (with a small delay in Europe), larger corporates etc.

This is propelling derivative CCPs from being participants in the relatively smaller listed derivatives market to being central to the much larger OTC markets – and thus becoming systemically important institutions in the financial system as a whole, and potential central points of failure.

Indeed, in the US, the Financial Stability Oversight Council has determined that three CCPs: CME, ICE Clear Credit and OCC, are systemically important financial market utilities.

In this context, both Dodd-Frank and the European Markets Infrastructure Regulation (EMIR) have mandated that more prescriptive, onerous and complex risk management standards should apply to all CCPs in their jurisdiction, and beyond if no substituted compliance or reciprocal recognition is in place.

The hope is that these will mitigate the risk now concentrated in CCPs by legislation. Dodd-Frank focuses on OTC clearing, whereas EMIR includes the listed markets.

## Segregation

One important area of change is customer account segregation. The US has known mandatory segregated customer accounts in listed derivatives markets for some time. The intention is to protect customer money from a broker default.

Across Europe, segregated customer accounts were not mandated, although could be provided, subject to CCP practices.

EMIR makes the provision of segregated customer accounts mandatory across Europe, both for listed and OTC derivatives clearing, resulting in the obligation for those CCPs who didn't offer them to do so now. This obviously also impacts on clearing members, although they should already be familiar with segregated customer accounts if they clear at multiple CCPs.

However, clearing members who only clear at a CCP that in the past has not offered segregated accounts (such as many German banks who are only clearing members at Eurex Clearing) will be more severely impacted.

> **Given the higher amounts at risk in OTC derivatives clearing, the regulators have decided to introduce additional segregation models**

Typically, segregated customer accounts have been 'omnibus accounts', meaning that futures commission merchants (FCMs)/clearers could co-mingle the assets of all their customers as long as they were separate from their own.

The economic benefit is that the FCM can net the margin contributions of its clients and post the netted amount only to the CCP, reinvesting the surplus. The interest income from this provided revenue for FCMs, which reduced the cost of clearing for customers. From a risk point of view, however, the downside was fellow customer risk, i.e. they may be impacted if another customer of the same FCM defaults.

## Higher risks

Given the higher amounts at risk in OTC derivatives clearing, the regulators have decided to introduce additional segregation models: legally segregated, operationally co-mingled (LSOC) in the US, and individual customer segregation in Europe.

Both of these regimes amount to a kind of gross margining, resulting in the economic benefits of net omnibus margining disappearing, to both FCM/clearer and customers. On the plus side there is a risk reduction for customers as fellow customer risk is avoided. Additionally, some individual segregation models are being discussed where the transfer risk of margin collateral is also reduced, i.e. when a customer transfers margin to an FCM who then goes bust before transferring on to a CCP.

LSOC is compulsory for OTC clearing in the US, whereas individual customer segregation is optional in Europe from a customer perspective. However, EU-based CCPs have to offer it, even if there should be no demand for it. LSOC is not recognised by the European Securities and Markets Authority (ESMA) as a variant of individual customer segregation. This impacts primarily LCH SwapClear, whose historic OTC segregation model is LSOC-like.

Designing and implementing an individual customer (and customer of customer) account structure is a major undertaking for EU-based

CCPs and adds to their cost of doing business. However, compared to other factors increasing CCPs' cost of doing business, such as increased capital requirements, the cost of implementing this is but a fraction.

Whether CCPs can charge extra for the individual segregation option remains to be seen. Eurex Clearing has announced that it won't for the time being. Once implemented, operating individually segregated accounts should not be significantly more expensive than operating LSOC segregation for the CCP.

The existence of LSOC, a gross omnibus model with an overlay of information about who owns the actual positions, owes more to expedience than logic. LCH SwapClear already had it, FCMs were familiar with it and the Commodity Futures Trading Commission (CFTC) wanted a solution.

However, it loses the economic benefits of net omnibus margining and whether it is easier and cheaper to operate in the long term than a properly designed individual customer segregation model is doubtful. The main advantage of LSOC versus individual customer segregation seems to be the lower cost of implementation, specifically for the incumbent, e.g. SwapClear and the clearers.

In the EU, all derivatives clearing houses will have to offer individual customer segregation, even if they don't offer OTC clearing. These cost pressures may lead to another wave of CCP consolidation. Cross-product netting efficiencies would also seem to favour CCP consolidation.

## Bifurcation

The non-recognition of LSOC by ESMA as 'individual customer segregation' and the optionality of the latter for European customers and clearers could lead to a bifurcation of the US and EU markets.

The presumption is that certain categories of customers, such as pension funds, will insist on individual segregation, which to get the full benefit of portfolio margining will have to extend to their listed derivatives positions. But their clearing broker may not support that model and, if it did, the loss of net omnibus benefits, which are likely to increase again with tapering, and the clearer's fee structure may override their desire for lower-risk individual segregation.

This is what happened when Eurex Clearing first offered its listed derivatives model of individual customer segregation pre-Lehman. Client take-up was non-existent. In addition to the cost of setting up individual accounts, the FCM may not want to encourage disintermediation of their customer relationship by the CCP.

The end result could be that the net omnibus model will persist in the EU and thus make OTC clearing less onerous than in the US,

# How CCPs are adapting to accommodate regulatory changes

**By David Weisbrod, CEO, LCH.Clearnet LLC**

Mandatory clearing has been transformational for the operational aspects of the industry. Early on in the market evolution, we adjusted our membership rules to broaden access to the CCP; this resulted in revised default fund contributions and an upgraded default management process. More recently, we recalibrated our margin methodology and introduced real-time trade registration.

In March 2014, we will be officially launching a new interest rate swaps compression offering; and in the future we expect to broaden our eligible collateral, introduce new products and currencies and expand our geographic reach subject to regulatory approval. It's been a remarkably active time for CCPs, but our role as guardians of counterparty credit risk remains undimmed.

In fact, the spotlight has been turned on CCPs in the last year or so, putting us on the centre-stage. This public attention is another aspect of the transition to mandatory clearing that is new to the industry, but overall I think the experience has been overwhelmingly positive. There have been very few incidents resulting from client clearing, and although there were wide variances in preparedness, we are happy to report that as a whole, most of the hard work has been done.

Debates will be ongoing as to whether the increased role of CCPs is concentrating or diminishing systemic risk. Our view is that CCPs don't eliminate risk; they help it to be better managed. After all, our day is spent working on the systems, processes and technologies in place to continually improve the level of risk management. CCPs are like umpires – we don't get noticed unless we make a bad call.

especially in a higher interest rate environment. EU CCPs may have implemented expensive account structures that might see little use. The main arguments against these scenarios are a) customer demand and b) issues with respect to substituted compliance with the CFTC.

Setting up accounts and processing payments is something CCPs have been doing successfully for years. Managing OTC derivatives risk, however, with the exception of SwapClear, is relatively new to them. The higher complexity of OTC clearing has resulted in the standardised portfolio analysis of risk being abandoned for calculation of initial margins for portfolio-based historical value at risk-derived (HVaR) margin methodologies.

The pressure in a mandated OTC clearing world to minimise collateral needs while still maintaining safe levels of risk reduction inevitably will lead to the same methodology being applied to listed derivatives in order to enable a proper portfolio view of risk.

Other than Eurex Clearing, which has started a gradual move to HVaR-based margining on its listed derivatives; and CME, where FCMs and customers can choose to have their Eurodollar and Treasury futures positions margined as a portfolio with their USD IRS trades, no other major clearing house has done so yet.

Competitive pressures are likely to lead all CCPs who clear both listed and OTC to move to a common HVaR-based methodology.

## Complex default management

But the most complex issue of all is default management. OTC derivatives portfolios, specifically IRS portfolios, tend to be quite complex beasts. Hedging, managing, replacing and auctioning one in the event of the default of a clearing member is a non-trivial exercise beyond the capability of typical clearing house employees.

Experienced, practising market dealers are needed for this. These are found at the swap dealing banks who tend to be clearing members as well, or their FCM affiliates in the US.

This is why the leading CCPs have followed the tried and tested, as in the Lehman default, lead of LCH SwapClear by forming a default management panel consisting of nominated employees of swap-dealing banks who, in the event of a default, will assist in the management/hedging/ replacement of the defaulter's portfolio.

With several clearing houses offering OTC IRS clearing services, the availability of suitable committee members may become an issue, as one institution's default may impact several clearing houses simultaneously and be contagious to other banks. This highlights the need for close coordination and cooperation between CCPs and OTC clearing members/dealing banks.

Although CCPs will become systemically important financial market utilities, they are only a part of this financial ecosystem.

Clearing members are the other crucial component in this brave new world. An OTC derivatives CCP ignoring this reality is likely to fail. It will be interesting to see how the sometimes conflicting interests of these two groups balance out going forward. ■

# Meeting post-trade challenges from new regulatory regimes

## By Alun Green

When new regulations were first proposed to address weaknesses in global financial markets, no-one expected the industry to be faced with the sheer volume of complex, detailed change it is facing today.

EMIR in particular is introducing transparency and accountability requirements which are challenging established practices. The very high levels of automated processing and administration which characterise exchange-traded derivatives now need adapting both to accommodate OTC markets and new practices in ETDs.

Most banks and brokers are already reacting to the new constraints by bringing together a number of previously separate activities. Their ETD broking and clearing activities, bilateral OTC departments and collateral management, for example, are increasingly converging into a single stream. This immediately requires the processing systems which supported these activities to be similarly addressed. Years of silo spending on asset class-specific functions will have to be streamlined into a more cohesive business.

But the structural changes which emanate from regulations will exert enormous pressure on costs, coming at a time when bank and broker margins have already been squeezed thin. In this context, the need to reduce the cost of core utility functions is clear. Much of the back office work in terms of regulatory reporting, client statementing, reconciliations and margining, i.e. areas where brokers do not present a competitive advantage, will need to be fully automated and harmonised across cleared products, whether they are OTC or ETD. Similarly, client specific functions such as fees, intra-day liquidity optimisation, interest payments, collateral management and service levels will need to be differentiated for the competitive edge.

Banks and brokers are therefore preparing to take a much more granular view of post-trade functions as a way of determining which parts of customer services need some kind of in-house refinement in order to improve the level of service offered, and which parts are routine utilities that can be automated to conform to the new regulatory requirements. Inevitably this requires a new holistic coordination between IT and Operations departments across a wide range of what were previously autonomous departments within banks.

### Account proliferation

A new challenge for clearing brokers is the EMIR option for end-user clients to maintain individually segregated accounts at the CCPs. This affects both cleared OTC and ETD businesses. At this stage it seems that clients prefer this option in majority and are indeed moving their credit risk from their brokers. Operationally, however, it

represents a huge change, and challenge, for clearing brokers and CCPs.

Clearing brokers already have detailed client account management systems in place of course, and while replicating these for the clearing broker/CCP relationship is a major task, it is within their capability. But it will further reduce their ability to offer new fee-based services based on their customers' credit (e.g., ROI optimisation, credit improvements). For CCPs, however, this is a major new challenge, not one they asked for, which will require a substantial increase in their account administration and cash, credit and collateral management systems, and it is not yet clear if they will be able to derive new fees from this capability.

Clearing brokers are facing the additional challenge of different account models at different CCPs and are already looking at reducing the amount of manual handling which these new requirements entail. But the CCP authorisation programme underway in 2014 means it may be some while before clearing brokers and banks can see exactly where to direct the serious investments in new processing systems and to support new value-added services. Meanwhile operations managers will want to skew the balance between manual and automated processing toward the latter as much as possible.

All this takes place in a market where new and established clients will be increasingly reliant on the sell side for service levels which meet the new regulatory requirements. While some hedge funds and asset managers are investing to meet new compliance standards, many more will look to their banks and brokers for account administration services which meet their specific needs in a more complex regulatory environment.

**Alun Green is general manager of SunGard's post-trade derivatives business.**

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# Avoiding CCP failure

The concentration of new risk at CCPs has raised important questions about how they are capitalised and funded and their new vulnerability. By **Tim Reucroft**, Thomas Murray

New regulations have changed the way financial market practitioners assess the risks between central counterparties (CCPs). The original expectation from CCP regulation was that the major differentiators would be between margin models and in the operation of default funds.

However, it seems that regulators have a reasonable grip on this and most CCPs comply with the global standards. More surprising is the major inconsistency in the capital requirements of CCPs.

The requirements from the European Securities and Markets Authority (ESMA) and the European Banking Authority (EBA) are robust, while the Commodity Futures Trading Commission (CFTC) is only now adopting international standards.

## Global requirements

While the mandate is driven by the G20 and the Financial Stability Board, the custodian of the global requirements for CCPs comes from the CPSS-IOSCO's Principles for Financial Market Infrastructures (PFMIs – which cover central securities depositories (CSDs), CCPs and trade repositories). IOSCO has some 123 ordinary members made up of the world's regulators, i.e. far more wide-ranging than G20. CPSS-IOSCO's original CCP recommendations were dated 2004 but new requirements came out in April 2012 and updated in December 2012. There are some additional requirements in consultation mode at the time of writing – January 2014. Why then aren't these requirements sufficient?

Firstly, because they have no statutory force, they are only enforced by treaty. Secondly they are only a minimum requirement. But if we're seeking global harmonisation then is it not sufficient for each CCP to meet the CPSS-IOSCO requirements without the need for any additional extra-territoriality?

This is effectively the stance taken by the Basel Committee on Banking Supervision (BCBS) in their Qualifying CCP (QCCP) requirements. The problem is twofold:

(i) CPSS-IOSCO set the minimum standard and many countries have written much more detailed requirements into law. The PFMIs only address infrastructure (i.e. Title VIII of Dodd-Frank or Title IV of the European Markets Infrastructure Regulation (EMIR)) – the laws are much wider. Nevertheless the PFMIs are an excellent benchmark.

(ii) There is no mechanism to ensure a level playing field against these global standards. The CPSS-IOSCO assessment methodology is local and not independently audited. This means that the national regulator can set their own standards for observance, despite there being a large number of key considerations that they have to take into account.

It is understandable that the G20 nations want to protect themselves from contagion arising from outside their jurisdiction – hence extra-territoriality. Equally understandable is the third country claim that they have their own standards (subject to a CPSS-IOSCO minimum), which ensures that protections are adequate, both inside and beyond their local boundaries.

**"There is no mechanism to ensure a level playing field... the CPSS-IOSCO assessment methodology is local and not independently audited**

The real issue is what if the minimum standards are not met? This is where the differences in country-specific capital requirements become important.

Before we explore the country-specific issues, let's single out the PFMIs that relate to capital requirements:

- Principle 4 – A CCP should maintain sufficient financial resources to cover its credit exposure etc.
- Principle 7 – A CCP should maintain sufficient liquid resources etc.
- Principle 15 – A CCP should hold sufficient liquid net assets funded by equity to cover potential business losses etc.

Basically Principle 4 says a CCP should have sufficient financial resources to cover a default (on a Cover 1 or Cover 2 basis), Principle 7 says these resources should be liquid, while Principle 15 says the CCP should have sufficient equity to cover a wind down.

Notice the difference between "financial resources" and "equity". Financial resources include margin monies, default fund contributions and the resources of the CCP. Equity is defined as common stock, disclosed reserves, or other retained earnings.

What is fascinating is that the CFTC has finally succumbed (Federal Register 2 December 2013) and implemented the CPSS-IOSCO PFMIs within its rules as follows:

| CFTC Rule | PFMI |
|---|---|
| 39.33 | 4 & 7 |
| 39.35 | 4 |
| 39.39 | 15 |

The driver has been to enable derivatives clearing organisations

**The major differences between Europe and the USA are between what counts as financial resources and what counts as equity**

(DCOs) to gain QCCP status under BCBS (one of the requirements of which is to comply with CPSS-IOSCO standards) – a genuine move towards global harmonisation.

Even more fascinating has been CME's response to the liquidity requirements of Rule 39.33 with the introduction of Rule 822 with its liquidity event, one consequence of which is that primary dealer members would have to replace US Treasuries, with cash, at 60 minutes' notice.

Setting aside differences over Cover 1, 2 or other metrics, the major differences between Europe and the USA are between what counts as financial resources and what counts as equity.

### Financial resources

The CCP or DCO has to have sufficient financial resources to cover a default. CFTC Rule 39.11 (b) (1) specifies that the financial resources may consist of initial margin, default fund contribution and the DCO's own capital.

If the initial margin and default fund contributions are sufficient there is no obligation on the DCO to commit any of its own capital.

The European regulators view this as a form of moral hazard and require (Article 43 of EMIR) that the CCP contribute skin-in-the-game at a particular point – pretty high up – in the waterfall.

In reality it doesn't amount to much, being 25 per cent of the minimum capital requirement, but it has to be held separately in the CCP's balance sheet. ESMA is quite clear that no resources, other than capital, including retained earnings and reserves, can be used to comply with this requirement. There is no equivalent in the CFTC Rules (or in the PFMIs).

Under EMIR, the responsibility for setting minimum capital requirements was assigned to the EBA, which set four criteria for European CCPs – sufficient capital to cover:

(i) winding down;
(ii) operational and legal risks;
(iii) credit, counterparty and market risk not covered by margin and default funds;
(iv) business risk (minimum 25 per cent of operating expenses).

All taken together this represents around one year's worth of expenses; not dissimilar to the CFTC's requirement contained in Part 39.11 (a.2).

Once the EBA and ESMA released their capital requirements, LCH Group raised an extra €300 million in capital and Eurex also injected an additional €150 million. EuroCCP and EMCF merged.

In the USA, the OCC is currently building up its reserves but CME Clearing is not a separate legal entity. In Europe, a CCP has to be a legal person while in the US, a DCO just has to have a well-founded legal framework.

### Do CCPs meet the capital requirements?

Given the varying requirements


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described above, to what extent do the major CCPs meet these requirements? The numbers, taken from the 2012 audited accounts, are shown in Figure 1.

These numbers are all at 31 December 2012. See text above for subsequent capital additions.

Note that the OCC, on the basis of these figures, did not meet CPSS-IOSCO Principle 15 since it does not have equity sufficient to cover six months operating expenses. It did meet the SEC requirements because it has a $2 billion credit line that it is allowed to use in lieu of capital. Credit lines are not a Basel II eligible form of capital. It will be interesting to see if the SEC comes up with an equivalent to the CFTC's 39.39 (d)(2).

## Goodwill

The net shareholders' funds numbers assume a full write-off of intangibles, which seems harsh, but if the exchange gets into trouble then what price goodwill and what is the risk to the CCP?

The CME Group has substantial amounts of intangibles in its balance sheet ($27.6 billion). This is largely a consequence of the takeovers it has made (CBOT, NYMEX, COMEX). The problem is that acquiring an exchange results in significant goodwill – you pay a lot for a computer system and some IP in the form of the exchange's contracts; but the value is all in the future revenue deriving from the acquired contracts. However, changes in the market may impact the value of this future revenue stream. For example, the shift of volumes from West Texas, owned by CME, towards Brent, owned by ICE, should at least trigger a statement under IAS 36, which requires that goodwill should be assessed for impairment.

Similarly, it will be interesting to see the impact on ICE's 2013 balance sheet from the NYSE acquisition.

In Europe, financial services companies were ordered to write off 25 per cent of their goodwill in 2011 as a result of the crises that occurred. Goodwill needs to be accounted for very conservatively.

## Default funds

We know of no CCP or DCO that publishes the adequacy of its default fund yet. Let's assume this is Cover 2 – sufficient to cover the default of the two largest clearing members. How can you assess if this is covered by the financial resources available? The key metric would be the number of clearing members that could go into default before all the CCP's capital was used up – starting from the largest down. So a CCP with strong resources might be able to cover the default of its five largest clearing members (or more) – a Cover Down metric and a simple global benchmark.

There is no mention of QCCP status under BCBS. The hypothetical capital calculations are being revised but these bite on CCP clearing members, not on the CCP itself. If the BCBS capital requirements are high then it's a commercial decision for the clearing broker – irrespective of the systemic risk issues for the regulator of having a CCP with insufficient capital. For the clearing broker it's just a cost of doing business; for the regulator it could be resolution.

Similarly these is no mention of the PRC or the quantitative metrics on their way from CPSS-IOSCO. The public quantitative disclosure standards for central counterparties (CPSS 114), currently out for consultation, do not specify a cover down metric.

## Recovery and resolution

Adequate capital requirements are the first line of defence against recovery and resolution. The consequences of letting a large CCP go under would be catastrophic in today's new world of mandatory clearing. Concentrating all this risk in a CCP creates a systemically important financial institution and one too big to fail.

Resolution is the outcome that nobody wants to experience, whereby the regulator will be required to step in and work out how a CCP can be saved without taxpayer funds. But where will the funds come from? Not from an exchange with illiquid assets in the form of intangibles. This might suggest that CCPs should be separated from exchanges. However, there is a contrary argument that seeks to avoid the need for resolution.

If a clearing broker goes into default, any positions not ported will need to be closed out as quickly as possible. The way to avoid resolution is in the limit that the close out period goes to zero, then the CCP losses on default also go to zero. If the exchange shuts, the close out period goes out to infinity (along with the losses). The risk to the CCP is the time it takes to

| Figure 1 | CME ($ million) | OCC ($ million) | LCH (€ million) | ICE ($ million) | Eurex (€ million) |
|---|---|---|---|---|---|
| Shareholders' funds | 21,419 | 12 | 424 | 3,643 | 139 |
| Operating expenses | 1,223 | 152 | 326 | 536 | 105 |
| Profit after tax | 907 | -1 | 60 | 562 | 1 |
| Dividend | 1,228 | nil | nil | nil | nil |
| Margins and default fund | 6,584 | 2,664 | 81,831 | 31,882 | 19,709 |
| Intangible assets | 27,594 | nil | 198 | 2,736 | nil |
| Net shareholders' funds | -6,175 | 12 | 284 | 907 | 139 |

close out these positions, ranging from two days for exchange traded derivatives (ETDs) to 10 days for over-the-counter (OTCs). The CCP is totally dependent upon either the exchange remaining open (for ETD close outs) or for clearing brokers to bid the OTC book.

If the exchange has no ownership in the CCP, why care if it goes under? However, if the utility is user owned, then the users (in this case the clearing brokers) have a vested interest in keeping the utility solvent. This suggests CCPs owned by exchanges may have a more secure resolution regime, in contrast to the goodwill argument above.

Under the silo model the exchange would never close, since the losses from putting the CCP into default would be far worse than the alternative losses at the exchange. In the absence of a silo model then perhaps there needs to be an obligation on the exchange not to close.

### Vulnerable

The capital base held by a CCP is crucial to its ongoing viability as a financial market infrastructure. If the capital base is insufficient, then there is a very real chance that we will experience at least one CCP failure during the next scenario of extreme market stress. The capital requirements at these now vital infrastructures aren't stringent enough in some territories, which makes some CCPs vulnerable, and perhaps a huge source of systemic risk to the market – the very thing that they are supposed to be removing.

The differences in approach between Europe and the USA pose very different risk questions, which mean that the CCPs themselves also pose very different risks to their members. ■

*Thomas Murray has been providing risk assessments of CSDs since SEC17f7 was introduced in July 2001. With the advent of G20 they introduced risk assessments of CCPs and now cover 26 globally.*

## Insurance for CCPs

**New insurance products may provide a firebreak between CCPs and their clearing members, underpinning their default funds. By John Parry**

Although the mutualisation of risk model has served the futures industry well for decades, there is today concern that the weight of clearing over-the-counter (OTC) products and the specific strictures on how clearing members and central counterparties (CCPs) operate could stress this model beyond breaking point.

Governments assert that CCPs will not attract tax-payer support in the event of failure. But although their clearing load is about to increase perhaps twentyfold there is no equivalent increase in their balance sheets nor the balance sheets of their main customers – the clearing members.

The traditional solution to managing a member default has been for the CCP to re-distribute client positions between other clearing members while at the same time using margin assets and default fund provisions to manage the shortfall. The strength of this mutualisation model is also its greatest potential weakness – it is largely the same community funding the solution that was part of the problem in the first place. See Lehman Brothers 2008.

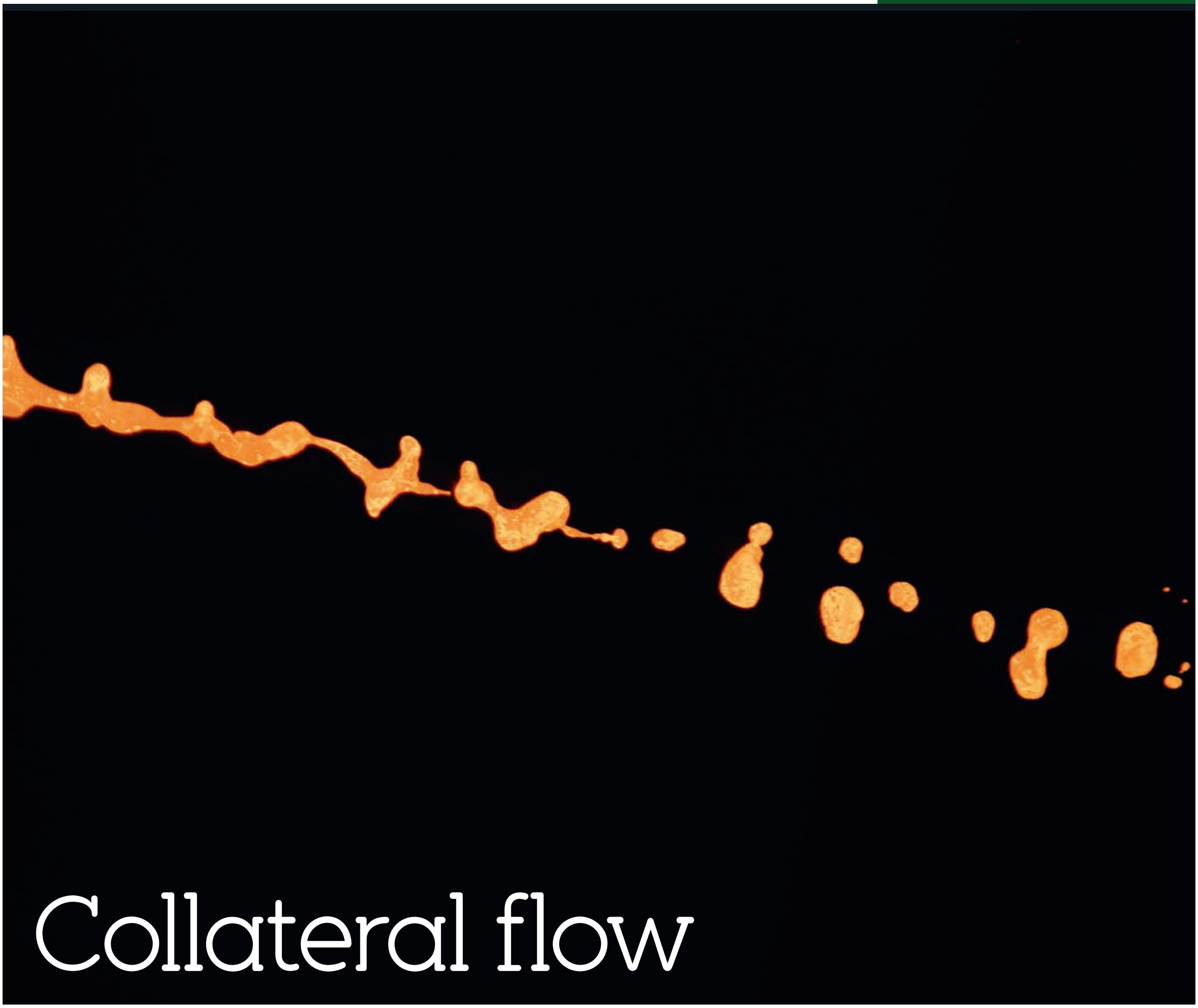
One way out of this paradox is to introduce external funding. Insurance has been used to underpin CCP default provisions for years. But traditionally it was a longstop arrangement, coming in after margin and default funds were drawn down.

Part of the reason for that was the insurers' need to define a claiming event and partly because insurers tended to pay out too slowly to meet a CCP's liquidity and deficit requirements. Also, CCPs had evolved to a sufficient size and operational capability to manage a futures market default.

GCSA, a programme and claims manager in the insurance business, is addressing these new pressures with insurance products designed specifically for post-Dodd-Frank and European Markets Infrastructure Regulation (EMIR) CCPs.

It draws on insurance company assets that are non-correlated with clearing members, it structures products that are immediately responsive to the liquidity needs of CCPs managing member defaults, and it offers 'third eye' surveillance of CCP risks, which is independent of the derivatives market, its members and operations.

The concept is not new, but 2014, when CCPs step up to meet the implementation challenge of Dodd-Frank and, particularly, EMIR, may be when it takes off.



# Collateral flow

Collateral management is moving to the front office, requiring new solutions under the new clearing regimes. By **Anna Reitman**

Clearing is set to greatly increase the amount of collateral moving through the system. But how the market will handle the flow is still being debated as regulations are finalised. Against the backdrop of uncertainty this creates, firms are facing pressures to make decisions about collateral management now that will affect almost every aspect of their trading.

In terms of client asset segregation, a clear preference is already being expressed in principle – full physical. But as administrative burdens and costs add up, the industry is becoming more open to a 'halfway house' solution that would satisfy regulators while making the buy-side feel sufficiently protected, says Jonathan Philp, capital markets consultant at everis.

"If you are an asset manager putting up excess collateral, you want it sitting in the clearing house, not with the broker, which is what the regulation requires. But the discussion on how to do that is still ongoing," he says. That discussion is being led by giants like PIMCO, Fidelity and BlackRock, with the rest of the crowd in a 'wait and see' mode.

There are about a dozen segregation models that can include anywhere from two to five parties in the transaction. The more complicated the model is, the more potential there is for sticker shock.

Philp points out that while there is some leeway for infrastructure providers to present affordable alternatives, client acceptance could be challenging.

"It would be very difficult for a buy-side firm to defensibly say to its investors, we went for this cheaper option to save a few basis points but there is a risk of losing collateral or problems if a broker defaults," he says.

## Insolvency insulation

The stark contrast between US and UK procedures came to the fore in the wake of the Lehman default. Now, as the US shapes its rules under Dodd-Frank and the UK within European regulations the Alternative

Investment Fund Managers Directive (AIFMD) and the European Market Infrastructure Regulation (EMIR), those differences have consequences for managing collateral.

In a recent report, US-based consultancy firm Finadium found that the best way to reduce exposure to broker insolvency is to hold pledged assets away from a broker, but this may be ineffective in the US. That's because in the US client assets are generally considered broker property and distributions in the case of bankruptcy will be made on a pro-rata basis. In the UK, however, accounts that are not in default cannot be pooled and exposed to other clients' claims.

There are benefits and drawbacks to each of these depending on the situation and there are many more nuances that participants in both markets should understand, but ultimately, Finadium believes that investors should be able to make their own risk-based decisions, and in this regard the UK model is superior, if not foolproof.

The pressure on infrastructures to find the best way to protect collateral goes hand-in-hand with the huge amount of it that is expected to flow as a result of derivatives reform. One consequence has been a push towards 'enterprise-wide' views of collateral holdings, particularly as the need to post initial and variation margin for OTC clearing draws near.

### Posting problems

The futures and options universe is well acquainted with posting margin, but it too will face a cultural shift as more holistic operational structures are implemented across firms. Staffan Ahlner, managing director of BNY Mellon's Global Collateral Services team, says that walls between trading disciplines are coming down when dealing with collateral management.

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One of the main challenges from his perspective is the big question mark over whether all custodians can hold both initial and variation margin efficiently enough – particularly with the latter in cash-only. "A tiny change in interest rates could have a huge effect on the variation margin (of interest rate swaps) on a short-term notice. That is a challenge even for the sell-side, but now not only do you have to ask buy-side funds to have a cash contact network equivalent to a large-scale broker dealer, but also the operational capability to raise finance on short notice," he says.

Little wonder then that systematic ways to make the best use of available collateral is getting attention as an important capability, particularly for firms pooling in many activities. "A participant in the collateral optimisation programme can use collateral for repo, securities lending, collateralising into a clearing house and an OTC derivative, and the asset can move freely among those various pockets. You can ensure you have the right collateral in the right place at the right time," Ahlner says.

### How much is enough?

Just as there is a debate over how much segregation is enough, there are also questions over how much collateral optimisation is necessary, says everis's Philp. Among his buy-side clients, there is less interest in all of the bells and whistles after costing. "There is a lot of interest in having a single view of collateral and in being able to move assets around, but pragmatically, there are diminishing returns to heavy investment in systematic optimisation," he says.

For the biggest players, some form of partnership with technology vendors seems inevitable – SunGard, Calypso, Murex and Lombard Risk being several of the front-runners. International central securities depositories Clearstream and Euroclear are also actively looking at ways in which to best utilise the trillions of dollars in collateral they hold for their clients in the form of securities deposits.

Olivier de Schaetzen, director and collateral expert at Euroclear, says that custodians offering collateral management services can use its global 'Collateral Highway' to access securities for initial margin, for example. "CCPs are targeting 24-hour collateral calls and a 15-minute time gap to respond to these calls, and that is where we are stepping in," he says.

One of the hurdles to overcome, he adds, is that newcomers to the market are being mandated to it – not an ideal situation.

"We (in the market) need to be connected to each other in the most efficient and optimal way for the buy-side client to continue to operate. At the end of the day that is what is fuelling the whole capital market," he says. ■

# Cross-border collaboration is key to collateral challenge

The ability of financial reform to increase market stability, enhance transparency and reduce risk will be intrinsically linked to efficient and effective allocation of collateral. The industry's ability to meet this challenge, however, hinges on cross-border collaboration and development of industry-wide solutions. By **Mark Jennis**

Derivatives regulations and new capital and liquidity requirements for financial institutions remain the key drivers of new collateral demands. However, while these drivers are well known, estimates on the amount of collateral required vary. The Bank of England estimated in 2012 that the amount of collateral needed to meet requirements posed by new regulations globally could reach $800 billion. A more recent study by the Bank of International Settlements estimates this to be around $4 trillion.

Estimates on the likely increase of margin calls also vary across the industry. Dealers estimate margin call increases of between five to 10 times as a result of clearing requirements, bifurcated derivative portfolios and clearing fragmentation across asset classes and regions. These changes, coupled with the Basel III proposal to match the currency of the collateral settled with the currency of the underlying trade in a multi-currency portfolio, will increase both the complexity of calculating collateral requirements for margin and the volume of collateral calls to be managed.

**The situation urgently demands a solution which can address both the scale and the efficiency of the collateral management challenge**

The scale of the challenge is unprecedented. Many institutions do not currently have a clear picture of their pools of eligible collateral. They need to first establish the inventory and location of collateral, before they can look at optimising its use, but the challenge does not stop here. Optimising collateral not only requires reviewing the eligibility criteria and understanding the terms of the collateral agreement, but also calculating the costs of putting that collateral to different uses and moving the collateral and following its settlement status across the extensive network of depositories and custodian banks.

Many firms' systems and workflows are ill prepared to meet this challenge. The combination of legacy workflows, an increase in collateral required and in margin activity will negatively impact the balance sheets of financial institutions as well as their operational costs, unless an industry-wide solution is agreed upon.

Capital charges will increase due to the need to fund larger amounts to support the lack of certainty around intraday collateral required. This is even before accounting for additional charges associated with moving collateral from the dealers' balance sheets to segregated accounts.

Operational costs will also increase. The process of tracking collateral and identifying collateral transactions will likely prove overwhelming to the current processes. Furthermore, the segregation of accounts required by new regulations, while improving the safekeeping of collateral, will add a complexity to the collateral management process that existing technology will find challenging to manage.

There are currently multiple collateral management solutions encompassing anything from portfolio margining to collateral optimisation trying to address the different segments of the collateral challenge. However, the situation urgently demands a solution which can address both the scale and the efficiency of the collateral management challenge, as well as the gap between the supply and demand of collateral. Without it, hedging risks will become more expensive, profit margins will continue to be squeezed, and investment returns will become more challenging.

The complexity and the global nature of the derivatives markets have meant that market participants – the buy-side, corporates, the sell-side and third party intermediaries – have expressed a preference for an industry-wide strategic infrastructure solution to address these challenges and avoid the additional costs which would result from fragmentation. An industry utility which can foster cross-border collaboration and strategic industry partnerships is best placed to respond to the challenge of the changing environment for collateral.

**Mark Jennis is managing director, strategy and business development (mjennis@dtcc.com)**

# Feeling the heat

Clearing brokers are being required to make huge changes to their established routines as they cope with regulatory uncertainties. By **John Beck**

Much of the European Markets Infrastructure Regulation (EMIR) does not specifically target clearing members. However, positioned between central counterparties (CCPs) and clients, they will, nonetheless, feel the heat. As a result, they are having to make significant adaptations in order to operate in the new world.

Like the rest of the industry, clearing members will be required to adapt fast. EMIR is legally binding and it is not certain whether a transition period will be offered. It is, says Silas Findley, EMEA head of OTC clearing with Citi, a challenging time for the industry.

Of particular concern to many clearing members is that CCPs must begin to offer clients different account types to hold margin lodged against cleared over-the-counter (OTC) positions.

The new account structures are known as individually segregated accounts and co-mingled omnibus accounts.

The segregated model means clients can ask for an individual account to be opened in its name at the clearing house and kept separate from the assets of the clearing member and its other clients.

Co-mingled accounts will allow members to combine client assets and post net margin to the CCP. The latter is a much simpler, and therefore cheaper, structure for the client, but offers less protection and may not be as popular as a result. Segregated accounts are a worry for clearing members for several reasons, not least because they will put a halt to the traditional practice of pooling client assets, a once profitable process.

Patrick Cirier, chief administrative officer for Newedge's

UK business, adds that members will have to make cash advances and intraday loans to clients and fund their margin requirements overnight, unless a trade has been pre-funded. This, he says, is a concern in terms of risk as well as capacity: "One of the important consequences is an increased pressure on clearing members in terms of their obligations to pay margins to the CCPs while losing the benefits of pooling clients' monies."

### Huge numbers

Segregated accounts will also entail huge operational changes for both clearing members and CCPs, says Findley's colleague, Patrick Tessier, global head of exchange traded derivatives operations with Citi. Historically, a clearing member – having pooled most of its clients together in a single account – would usually have two or three accounts per clearing house. The introduction of segregated accounts would mean that a hypothetical asset manager of, for example, 100 funds could ask his clearing member to open 100 accounts on each of the 10 to 15 CCPs in Europe which clear his contracts.

Mapped across every client and every clearing house, the numbers are huge. "There's going to be a more than exponential increase in the number of sub-accounts which are maintained at clearing houses," Tessier says. "That creates additional complexity and work effort for members."

CCPs will, of course, face extra work too, but Cirier warns that they may not be ready to deal with these kinds of requirements. This too will impact on clearing members, he says. "Individual segregation causes tremendous operational complexity. You're creating the possibility for each CCP to be faced with tens, if not hundreds, of thousands of accounts if they open individual client accounts as clearers do today. It will create a massive strain on the system and the exchange of information between clearers and CCPs."

### Timing issues

Progress is not helped by the short timeframe – clearing houses had to apply for authorisation to operate under EMIR by September 2013 – which means the segregation models proposed by CCPs were not all equally scalable and some involved manual processes, says Hester Serafini, global co-head of OTC clearing at JP Morgan.

Additionally, the rush to develop new models as a source of competitive advantage for the CCPs made it hard for the rest of the industry to be ready for and understand them all. Eurex, ICE Clear Europe, SwapClear and CME Clearing Europe have 15 different account structures implemented or proposed between them, according to Thomas Murray Data Services.

Things are further clouded by the opaque reauthorisation process for CCPs. As a result, even the best intentioned members did not have full and clear information about how the new account models work. Citi's Findley describes the process as building towards a moving target.

However, he adds that things are improving somewhat, in that requirements are becoming clearer. Although, he says, the precise timeframe for implementation is not.

"We know a lot more now than we did a few months ago. We have a very good handle on the technical requirements, but questions remain on when exactly reauthorisation of the various CCPs will occur." And, of course, when the migration of clients to the new regime must take place.

Meeting these requirements will require members to expend a large amount of time and budget, he adds, describing investment in IT and infrastructure as one of the big themes of 2014.

### Education and investment

Preparation is already well underway, however. Serafini says JP Morgan has seen OTC clearing as a key revenue opportunity for some time; and as a result began appropriate IT investment several years ago: building connectivity to new clearing houses and for new products in the US, Europe and Asia.

The process has been adjusted along the way, she adds, as EMIR obligations on segregation models or reporting, for example, became known. "Many of those requirements were not initially foreseeable when we first embarked on this four or five years ago," she says.

As well as building infrastructure to support these different segregation models, members are also having to educate their clients on how the models work, she says, taking on an advisory position that she expects to be important throughout the adjustment process. This role extends beyond account operations. Some firms, including Newedge, are also reporting on behalf of their buy-side clients, says Cirier.

These new demands will drive an increase in running costs across the business and some of that increase will be borne by clients, he adds. Findley even predicts that there will be compression in the number of clearing providers in the market as a result.

There is then, much to be done, and significant adjustment will be required for continued operations in the new EMIR-compliant world. For clearing members, as for many other market participants, there will be tougher, more complex times ahead. ■

# Buy-side sensitivities

The varied nature of the buy-side throws up interesting tangents as a common clearing obligation is imposed. By **Richard Metcalfe**, Investment Management Association

The short-term challenge of implementing clearing is a serious one for investors and their asset managers. But this is only part of the story. In the long run, regulatory change could trigger radical shifts in liquidity that could be very important for the buy-side and for the wholesale markets they use.

Clearing is, of course, just one of the obligations affecting over-the-counter (OTC) derivatives, including most significantly the treatment of non-cleared business. While the latter regime may not look as unfriendly as was first feared, there are still big questions as to its likely impact.

Thresholds do mean that one has to have a big book before margin rules kick in: the mark to market on the non-cleared portfolio has to be over €50 million and the gross size of the book must exceed €8 billion. And, in analysing the likely impact of this on the fund management industry, it is worth bearing in mind footnote 10 of the September 2013 Basel-IOSCO paper on margin for non-cleared.

This paper points out: "Investment funds that are managed by an investment adviser are considered distinct entities that are treated separately when applying the threshold, as long as the funds are distinct legal entities that are not collateralised by or are otherwise guaranteed or supported by other investment funds or the investment adviser in the event of fund insolvency or bankruptcy."

## More cost, less liquidity

All the same, it is reasonable to expect some increase in cost and diminution in liquidity in the non-cleared world. Another point to bear in mind here is that capital requirements are going nowhere but higher, and that Basel has not finished reviewing the trading book – both its boundary and the treatment of what is within it.

On the question of non-cleared margin, there are attempts to multilaterally net down the initial margin requirements for those that do end up subject to them. But it is far from clear how anyone can make that net calculation stick, in the absence of a central counterparty (CCP)-like entity to sit in the middle of the possible defaulters.

Some dealers confidently predict that, because margins in swaps are so tight, there is room to re-price. But the big unknown is whether there will be the same incentive to use swaps – whether cleared or OTC. If the same economic exposure can be achieved by other instruments then some business will move.

The argument that one needs tailored derivatives remains true for some market participants, but perhaps less true for investment managers, some of whom might have viewed swaps mainly as a relatively cheap tool.

One more point on products: even when SwapClear was still a 1990s' glimmer in LCH's eye, the potential to net swaps and futures was viewed as attractive. If listed proxies for OTC products continue to grow in popularity – and if, despite what legislators seem to believe, there is only so much liquidity (read 'collateral') to go round – then one may not be able to make the same assumptions about liquidity in some products, even if they are now being cleared.

Really big picture: with the price of collateral set to increase (because demand is up and there will be a preference for the better stuff), and

with the product/venue landscape entering a new era, clearing is happening just as a broader, rather politically driven experiment with financial services begins.

## Where are we now?

In spite of being on the statute books since the middle of 2012, the European Markets Infrastructure Regulation (EMIR) had not, by February 2014, delivered a re-authorised clearer, although April was being flagged as a likely month for introduction. Much still depends on the processes of a) approving CCPs as EMIR-compliant and b) determining which 'asset classes' are suitable for the obligation. More on that in due course...

Meanwhile, clearing is now obligatory in the US, with remarkably little problem. A three-phase introduction (staggered over March, June and September 2013) brought in the full range of participants caught by the Dodd-Frank Act of 2010, including asset managers. Larger ones were ahead of the game, anyway; and clearing members, anxious to win share in the new market, were hardly going to turn them away.

So, everything will go just as smoothly in Europe, won't it? Well, maybe. Investment management firms have certainly prepared for clearing. Choices of clearing brokers have been made and – notwithstanding the more immediate need to comply with EMIR obligations to report to trade repositories – attention has been paid to issues such as clearing documentation.

## Segregation concerns

The complications relate not just to issues of logistics and timing, meaningful though those are. It should come as no surprise to anyone following the evolution of client clearing that the adequate segregation of client assets remains a primary consideration.

The offerings of CCPs in this regard are, however, still developing. While current incumbents in the CCP world may be difficult to challenge in terms of the critical mass they have built up, it is not impossible that buy-side choice will be heavily influenced by what appears to be increasingly creative thinking on segregation by some newer challengers. The European landscape is more diverse than the more monolithic model that prevails in the US.

Moreover, by law the appropriate account structures also have to be offered in relation to listed derivatives, in the same way that the exchange traded world has had to conform to new reporting requirements. Ironically, the 'safer' listed market has not traditionally worked on the basis of individual client-account segregation and that has to be implemented.

Also, no one can be sure what products will require clearing, because the European Securities and Markets Authority (ESMA) has not yet identified them.

In practice, it is not hard to predict what types of instrument will be mandated for clearing: those for which industry was way ahead of any regulatory obligation, notably interest rate swaps and credit derivative index trades. Throw in some types of predominantly cash-settled foreign exchange derivatives and you are pretty much there.

But the interaction with the EU's aggressive front-loading requirement makes this a more problematic issue. If you do not qualify for the pension fund exemption – which at the time of writing remained unclear for some market participants, through no fault of their own – then there is more at stake.

Pension funds are unlikely to have to back-load when clearing does eventually apply to them. But anyone failing to be classified as such will indeed have to.

> **Recovery and resolution of CCPs is far from settled and the clearing houses are split on the best way forward**

With their front-loading requirement (clearing old trades as well as new), EU legislators tried to 'out-regulate' the US, despite advice from industry. This obligation matters because of the inevitably altered economics that arise from transferring into an over-collateralised environment a deal that was originally done under the different economics of a bilateral contract.

### Walking away from business

The fund manager's clearing challenge is increased by the reported trend among clearing members to include clauses in the relationship documentation which give clearing members the flexibility to walk away from the business at relatively short notice.

Ironically, the process of authorising CCPs in the EU is far from transparent and the market was spending a lot of time in the later stages of 2013 trying to piece together which CCP might be authorised when.

None of this, of course, has stopped growth in clearing in Europe. But to date, that is largely driven not by regulatory obligation but because it makes sense (in risk-reduction terms) to dealer firms, with their web of offsetting positions, to embrace multilateral netting.

SwapClear, for example, has seen OTC IRS clearing volumes quadruple to $80 trillion notional in the year to February 2014.

In end-user land, the European Commission is required by EMIR to look at ways to facilitate pension fund use of clearing, specifically by looking for ways round the issue of pension funds not being natural holders of the cash that CCPs demand for settlement of variation margin calls. The EU is in the process of scoping the issues. Collateral transformation may prove a way forward, though some supervisors are ambivalent at best about this technique and the associated risks.

CCP recovery (as distinct from resolution) threatens to add a contingent cost, as well as considerable systemic impact. Fund managers are increasingly focusing on the risk that, in extremis, customers' margin could get haircut to help rehabilitate a CCP that was in trouble. Recovery and resolution of CCPs is far from settled and the clearing houses are split on the best way forward.

And what of the clearing members' business models? Will those be pure volume, with the service targeted at those who promise to do most business? Or perhaps a more nuanced model, with clearing part of a suite of services for favoured customers. Pricing and services levels could clearly depend on which model you end up facing.

Meanwhile, in December, we had reports (in *IFR*, 11 December) of a would-be OTC clearing member already falling by the wayside: BNY Mellon, a big custodian that was looking to challenge the clearing member operation run by established OTC dealers.

It's going to be an interesting ride. ■


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# Trade-reporting tensions

OTC market transparency is enhanced by new trade-reporting regulations, but there are questions about its application to exchange traded markets. By **Kathleen Traynor**

The European Markets Infrastructure Regulation (EMIR) is part of the EU response to its G20 commitment, but it goes beyond core G20 principles with its requirement to report over-the-counter (OTC) derivatives transactions to trade repositories. Article 9 of EMIR requires "any derivative contract" to be reported to a trade repository, bringing exchange traded derivatives (ETDs) within its scope.

Article 9(1) of EMIR states that: "Counterparties and CCPs shall ensure that the details of any derivative contract they have concluded and of any modification or termination of the contract are reported to a trade repository."

Legislators in Europe had taken the view in finalising EMIR that regulators would not be able to get a clear view of a firm's total derivative exposure if OTC trades only were reported. This may not have adequately reflected the fact that some ETD information is available to regulators through their oversight of derivative exchanges, but apparently

> **Defining a suitable industry-wide reporting approach under EMIR for ETDs is challenging for a number of reasons**

not at the level they require. In any event, once Level 1 text of EMIR was finalised, the reporting obligation required further specification through the creation of technical standards.

The European Securities and Markets Authority (ESMA) was tasked with drafting these standards, which set out the detail on how reporting to trade repositories (TRs) would work for all derivatives. The standards address how TRs are to apply to ESMA for TR registration, the format and frequency of the reports to be sent to TRs, and the specific data fields to be populated.

As of January, six trade repositories have been registered under EMIR: the London Stock Exchange's UnaVista; DTCC's Derivatives Repository; KDPW, which is based in Poland; Regis-TR, which is a joint venture of Deutsche Börse and Spain's BME; CME Trade Repository; and ICE Trade Vault Europe.

But back in early 2012 when ESMA started drafting these standards, it looked at existing pieces of international work, such as the OTC Derivatives Regulators' Forum (ODRF) guidance on access to TR data and CPSS-IOSCO standards, where the focus is OTC markets and OTC products. It is perhaps not surprising, especially given ESMA's burden of drafting work at the time, that ESMA's consultation documents on developing these standards did not mention the specific challenge of how ETDs should be reported.

### Industry-wide approach

It was only once the technical standards were finalised in late 2012 that it became clear that a significant interpretive analysis was necessary in terms of how to consistently apply reporting rules, drafted with OTC products in mind, to ETDs. Clearly, if the many market players involved in the chain of ETD business (end customer, executing broker, clearing member, CCP) interpreted the rules differently, regulators would struggle to reconcile, let alone make sense of the resulting data.

Defining a suitable industry-wide reporting approach under EMIR for ETDs is challenging for a number of reasons. Aside from the sheer volume of trades undertaken on a daily basis, there are differences in end-to-end trade and clearing processes across CCPs within the EU, so agreeing a common approach is a complex exercise. There are different exchange and CCP rules to contend with – for example, in some CCPs an ETD contract is subject to an 'open offer' model, and in others 'novation' applies.

Furthermore, much ETD business is conducted through the 'give-up' process, where an execution broker will facilitate the execution of a trade for a client, but it is the clearing member who actually takes on the risk associated with that trade for the client and who has the counterparty relationship with the CCP.

The execution broker may not know the identity of the end client or fund, does not know the risk exposure of the client, nor the form and value of the collateral held against the client's positions (unless it is also acting as the clearing member under a full service arrangement).

Against this backdrop, the FOA in December 2012 established a working group of clearing members[1] to address the uncertainties with respect to reporting ETD business. The group spent many weeks and months debating the most suitable way of interpreting the requirements set out in EMIR's technical standards.

Many questions were addressed and the following key conclusions were reached: (1) executing brokers should not be required to report if they are not holding any risk (i.e. if the trade was successfully taken up), (2) position information (and not merely individual trades) is of vital importance in determining ETD exposures and should be reported by clearing members, and (3) common unique trade identifiers cannot be shared across all the parties involved in ETD trades which are related to each other. The working group is therefore looking at workable solutions to help regulators link related trading activity together.

Since early 2013, FOA's working group has been documenting its analyses and discussing its approach to ETD reporting with ESMA staff and national competent authorities, raising unanswered questions and seeking regulatory guidance. After ESMA's Board of Supervisors ultimately agreed that the reporting rules for ETDs were insufficiently clear, ESMA recommended to the European Commission that reporting for ETDs be delayed by one year, to January 2015. A year was thought to be sufficient time to develop appropriate guidelines for ETD reporting and give sufficient implementation time to the industry.

In what can only be described as a political decision, on 7 November 2013 the Commission refused the ETD reporting postponement. Delaying any aspect of EMIR implementation was clearly not palatable to Europe's politicians because of concerns that Europe was materially lagging behind the progress of Dodd-Frank in the US.

As a consequence of the rejection of the year delay and the 12 February start date, the approach taken by the industry to prepare has by necessity involved looking to the working group's key assumptions, which have now in part been confirmed by ESMA (see reference to 20 December Q&A below). After the 12 February go-live, the industry will continue to work with regulators on reporting guidance, given the issues that remain unclear.

ESMA responded to the Commission's refusal with a public letter stating that despite the Commission's decision, ESMA still believed that reporting rules for ETDs require considerable technical guidance and adaptation, and that a delay to the reporting starting date would have been beneficial.

> **Helping regulators link related ETD trades together in a workable manner continues to be a major area of focus**

Essentially, ESMA appeared to be saying 'don't blame us when the ETD data in trade repositories is incomprehensible'. ESMA said it was in any case working on providing some guidance, although given the time pressures and without consultation, the guidance is unlikely to produce "the desirable quality of data that regulators would need for the exercise of their duties".

## Uncertainty remains

The Q&A document published by ESMA on 20 December 2013 – just weeks before the reporting start date – was of course welcomed by the industry in addressing several key questions. FOA's approach has been endorsed in a number of areas, including that execution-only brokers need not report if they have "acted on the account of and on behalf of the client to execute the trade".

ESMA also recognises that position data can be reported under certain conditions, and that for back-reporting, in terms of trades concluded between 16 August 2013 and 11 February 2014, counterparties were "expected to report only their resulting net position at the CCP level as of the end of 11 February 2014".

However, considerable uncertainty remains in key areas. One is the process for generating and sharing unique trade identifiers, which has been a focus of FOA's work and provided an opportunity to engage with CCPs through the European Association of CCP Clearing Houses. Another complex topic is the use of reference data for identifying the contracts traded on-exchange. As mentioned earlier, helping regulators link related ETD trades together in a workable manner continues to be a major area of focus.

Looking back to the original goal of EMIR reporting – to enable regulators to identify and mitigate risks – it is clear that policy-makers should engage effectively with industry to understand the markets' operational and technical mechanisms for managing this risk. Without this engagement, reporting systems may be developed which are not fit for purpose.

ESMA's recent 'call for candidates' to establish an industry consultative group to support ESMA's Market Data Reporting Working Group attempts to address this concern. Clearly it is of critical importance for regulators to test their assumptions with respect to the operation of ETD markets with market participants, as many of these complex issues continue to be debated. ■

[1] FOA's EMIR Reporting Working Group is chaired by Goldman Sachs. The other members of the group are Citi, Morgan Stanley, HSBC, Deutsche Bank, JP Morgan, Credit Suisse and Barclays.

# Clear access

Mandated clearing is designed to improve the security of markets, but it will come at considerable cost. By **Dan Barnes**

Industry reaction to mandated clearing recognises that market security will be enhanced, but there is concern that the cost of the complex new structures and processes are high. The established clearing model, honed for exchange traded derivatives, requires central counterparties (CCPs) to demand margin collateral in the form of relatively liquid and low-risk assets.

But many firms focused on low-risk, long-term returns, such as long-only asset managers, do not have cash and government bonds lying about. Sourcing assets is a new cost, on top of the lost returns from handing assets over to a CCP.

"Buy-side firms are still very angry that they will be stuck with costs for a security model that will not make them much safer, but will make them more complicated," says Alex McDonald, CEO of trade body, the Wholesale Markets Brokers' Association.

It is therefore important that the CCPs will provide security while minimising costs where possible so that the expense of trading over-the-counter (OTC) derivatives is not prohibitive.

"Members and clients want full asset protection and operational efficiency with robust risk management, all delivered at a reasonable cost of capital, so they need to see cost efficiencies such as netting," says Philip Simons, head of OTC derivatives business at Eurex Clearing, the CCP for Deutsche Börse Group.

## It's not my default

In the event of a default, procedures and structures have been changed under the European Markets Infrastructure Regulation (EMIR), ostensibly to better serve the end investor.

"There are enormous sums of money available to deal with problems if a CCP does get into difficulty and so in all but the most extreme circumstances, one would expect things to be resolved at the CCP," says Henry Raschen, head of regulatory and industry affairs, Europe, at HSBC Securities Services.

A crucial imposition of EMIR for client safety is the required offering of segregated client accounts to investors. Fully segregated accounts, which CCPs must offer as an option to clearing members and their clients under EMIR, will provide a better level of protection for clients than the account structures that had been used during the default of Lehman Brothers or MF Global, where client funds were co-mingled with those of other clients and the broker.

In the event that a clearing broker defaults, the assets of its fully segregated clients are ported in their entirety to a new clearing broker. Other segregation models, such as the legally segregated, operationally co-mingled (LSOC) model in the US, require the value of assets to be transported, and so the original assets can be liquidated. This may not be the optimal model.

Simons says: "Ideally one wants to port, rather than close out, a position and if possible porting without having to liquidate assets. If you have to liquidate securities because they are being ported by value rather than by asset then you are potentially incurring transfer risk within the market."

Two issues are still to be resolved with regard to default practices: whether the buy-side will be asked to contribute to default funds, and whether state money will be used to back a CCP in the case that it may collapse. Both are in the hands of regulators to determine, but fund managers will not want to be exposed to brokers' losses, argues McDonald.

"Buy-side firms are not so trusting of banks these days, so does that mean that they want to mutualise their risk through CCPs?" he asks.

## What do CCPs offer?

End clients, facing rising costs, want to know what CCPs will do to increase efficiency, says Ted Leveroni, executive director of derivatives strategy and external relations at Omgeo.

"How are margins calculated? What kind of netting can be provided? Can they net futures exposure and OTC exposure? If so, how is that netted margin treated? A lot of CCPs can provide tools to help anticipate margin, tools to help minimise costs associated with margin calls and netting," he says.

Netting and compression create efficiencies in terms of cost for the client, but are also an integral part of the whole risk management structure, argues Lisa Rosen, group head of compliance and public affairs at LCH.Clearnet.

"By decreasing the number of trades in the system they decrease operational risk," she says.

The CCP itself must be considered prudent, Rosen says, observing that cost efficiency must be provided without impacting service quality or risk management.

"It is important that CCPs don't start engaging in a race to the bottom and that the focus remains on the purpose of CCPs, which is systemic risk management," she says.

In Europe, where clients are faced with 15 operational models for segregating their collateral from other clients, they must take care to understand the protection their assets have under any given model offered by a CCP. Where risk is not being taken by the clearing houses, it can often simply be pushed further down the chain, warns Raschen.

"It is important that CCPs have robust members to maintain their own financial integrity, and as a result CCPs may want larger institutions as members," he says. "In turn, many smaller participants in the derivatives markets who are now obliged by regulation to use a CCP may be looking to access CCPs through the general clearing members. General clearing members will accordingly be looking carefully at the financial standing of new members so as not to be left responsible for uncovered payments to CCPs."

He believes it possible that some firms will struggle to continue in the OTC derivatives market as a result.

"They may incur high costs for bilateral arrangements, or even move business away from the jurisdiction of EMIR and Dodd-Frank," he says.

## One step beyond

At present it is only the exposure to clearing members and their clients that CCPs have to consider. However, EMIR has set out plans to consider the creation of interoperability arrangements between CCPs, to allow traders to select the CCP of their choice, in order to force down the cost of clearing through competition. Interoperability arrangements are currently restricted to transferable securities and money-market instruments. However, by 30 September 2014, ESMA must report to the Commission on whether an extension to other financial instruments should take place.

"Interoperability will not happen in the near term, there is too much risk involved," Simons says. "To make interoperability work will require someone to come up with a model that currently doesn't exist and would first require consensus within the industry."

Nevertheless, Raschen sees hope in the longer term.

"Interoperability does have issues that haven't been resolved yet, but I believe they will be overcome in due course, as interoperability is a sensible way to go to facilitate trading," he says. ■



# How to improve FICC margins

**By Mas Nakachi, CEO, OpenGamma**

Regulations that require financial institutions to clear standardised over-the-counter (OTC) derivatives through central counterparties (CCPs) are beginning to weigh on bank P&Ls. In particular, clearing through CCPs has caused a sharp increase in the operational costs of banks' derivatives businesses.

With overall Fixed Income, Currency and Commodities (FICC) revenues down 20 per cent last year and average revenue from interest rate trading within FICC down 40 per cent, banks are not in a position to make incremental changes to their cost structures. Wholesale changes to their business models are needed. One place to make a material impact on these costs is in the calculation of standardised metrics like CCP initial margin (IM).

Bankers see the FICC revenue decline as a secular phenomenon, driven in large part by the cost of complying with Basel III, Dodd-Frank, EMIR and other regulations. These establish tighter regulatory capital requirements, impose leverage and liquidity requirements and force banks to de-leverage and shut RWA-heavy businesses, all of which can reduce FICC revenues. Combined with the negative impact on market trading activity overall caused by regulatory uncertainty and market structure changes, this reduction can be pretty dramatic. To put this in perspective, Goldman generated almost as much core FICC revenue in Q1 of 2009 as it did in all of 2013.

**Only by understanding the true costs of the business down to every trade, in real-time, can a derivatives business today be optimised**

When FICC revenues were on the rise ten years ago, cutting operational costs was not a priority. FICC business heads hired scores of quants to build and maintain proprietary pricing and risk management systems. Those quants and a lot of the systems they built now seem expensive, bloated and unnecessary, especially since standardised solutions with lower initial price points and much lower total cost of ownership are now available. Standardised systems that were not available even a year ago can now calculate CCP IM with much greater precision and speed than most proprietary solutions at a fraction of the cost. And unlike the case with proprietary pricing models for structured products, for which there is real edge in calculating a price more accurately, there is no business reason to calculate IM differently than the CCP.

As it currently stands, banks and CCPs can often end up with very different numbers and banks routinely overfund 15-20 per cent more collateral than their own margin systems say they need intraday, largely in case a CCP makes a bigger-than-expected margin call at the end of the day. Setting aside that buffer ties up capital that cannot be deployed in revenue-generating activities and it ultimately reduces the profitability of these businesses.

And speaking of profitability, only by understanding the true costs of the business down to every trade, in real-time, can a derivatives business today be optimised. Accurate, real-time and granular information about costs is fundamental to decisions about portfolio optimisation, compression and risk management; all functions necessary for balance sheet de-leveraging, RWA reduction and ultimately profitability. Decisions over what positions to novate, tear up or hedge cannot be made with certainty without accounting for their true costs across myriad market structures and regulatory dimensions.

With many new financial regulations progressing towards full implementation, derivatives business managers must find ways to counter all the additional costs these regulations impose on increasingly smaller revenue lines. The first step to doing so is to understand fully what uses of capital produce real proprietary value for the business and what does not. An accurate assessment of this will invariably lead to the conclusion that deploying capital to activities like replicating standardised numbers is a wasteful and inefficient activity that should be replaced with off-the-shelf, modern, industry-standard technology. All the subsequently freed up capital across overfunding buffers, legacy systems maintenance and actual development resources should be redeployed to revenue-generating activities so that FICC businesses can ultimately become growth businesses again.

OpenGamma

# Risk – an Orwellian dystopia

Risk management is fundamental to exchange traded derivatives but the new regulations are putting some established procedures under great strain. By **Richard Wilkinson** and **John Parry**

The old adage that hard cases make bad laws could easily be applied to the implementations of Dodd-Frank and the European Markets Infrastructure Regulation (EMIR). The drive to protect governments from further bank bailouts has resulted in an Orwellian mantra "bi-lateral bad, cleared good" with little detailed analysis of the impact of pushing more assets through the exchange traded and cleared model. The increasingly proscriptive regulatory drive is creating an environment with ever more stringent reporting requirements, but scant focus on the consequences.

Risk management has always been the keystone for the exchange traded derivatives (ETD) world and will continue to be so in the new world of over-the-counter (OTC) cleared. However, there are a number of new risk components that will need to be managed by central counterparties (CCPs) and general clearing members (GCMs).

Starting at the pre-trade level and moving through to clearing, the regulatory drive has created new tensions in the transaction lifecycle, each adding to the overall risk profile. It would appear that the regulators and their political masters have misinterpreted the risk mitigation that clearing provides as risk elimination. This could prove to be a serious error.

Pre-trade checks are becoming more intrusive. This is impacting the discovery and execution processes by forcing everyone on the broker to CCP chain to introduce additional risk controls into the flow (albeit for OTC, rather than ETD). The additional checks could inadvertently increase risk by creating orphan trades – out-trades that meet the clearing mandate but cannot be cleared due to counterparty credit issues between the client and its GCM and/or the CCP and the GCM.

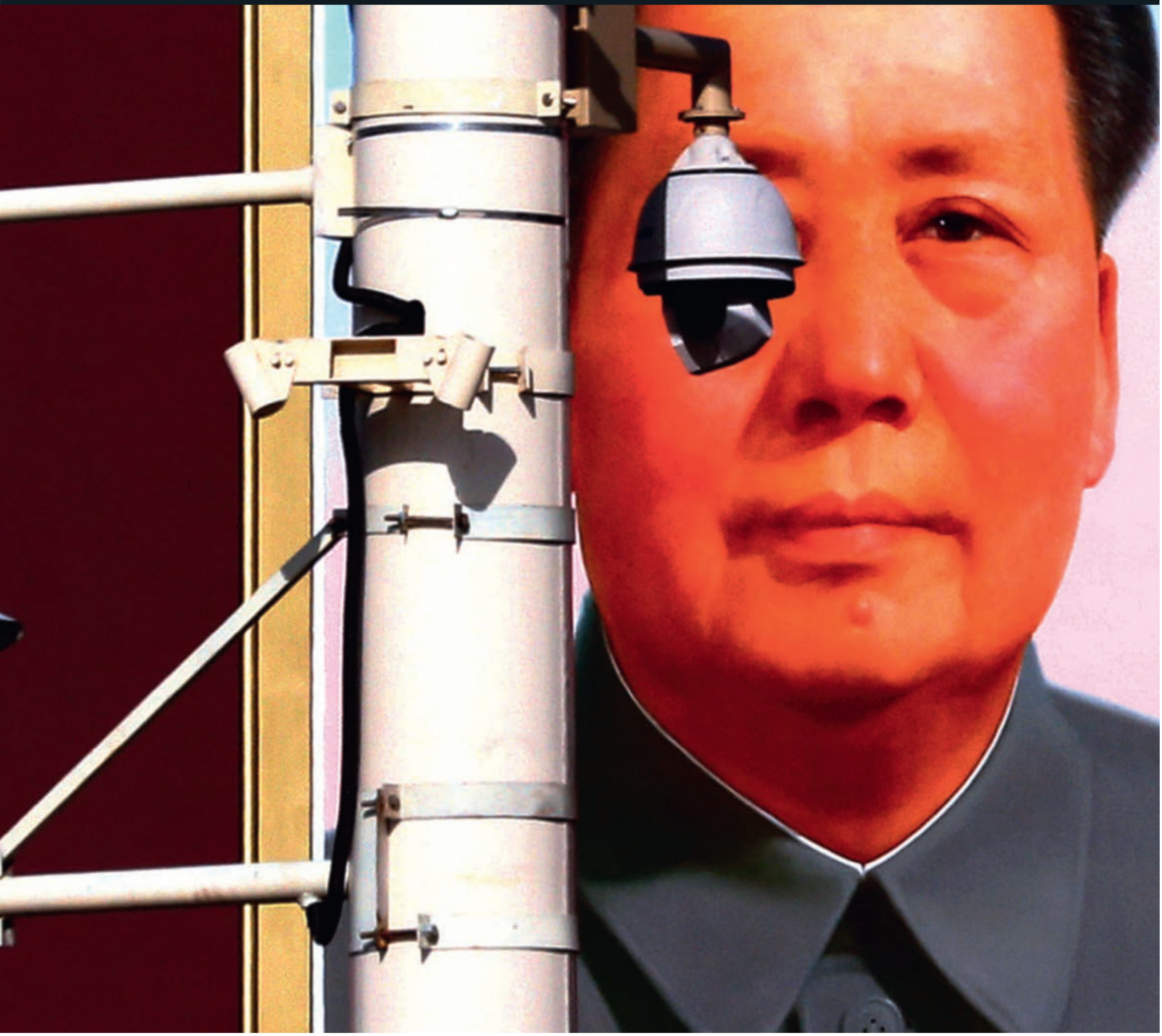
Thankfully, this does not appear to be impacting ETD, where the anonymity of execution at the exchange level, coupled with the open offer concept between exchange and CCP, looks like it's being maintained.

## Additional risks

The outlawing of non-segregated accounts for customer clearing is a positive move largely welcomed, so far in principle, by end users. This move should prevent repeats of the problems of identifying client positions and associated assets when Lehman and MF Global defaulted. But the drive to provide maximum client protection means additional process risks are being introduced to the system.

One such example of this concerns the movement of client assets between CCPs, where clients operate individually segregated accounts (ISAs) at multiple CCPs. For the GCM, cash is no longer fungible. A client's excess margin must be held at the CCP level, but if that client liquidates all positions at that CCP and creates positions at another, the GCM needs to receive authorisation from the client prior to recalling the assets.

The margin requirement for the new position will be called automatically, leaving the GCM with an intra-day exposure to the client and, in the worst case, having to fund



the requirement until the assets are returned from the 'old' CCP. The additional capital requirements, shorter timescales for the movement of margin and more complex payment processes will create additional liquidity risks for GCMs.

This liquidity risk is replicated at the top of the clearing chain. CCP Treasury functions will need to be at least as good as those of their GCM community in order to manage the increased flows of cash and non-cash collateral to and from the GCMs, a percentage of which will be 'asset tagged' (logically or physically segregated at the ISA level). The additional complexity in reconciling accounts and moving collateral round the system on a many-to-many basis will increase operational risk for both CCPs and GCMs and introduces higher levels of settlement risk into the equation.

For the hedge fund community historically reliant on the portfolio margining capabilities of their prime brokers, the segregated accounts requirements are a particularly serious challenge.

Regulators are no friends of hedge funds but the new segregated accounts rules may seriously wound, perhaps fatally, prime brokers' abilities to represent a multi-asset, multi-account fund trading on multiple exchanges with several CCPs. Broking and clearing what is essentially a mixed portfolio into a series of accounts from which the prime broker derives no income from the lodged collateral and greatly increases his exposure to several CCPs is going to be a difficult business now.

The G20 commitments, agreed in Pittsburgh back in 2009, are being stretched and bent by politicians and regulators as they strive to protect their own electorate from future crises and their own positions from future criticism.

The result is a bifurcation of standards either side of the Atlantic, with the potential for trifurcation once Asian legislation starts to bite. Just three instances provide examples of this: segregation models, confidence levels and holding periods. While these all purport to mitigate risk, in actual fact they may create risk through additional operational burdens, uneven playing fields and the possibility of risk arbitrage.

**The higher the confidence level applied to the margin methodology, the higher the resultant initial margin**

### Segregation models

The US response to segregation of client assets is legally segregated, operationally co-mingled (LSOC), although it should be noted that clients of US futures commission merchants (FCMs) with pure futures business (as opposed to OTC cleared) may continue with the customer gross margin (CGM) model. Further, neither the LSOC or CGM models provide clients with specific asset-level protection, only with value protection.

EMIR has gone further than Dodd-Frank and has mandated that CCPs and GCMs provide both omnibus segregated accounts (OSA) and ISA levels of client protection. OSAs are similar to the current European customer segregation offerings and are broadly equivalent to LSOC, also providing value protection of client assets.

ISAs offer full asset-level protection, with client details being recorded at the CCP. ISAs enable the CCP to deal directly with end clients, including in the event of a GCM default. However, a substantial take-up by end-users of ISAs effectively expands the CCP's traditional direct clearing member base to potentially many thousands of accounts. The ability of CCPs to manage this proliferation of accounts will come under close scrutiny later this year.

Additionally, all of Europe's main CCPs are developing similar, yet distinct, offerings. The lack of standardisation of, for example, segregation model structures, account management, asset tagging and protection processes introduces considerable additional cost, complexity and operational risk for GCMs.

### Confidence levels

In simple terms, the higher the confidence level applied to the margin methodology, the higher the resultant initial margin. This is offset to a degree by a lower default fund requirement, following the 'defaulter pays' principle. We are already seeing differences in the minimum confidence levels even within EMIR, where ETD requires a minimum 99 per cent, while OTC requires 99.5 per cent (this can be reduced to 99 per cent if the CCP determines the product being cleared correlates to an ETD).

### Liquidation periods

A similar picture is emerging in relation to the minimum periods being applied for liquidating a defaulting portfolio. The Commodity Futures Trading Commission has a minimum one-day period, while ESMA is adopting two days for ETD and five days for OTC (again with a caveat to lower this to two days at the CCP's discretion). A longer liquidation period generally equates to a higher initial margin requirement, to cover the additional price volatility.

Different minimum standards will create risk arbitrage opportunities in the OTC cleared environment and create a tension between buy- and sell-side. The buy-side prefer lower initial margin and higher default contributions (as it is their clearing brokers who pay default funds). Conversely the sell-side prefer the opposite, especially when capital charges are applied.

The opportunity for risk arbitrage has not been a problem historically for ETD contracts as they have always been processed in a monopoly environment (i.e. no inter-operability at the CCP level for ETD).

Does all of this translate into more or less risk going forward? Had EMIR and Dodd-Frank been designed to be more equivalent there seems little doubt that overall the markets for leveraged instruments would probably be less risky. But the substantial content gap between the two bodies of regulation, the unfeasibly tight implementation schedule for EMIR and its greater complexity and cost means European market participants are nervous.

New levels of concentration risk at CCPs are a concern. The contraction of the FCM/GCM community is a concern. The much higher broker services costs are a concern, as there is little doubt that clients who enjoyed low-cost access to risk management markets may not in future have that and could reduce their hedging programmes as a result. This was not what G20 intended, but it may be what happens. ■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# Vendors suffer poor process

A juddering implementation of new clearing and reporting rules in Europe has left IT vendors at full stretch. By **Dan Barnes**

Europe's ongoing reform of the derivatives markets is complex. Its multinational governance model lacks uniform direction and that can create delays and counterintuitive decisions. These characteristics are affecting independent software vendors (ISVs) who are stretching their resources to try and deliver technology solutions for brokers, banks and asset managers that need to comply with the new rules.

"There is so much work to be done by ISVs," says Ted Leveroni, of back-office specialist Omgeo. "What we and our clients have found is that you can be on the right track and in good shape today, but then there is a change tomorrow and suddenly you have got a lot of catching up to do. There are shifting sands upon which we are building solutions. Constant changes or additions to the data firms are required to deliver and reporting requirements are causing the most work for us."

The European Markets Infrastructure Regulation (EMIR), which took effect on 16 August 2012, is being rolled out haphazardly. For example, the European Securities and Markets Authority (ESMA), a pan-European regulatory body responsible for delivering the technical standards by which firms comply with regulation, had asked the European Commission (EC) for an extension to the 12 February 2014 deadline to report listed derivatives trades until 1 January 2015.

When that was turned down by the EC on 7 November 2013, it caught many firms by surprise. This was compounded by the speed at which trade repositories (TRs), with whom the ISVs had to connect, were to be authorised: the DTCC Derivatives Repository, Krajowy Depozyt Papierów Wartosciowych, Regis-TR, and UnaVista were approved on 7 November 2013 followed by ICE Trade Vault Europe and CME Trade Repository on 28 November 2013.

## Tough questions

Vendors responsible for connecting traders with the TRs had a 12-week window to match up administrative and technical requirements in order to ensure their clients' compliance. This was made more challenging as the TRs had had little time to prepare themselves and needed to test and refine, which has led to a procession of technical changes being made.

Carsten Kunkel, a manager of the regulatory and compliance group at buy-side system supplier SimCorp says, “The changes being announced from the DTCC and Regis TR with whom we are connecting continue; the current state of one of those repositories can now be considered as final, but we expect to see more changes to these applications and therefore changes to the configuration of our solution.”

In addition to trade reporting, the approval process for central counterparties (CCPs) remains challenging. CCPs, which will bear the burden of risk management, were required to submit an application to their national competent authority by September 2013, from which point the authorities had six months to decide to re-authorise the CCP, based on their models for risk management and default management.

There is no single model under which a CCP will have to implement its new procedures, nor any clarity about how a CCP that is not approved may go about regaining approval, nor a timeframe in which approved procedures must be implemented.

On top of that, concern has been raised over the clash between a CCP’s risk management mandate and its commercial imperative to attract users.

“The thing that had everyone running around was trade reporting as that was the next truck coming over the hill,” says Fidessa’s Steve Grob. “With the CCP re-authorisation programme there is a question; given the aim of the regulation is to move systemic risk onto CCPs, does it make sense that they should be commercially competing with each other and developing different rules about how they might net margin between different types of contract, in order to commercially differentiate themselves? Is that a good thing for systemic risk?”

> **As the changes are fast and furious, ISV developers need a dedicated resource that can deal purely with regulation**

### Resource intensive

As the changes are fast and furious, ISV developers need a team or a dedicated resource that can deal purely with regulation and analyse the effects of each change to the firm’s clients and products.

“It used to be that the product manager in an IT department could keep up with that and figure out a solution,” says Leveroni. “I think that job is now too much for one person. You need to build flexibility into the system, so you can add fields if you need to, you can add reports, you can add messaging and interfaces to connect with interested parties. You know you have to send data but what and when changes a lot so you have to be quite flexible with how you define fields and change timings.”

The level of work required is taking time and resources away from other projects, says John Omahen, senior business analyst at IT provider SunGard Futures Systems.

“When it comes to unwinding what the impact of requirements are on very complicated systems, you don’t want junior staff working on that, you typically need a system or industry expert,” he says. “The industry doesn’t have the number of people it needs working at a high level and those there are – whether working at a software vendor, bank or regulator – are being extremely taxed right now.”

ISVs are also developing software that may not get used, because they do not have the time to wait until the right path emerges.

“You have to back a number of horses and some will not last the course,” says Grob. “That situation does lend itself to the larger firms who can take that kind of approach.”

Omahen concurs that ISVs are having to build tactical things that they expect to be throwaway, as part of the process of refining requirements. At present the data that is required by trade repositories may create duplicated reporting as a sell-side firm or service provider reports on behalf of their client.

“How someone from the outside, the regulator, will be able to piece those different versions of the trade together has been subject of a debate,” he says. “That has proven quite difficult to this point. So we are leaving the system open to capturing quite a bit more information than might be required, so that when those specifics of reporting come into clarity we don’t have to start from scratch.”

Although the costs for the brunt of the change are being born by banks right now, says Leveroni, whenever a service provider, vendor, or a bank incurs more cost, it will inevitably get passed on to other market participants.

“Banks will lean on vendors to charge less, they may potentially increase charges to some of their clients, while if you are an investment manager you might lean on your brokers to try and decrease costs,” he says. ■

# EMIR's long shadow

It's not just about interest rates swaps and banks – MiFID and EMIR will force changes in commodities, foreign exchange and equity products too. By **Will Mitting**

> **The core responsibilities for non-financial counterparties under EMIR fall into three areas: clearing, trade reporting and risk mitigation for non-cleared trades**

Interest rates and credit derivatives have received the most attention from the media but regulatory reforms in the form of the update to the Markets in Financial Instruments Directive (MiFID) and the European Markets Infrastructure Regulation (EMIR) will also hit other asset classes.

A distinction in EMIR is made between financial and non-financial counterparties (NFCs). Financial counterparties are broadly defined as banks, insurance companies and various funds and fund managers.

NFCs are defined as all other businesses and it is these companies that will face the biggest changes under EMIR, being largely unused to dealing with the infrastructure of clearing and dealing with a financial regulatory framework on the scale of EMIR.

The core responsibilities for NFCs under EMIR fall into three areas: clearing, trade reporting and risk mitigation for non-cleared trades. Of these, the clearing component potentially poses the biggest challenge and the costliest change for NFCs.

EMIR sets a series of thresholds beyond which NFCs are required to clear trades. The thresholds are set on gross notional value of derivative trades conducted by NFCs and are €1bn for credit and equity derivative contracts and €3bn for interest rates, foreign exchange (FX) and commodity derivative contracts.

The clearing threshold applies to the rolling average of an NFC's outstanding notional positions in over-the-counter (OTC) derivatives over 30 days. Once one of the thresholds is reached in one of the asset classes, the firm will be required to clear all their derivative trades across all asset classes.

For firms well below the thresholds, there is little to worry about, but firms approaching the €3bn mark have a range of issues they are struggling to accommodate, including the possible double counting of intra-group trades and ensuring they are fully compliant with the exemption for 'risk-reducing' trades, or hedges.

### Defining a hedge

As regulators drawing up the Volcker Rule in the US have found, defining a hedge is not always an easy task. The European Securities and Markets Authority defines a hedge as a trade that is: "objectively measurable at reducing risks directly related to its commercial activity or treasury financing activity or that of its group".

Firms that do not already account for their hedges under IAS 39, the EU accounting standard that defines what can be termed a hedge, will be required to have internal processes to ascertain and prove to regulators what is a hedge, and may run the risk of falling foul of the regulations.

Firms have to be aware not just that the volume of trades could push them above the threshold but also that a rise in commodity prices could increase the value of their trades, warns David Coulon of Ernst & Young. NFCs must therefore ensure that their hedging exemption assumptions are valid on a daily basis; that their threshold calculation is accurate and includes the correct derivative trades; and that firms have considered the potentially stringent system of reporting derivatives exposures, including market-to-market of such trades, he says.

Regardless of whether an NFC is required to clear, it will need to be aware of what category of institution it is trading with,

# EMIR transforms the financial markets of the European Union in 2014

The obligation of reporting the details of derivative contracts to trade repositories took effect on 12 February 2014. KDPW is one of six institutions in Europe to register a trade repository with ESMA.

EMIR also imposes the obligation of clearing trades concluded on the OTC market in authorised CCP clearing houses.

In December 2012, KDPW_CCP launched a new service: the clearing and guarantee of OTC derivatives and repo trades (OTC_CLEARING). KDPW_CCP began in this way to process interbank trades, mainly aiming to reduce the risk of default by trading counterparties and, consequently, to generate growth in this market sector. The major Polish banks already work with KDPW_CCP's OTC clearing service.

On 28 June 2013, KDPW_CCP applied for authorisation as a CCP under EMIR. Moreover, obtaining authorisation is supposed to encourage the entities active on the OTC market to clear their OTC trades through a CCP, since getting EMIR authorisation automatically means receiving the status of a qualifying CCP. Under the Capital Requirements Directive ("CRD"), central counterparties which meet the requirements of EMIR may apply reduced risk weights to trades where the CCP is a counterparty, following novation.

In the implementation of the OTC_CLEARING service, KDPW_CCP in partnership with the biggest Polish banks has developed a model for the clearing and guarantee of OTC derivatives trades, has built an OTC trade clearing system (kdpw_otc), and selected trade confirmation platforms (MarkitWire and SWIFT Accord).

As an important part of the project, the KDPW_CCPs share capital has been increased with additional funds supporting the multi-tier clearing guarantee system up to a value of PLN 218 million (ca €55 million).

Trades are cleared using novation. As a result, KDPW_CCP offers a superior level of trading security to participants, in line with international standards.

KDPW_CCP clears trades in instruments denominated in PLN, including the following OTC trades:

- Forward Rate Agreements
- Interest Rate Swaps
- Overnight Index Swaps
- Basis Swaps
- REPO

KDPW_CCP is planning to add a currency derivatives clearing service to the CCP's OTC clearing service. The service is to be made available in stages starting at the beginning of 2014.

The list of instruments offered for clearing in Stage 1 includes the following EURIBOR/EONIA contracts:

- FRA
- OIS
- BasisSwap
- IRS

In Stage 2, KDPW_CCP will offer a clearing service for interest rate derivatives in other currencies (USD as well as other currencies following consultation with banks, e.g., CHF, GBP):

- FRA
- OIS
- BasisSwap
- IRS

In Stage 2, KDPW_CCP will also offer a clearing service for FX derivatives such as:

- CIRS (including swaps with the exchange of principals)
- FX Forward
- FX Swap

KDPW_CCP offers the following, as part of its OTC_CLEARING service:

- clear trades accepted in the OTC clearing system;
- act as an intermediary in the settlement of debits and credits arising from the clearing process;
- manage clearing risk;
- manage collateral;
- act as a central counterparty (CCP) using novation;
- report to a trade repository.

**Reporting derivative contracts to the KDPW Trade Repository on request of a clearing member**

In addition to compliance with its reporting obligations as a CCP, KDPW_CCP has developed the service of reporting derivative contracts to the Trade Repository operated by KDPW on request of clearing members. Reporting can be delegated both by clearing members and through them by their clients concluding derivative transactions on request of their clients (brokers).

as this will impact its portfolio reconciliation and confirmation requirements.

Commodity firms have been relatively unregulated under MiFID by virtue of a number of exemptions, including those from requirements under the Capital Requirements Directive (CRD), which exempts energy firms from holding regulatory risk capital relating to their trading book.

"MiFID II and CRD IV are going to apply to commodity firms more directly than is the case today. It is clear which way the playing field is tilting," says Shane Henley, a director at Ernst & Young. "At the same time, banks are facing more stringent capital requirements for uncleared OTC trades and higher costs for commodity business generally. It is making the sector less and less attractive."

As a result of the higher capital requirements for commodity trading and political wrangles over bank ownership of physical infrastructure, a number of banks, including JP Morgan and Morgan Stanley, have scaled back their commodity operations.

A key issue for the energy sector currently is whether physical forwards are in scope or not in terms of the clearing threshold. Physically settled gas and power forwards that are traded on multilateral trading facilities (MTFs) are 'financial instruments' for the purposes of MiFID, and OTC derivatives under EMIR.

### Platform questions

Market participants have to distinguish between MTF and non-MTF trades. What is in question is whether broker-operated platforms are classified as MTFs and are therefore subject to the threshold. The Financial Conduct Authority was set to rule on this question as we went to press.

> **When it comes to the FX market, the biggest change will be the introduction of clearing for OTC FX options. The question is not if, but when...**

If gas and power trades on broker platforms are considered financial instruments, they will become vastly more expensive to trade. A solution is expected that will exclude these transactions from financial instruments, but if that is not the result, firms will have to justify their transactions are for hedging or many more companies will be above the threshold.

Alex McDonald, chief executive of the Wholesale Markets Brokers' Association, says: "It is a logical line to draw in some respects, but you are forcing the derivative and the physical markets down different infrastructures. If you want lower systemic risk, more transparency and more open access then you would want to encourage a commodity derivatives market," he says.

Another concern for commodity traders in MiFID II is the introduction of position limits. Under the final draft of MiFID II, competent authorities will be given powers to limit the size of a net position which a person or firm may hold in commodity derivatives.

How they will be enforced remains to be seen, but questions are already being asked. McDonald highlights the challenge of achieving the goals of the regulators.

"How do you enforce position limits across venues and locations? Entity supervision is required rather than position limits, and limits need to apply to the management of risk within a counterparty rather than the metrics on any venue," he says.

### Clearing FX

For the FX market, the question is what can be cleared and when. In the US, FX swaps and forwards are exempted from mandatory clearing but non-deliverable forwards (NDFs) and options are covered.

European regulators initially wanted to capture a greater portion of the FX market in their mandate but scaled back their ambitions as it was clear that the US would not follow suit and the risk of regulatory arbitrage grew.

A number of central counterparties (CCPs) already offer FX clearing for NDFs, including LCH's ForexClear, CME Group and Singapore Exchange. IntercontinentalExchange last year shelved plans to offer an FX swaps clearing service, citing delays in the regulatory mandate to clear such contracts.

NASDAQ OMX is awaiting regulatory approval for its FX clearing offering, which will initially cover non-NDFs, non-deliverable options and cash-settled forwards in G10 and emerging market currencies. It plans to expand into FX swaps, options and forwards soon after launch.

When it comes to the FX market, the biggest change will be the introduction of clearing for OTC FX

options. The question is not if, but when, but it may be some time.

While other asset classes are marching towards OTC clearing in line with the G20 mandate to centrally clear, FX options are crawling towards a centrally cleared model. Holding back the development of central clearing for FX options are two factors: complexity of the contracts and, more fundamentally, concerns over settlement risk.

### Exotics challenge

"The bespoke nature of exotic foreign exchange options and the unique obligations they are designed to fulfil create specific challenges when it comes to pricing and valuation," says Rob Gray of Dion Solutions.

Last year, Jeanmarie Davis, a senior official at the New York Federal Reserve, summed up the concerns over settlement: "Risk managers have to know that 99.8 per cent of deliveries will happen on the day they are meant to occur... This is the challenge for CCPs: the methods for collecting margin do not factor in the need to deliver forex."

> **"NDFs are likely to be the main FX contract that is subject to central clearing, with other instruments to follow**

The concerns are heightened when it comes to more illiquid currency pairs. "The market could restructure its FX options business to being cash settled or index settled and could then start central clearing much sooner. It is in physically settled options where real concerns over plumbing the payment system directly into the CCPs is the issue," says McDonald.

But for many users of the OTC FX market, taking delivery of the currency is essential. Some in the industry claim that there is no need to mandate or develop the clearing of OTC options as the current regime under the auspices of FX settlement giant CLS works well.

"There is no point trying to reinvent the wheel if the wheel isn't broken," says one market participant.

However, in an interview with *FX Week* in January, David Puth, chief executive of CLS, said that working with banks and CCPs to facilitate central clearing of FX options was a "high priority strategic initiative" for the organisation.

For the time being though, NDFs are likely to be the main FX contract that is subject to central clearing, with other instruments to follow in due course. For NFCs, EMIR and MiFID II present a paradigm shift in how many of them will transact business. Many will choose to reduce volumes in derivative trading, conversely increasing risk in the financial system. ■

# Where next for ETD?

Will new regulation foster product innovation to bridge the gap between OTC and exchange traded derivatives? By **Hirander Misra**

New derivatives regulations provide a fascinating challenge to new and established exchanges to address the gap between standard exchange traded derivative (ETD) contracts and the more precise over-the-counter (OTC) constructs. The introduction of mandatory clearing in the US last year seems to have already boosted some ETD volume, but the key question is whether current ETD products are good enough to attract more volume or is further product innovation needed?

While regulatory change has its obvious cost, with it also comes new opportunities and the need to innovate. Organisations which can translate these opportunities into a valid commercial response can rapidly prosper while the rest grapple with the challenging consequences of change. Such is now the rapid pace of change that once dominant players can be superseded by relative upstarts with more nimble business models enabled by technology. We have seen this in other sectors where Google, Facebook, LinkedIn

WHERE TO NEXT?

**Also in this section:**



and Twitter enjoy enormous success. In our industry, Chi-X Europe in pan-European equities and IntercontinentalExchange (ICE) in derivatives are classic example of newcomers which have become dominant.

## Milkshakes and steel mills

The key for such firms is how to keep on innovating as you grow bigger and more complex. ICE CEO Jeffrey Sprecher recently summed this up, saying: "We are very conscious we are no longer the underdog and have to be innovative in new ways in order to keep our position."

This is a case of trying to avoid the classic *Innovator's Dilemma*, which is the work of Harvard professor and businessman Clayton Christensen. First published in 1997, Christensen suggests that successful companies can put too much emphasis on customers' current needs. They fail to adopt new technology or business models that will meet customers' unstated or future needs and therefore eventually fall behind. Christensen calls this "disruptive innovation" and gives examples as diverse as the personal computer industry, milkshakes and steel mills.

How can one avoid this? The obvious answer is to innovate, which is often easier said than done. Take the example of inter-dealer brokers (IDBs) as a case in point. Their traditional clients are the banks, but that revenue stream appears to be eroding year on year. It would make sense for the IDBs to reach out more to the buy-side to offset revenue loss on the sell-side.

However, this conflicts with the interests of their largest clients. Some IDBs are innovating as voice execution wanes and the likes of Tullett Prebon, ICAP and Tradition have invested in their electronic businesses, with some also looking to see how they leverage acquisitions and partnerships as well as looking to diversify further, for example by monetising their OTC data as it becomes more valuable.

Tullett Prebon Information, the wholly owned subsidiary of Tullett Prebon plc, is one such example of this. On the acquisition front, ICAP's investments into Traiana and TriOptima seemed to have paid off very well.

## Fragmented clearing

In derivatives markets we now see fragmentation of clearing across the likes of CME Clearing, ICE Clear, LCH.Clearnet and Eurex, not to mention the Asian clearing houses, for both OTC and exchange centrally cleared products. Looking at interest rate swaps (IRS) LCH.Clearnet is the incumbent, but under threat in the US from CME and in Europe from Eurex.

Could this be another case of the 'Innovator's Dilemma' playing out in reality again? There is no cross margining at LCH between the IRS products in SwapClear and the fixed income pool of EquityClear and no firm timeline communicated about when that will happen.

In the US this already exists at CME and some reports suggest that the cost saving for end users has been as much as 40 per cent through margin offsets and being able to leverage the same collateral pool.

In Europe, Eurex Clearing's new Prisma system will allow cross margining between its exchange products, e.g. Bund, Bobl and Schatz, as well as Eurex OTC Clear for physical IRS activity and other products that Eurex may launch in future, such as swap futures.

There is also talk in the market that much like CME in the US, which clears ERIS Exchange, Eurex will also clear third-party venues, with the first potentially being Global Markets Exchange Group (GMEX), in which it, via parent company Deutsche Börse Group, acquired a minority stake in October 2013. As such, the so-called horizontal model by LCH.Clearnet seems to have been selectively embraced by the so-called vertical silos, with LCH.Clearnet appearing to have a number of vertical silos it cannot cross product margin across in its own business.

The exchanges who will win will be those that harness the synergies between as many products as possible, be they exchange traded or OTC cleared. The cost of collateral will simply be too great otherwise.

Such capital-efficient trading and clearing products will be key. The exchanges have a golden opportunity to innovate with more standardised products and create economies of scale by cross margining these as well as OTC activity, which needs to be centrally cleared.

With no interoperability between clearing houses in derivatives markets, even the same products listed across the largest derivatives markets are non-fungible. As such, it is being left to the users to decide in many cases which line they want to trade, e.g., on their electronic platforms the IDBs may isolate 10-year IRS cleared by LCH.Clearnet, Eurex and CME and leave it to the users to decide which they want to trade.

## Smarter solutions

Smarter solutions are emerging as post-trade collateral management has become a key issue. MSCI has a pre-trade product which assesses the post-trade margin and collateral impact of what you want to trade and suggests where you should be trading or clearing. Other start-up firms like NetOTC are also emerging with new solutions for OTC collateral management.

Mandatory reporting of derivatives and OTC exchange data in Europe is a great idea in terms of creating transparency, but in reality the US example has shown that unless proper standards are applied, making sense of this data and interpreting the reported numbers correctly is a challenge and erodes the value of such an exercise considerably.

Fragmentation and consolidation have taken place in the equities markets, which were already electronic, whereas an opaque OTC market is being made more transparent without any steps in between. This has already led to some buy-side firms trading over the telephone rather than electronically, thus reducing transparency. Swap execution facility (SEF) consolidators who aggregate venues and data will also assist in the virtual consolidation process ahead of any actual consolidation.

> **Where there is a need for more effective standardised hedging products, there is a great opportunity for some exchange players to be innovative**

While the SEFs fight it out, the real opportunity lies in equivalent IRS futures products, which can be less capital and margin intensive. There will be new venues, such as the US Eris Exchange, but not as many as new SEFs, because creating an ETD variant for an underlying IRS is not an easy task.

This is indeed the case for various ETD products, which are created as an alternative to OTC products but end up not being suitable alternatives. The exchanges which will be successful are those that can make this transition and bring the futures markets closer to the OTC markets, rather than the other way around.

## Changing dynamics

The landscape also has existing exchange players looking to diversify beyond their traditional product base or geography, such as NASDAQ NLX in Europe. CME is also looking to establish a European-based exchange during 2014, initially trading foreign exchange products and then looking to potentially leverage its US rates offering in Europe. trueEX in the US, while live with its SEF elements, in its capacity as a direct contract market will also launch an IRS futures product.

What is true of most of these developments, including NYSE Swapnote, is that they are based on similar contract structures to each other, with expiry dates, whether they are physically delivered or cash settled. Other exchanges are opting for a different approach, such as GMEX's non-expiring IRS Constant Maturity Future, tied to the underlying IRS market at the start and end of day by way of an index.

Where bespoke products are required, the need for OTC will remain, but where there is a need for more effective standardised hedging products, there is a great opportunity for some exchange players to be innovative. This will help satisfy the latent demand which many believe does exist for such products but has not been satisfied yet.

Time will tell how the dynamics between the OTC and the futures products plays out and what other exchange innovations are announced. One thing is clear: in this era of dramatic change, those exchanges which can react fast, come up with the right innovative products, which either have synergies or are alternatives to some of the more standard OTC products, underpinned by good scalable multi-asset technology, will be the ones most likely to succeed. ■

# STRUCTURED NOTES AS ATTRACTIVE FINANCIAL PRODUCTS IN THE **MEXICAN FINANCIAL MARKET**



**Structured notes are** financial instruments with two types of components: fixed income securities, which may be discount or coupon securities, and a basket of derivatives, generally optional. Structured notes can guarantee the entirety or a percentage of invested capital.

Yield on structured notes is linked to the behavior of an underlying asset, usually exchange rates and interest rates. These are generally offered to investors as instruments of remarkable profitability and excellent diversification vehicles.

In Mexico, in terms of structured notes, few financial institutions – mostly banks – have ventured with these instruments, and have mainly focused on covering the volatility of the two underlying assets. On the one hand, the USDMXN exchange rate resulting from the interaction of emerging developed economies and their markets, and secondly the Interbank Equilibrium Interest Rate (Tasa de Interés Interbancaria de Equilibrio, TIIE), as benchmark rate.

Traditionally, the exchange rate is one of the most dynamic factors, thus it is not surprising that most structured notes focus on this asset. Basically, notes operate by establishing upper and lower ranges within which the underlying asset will fluctuate. These are adjusted according to projections on movements and when it exceeds both ranges they offer an interest rate to be paid at maturity or at coupon deadline, depending on the structure, which can be Range Accrual, European Range or a combination of both (Mixed).

**Calculation method**

We will focus on the case of Mixed Range, which seeks to establish a general and robust algorithm where coupon payment is linked to the behavior of a risky asset, particularly for instruments involving structures similar to those set out below:

- The note pays a guaranteed percentage of Nominal value at maturity, and a guaranteed minimum rate on each coupon date.
- On each coupon payment date, ranges are established for the level of the underlying asset (Rates, FX or Equity), spreads and scale factors. Ranges typically remain fixed in periods or multiples of one year.

For every structured note, two types of coupon payment exist:

1. Fixed Rate: Pays a fraction of the fixed rate offered per each observation day that the underlying asset remains within the established range.
2. Variable Rate: Pays a fraction of the value of a certain reference rate (which may be different from the underlying asset) observed on a specific date (usually the beginning or end of the coupon) per each observation day that the underlying asset remains within the established range.

In both cases, the final interest payment rate will be the previous level multiplied by a scaling factor plus a spread (if any). It is worth mentioning that some notes pay a fraction of a rate A per each observation day that the underlying assets remains within range, and a rate B if it falls within a different range on a specific day.

For valuation purposes, the first step is to identify the range parameters, scale and spread for each coupon, then to introduce information on the number of observations where the underlying asset fell within range.

Considering that the note pays a fraction of the rate for each day, regardless of what happens the rest of the days, payoff for each date is the same as in digital options or 'cash-or-nothing' for which, fortunately, valuation is made in terms of the percentile of a Normal random variable under the dynamic established by Black & Scholes, i.e. a probability; this guarantees that its value will always be between zero and one.

Finally, the price of the structure is the sum of these discounted flows.

# No country for old banks

Regulatory changes now being implemented are likely to fundamentally change the long-term outlook for trading and investing. By **Chris Skinner**

There's a scene early on in the film *No Country For Old Men* when the deputy, surveying the results of a drug gang shoot-out, tells Tommy Lee Jones's laconic sheriff that it looks like a real mess. "If it ain't, it'll do till the real mess gets here," replies Jones.

Financial markets are in a similar position. During the past few years, investment markets have been subjected to more regulatory change than ever before. What are the consequences and what is the long-term outlook for trading and investing?

When the financial crisis hit, the big issue was the amount of debt that potentially was backed by Lehman Brothers' AAA-rated derivatives. The estimate was that there were $400 billion worth of bad debts on the balance sheet of Lehmans in September 2008.

Of that $400 billion there was an amplification of risk by a multiple of 20, based upon Lehman Brothers' name being used to back credit default swaps across the global markets. Hence the actual amount of risk on 14 September 2008, when they collapsed, was valued at $8 trillion rather than a mere $400 billion.

## Meltdown

This alerted the markets globally to the exposure to counterparty risk and locked down liquidity across the global markets. Hence the reason why banks such as Wachovia, Washington Mutual, Halifax Bank of Scotland, Commerzbank and more all found themselves in meltdown during the week that followed.

It also alerted the regulators, politicians and media to the issue of untracked counterparty trading in the over-the-counter (OTC) markets. Suddenly everyone was talking about a $700 trillion global issue that would cause global meltdown.

Forget the fact that every derivative has a counterparty to offset the risk; forget the fact that markets are complex and few understand their complexity apart from those involved in direct counterparty exchanges; and forget the fact that the clearing system ensured that the whole Lehmans mess was swept up and sorted within weeks.

Forget all that, as the politicians and media just saw a mess. A mess that needed sorting out – and the key to sorting it out was to lock down leverage, excessive risk-taking and systemically important banks.

Now we all know what happened in the past, and the issues of the past crisis, but the above is the reason for the regulatory response being excessive to say the least.

One of my good friends in the City said that it was a bit like the airline bomber being caught with explosives in his underpants and therefore forcing everyone to now fly naked. Sure, you feel safe as you can see no-one has a bomb. The problem is that no-one will want to fly any more.

This is the challenge created by global regulators as they lock down on capital requirements (Basel III), collateral and trade reporting (Dodd-Frank and the European Markets Infrastructure Regulation (EMIR)), prop trading (Volcker and Vickers) and leverage (the Banking Union).

The regulatory response has also not been consistent, with Europe, Asia and America all having different priorities and challenges to face.

The US decided to ban proprietary trading; Europe has created a Banking Union such that their banks are more interdependent upon one another; the UK has forced investment and retail banks to segregate but not separate; while China has a massive shadow banking sector to deal with, while trying to maintain growth.

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### Still drafting

No two regions are the same, and against this massive change is the backdrop of prior regulatory change. Europe was still drafting the Markets in Financial Instruments Directive (MiFID) 2 when EMIR was engaged; America was still trying to work out what went wrong with Glass-Steagall as Paul Volcker made up his rule; and the Financial Services (Banking Reform) Act 2013 has still not addressed the issue that caused the collapse: systemic risk creating a liquidity crisis.

This does not mean the regulations are wrong, but increasingly it does appear to show that the regulators are responding to political whims rather than market needs. EMIR and Dodd-Frank have inconsistent definitions and approaches to on-exchange trading and trade reporting related to OTC derivatives, while MiFID 2 lies somewhere in the middle.

It is too easy to lament the regulatory mush that the different legislators are concocting, and more difficult to identify the true outcomes of all this change. A few things are clear, however. For example, excessive risk-taking in core banking institutions is going to disappear. This means that a JP Morgan will no longer be allowed to entertain a whale and a Barclays will be sanctioned from leveraging for own-account trading.

In fact, the whole structure of leverage and collateralisation of trades will be pinched in the process of change. This will result in a further shrinkage of liquidity as the giants of investment banking become humbled, weakened and shrunk. Many will morph into something different and new. We can already see star bank staff moving into hedge fund and private equity quarters and this shift will increase over time.

In fact, longer term, I can see a scenario play out that many in the industry may not appreciate, but it would truly suit the political agenda of the decade.

### Trading posts

That scenario is one where no bank trades off its own book of business, but purely provides the platforms for those who have collateral to do so. The investment bank giants of the last decade become electronic trading posts for the next decade. They provide no features or capabilities to seek alpha for themselves, but purely allow others to send indications of interest, settlements and post-trade reporting over their electronic networks.

Nothing is traded OTC, and the large asset and fund management groups become more and more reliant on their own proprietary research and electronic trading capabilities to provide sustainable returns than the old days of using the market makers and bulge bracket brokers.

In other words, in this age of everything being electronically traded and reported, the only people who can speculate are those that are systemically unimportant.

When we get to that stage, the old joke about the City being run by one man and his dog will be absolutely on the money. In fact, it is already if you consider the long-term view of Volcker, Vickers and EMIR. The joke goes that the world’s trading systems are all now automated and that the dog is put in place to ensure no-one interferes with the computers. The man is there to feed the dog. ■


NEW RULES
SAME LEADER

# Outlook for clearing

By **Walt Lukken**, president and chief executive officer, FIA

In thinking about where we are going as an industry, it is often helpful to step back from the immediate flow of events and look back over a longer passage of time. Certain trends that may not be noticeable from one day to the next become much more visible when measured over many years.

To do this properly requires good data, and fortunately we have that data in the financial records kept by the Commodity Futures Trading Commission (CFTC). Recently I went back to the records from 10 years ago and looked at how they compare to our situation today.

The first thing that jumps out is the dramatic reduction in the size of the futures commission merchant community in the US. Ten years ago we had 177 futures commission merchants (FCMs) registered with the CFTC. Currently we have about 95. If we focus on just the FCMs that hold customer money, then we see a decline from slightly more than a hundred firms 10 years ago to just 69 today.

Another trend that jumps out of the data is a dramatic increase in the amount of customer funds held by the FCMs. In 2003 the FCM community held $62 billion of customer funds for trading on US. futures exchanges.

As of November 2013, which is the most recent data published by the CFTC, we are up to $146.8 billion, which means that customer funds have more than doubled over the last 10 years.

That is an impressive rate of growth, but it is important to note that there have been some significant bumps along the way.

In June 2008, right before the credit crisis, customer funds peaked at $169 billion. Over the subsequent months we saw a considerable decrease in customer funds and it took almost three years before customer funds reached a new peak of $171.5 billion in April 2011. That fall we saw another decline due to the MF Global collapse, and since then we seem to be bumping along within a band between $140 billion and $150 billion.

> **There is still plenty of competition among FCMs, so customers certainly have not lost the ability to choose**

## Strong backbone?

So what lessons can we draw from these two trends? First, we can see that the FCM community today is roughly two-thirds the size it was 10 years ago. Second, if we compare the customer funds data with the FCM data, it's clear that there is still strong demand for risk management products, but this increase in customer funds is being held by fewer FCMs.

There is still plenty of competition among FCMs, so customers certainly have not lost the ability to choose among competing providers of clearing services. But insofar as clearing firms are the backbone of the clearing system – it is after all their capital that provides the bulk of the financial resources in the clearing house default funds – then the fact that the number of clearing firms is shrinking even when customers are bringing more money into the business is something worth monitoring.

If you also look at the exchange community in the US, there is a broadly similar trend. Ten years ago, the CFTC statistics show that there were 18 registered exchanges in the US. Today we are down to eight. Over the same timeframe

## Clearing with trading in mind

**By Nicolas Bertrand, head of equity and derivatives markets, London Stock Exchange Group**

In a context of ongoing regulatory change and of various economic pressures driving the derivatives business to regulated entities, clearing has become a central point of focus for the industry. It is both where the cost of capital can be reduced through increased efficiencies but also the 'nerve centre' for managing risk.

There are many benefits provided by central clearing and of course, derivatives as we know them would not exist without the advanced systems in place today. One element, however, tends to be forgotten in the many debates about the future of clearing: the importance of having a trusted, liquid and appealing market to power it.

We have definitely seen an uptick of interest in the Italian market during 2013, and even some follow-through in more recent months. But what really drove Borsa Italiana's IDEM market's stellar performance last year has been its liquidity, thanks to a market structure based on a well balanced mix of on-screen liquidity and efficient trade-reporting mechanisms.

IDEM has enjoyed strong performance in 2013, with FTSE MIB derivatives being the fastest growing equity index contracts in Europe (futures up 10 per cent, options up 15 per cent) and has had a very promising start in 2014 with volume records in Italian single stock options, plus all time high volumes in dividend futures.

Innovation has also been critical to ensure this development. New market making schemes have been introduced to boost liquidity, new functionalities ensure that there is the best environment for the OTC world, with new cross rules for index products for instance. New contracts such as those in commodities like durum wheat, power contracts or pan-European dividend futures have been introduced and are gathering significant interest.

None of this would have happened without the trust and support of an ever more diversified trading community but also the support of CC&G, the Italian clearing house and its clearing members. Which brings us back to the over-arching theme: the market is a complex eco-system. Each element needs to perform in concert to deliver outstanding results.

**"The key question is whether the post-crisis regulatory framework proves to be so burdensome that it becomes a significant disincentive for new entrants**

the number of futures and options traded on US futures exchanges has risen by almost 200 per cent. That means that we are seeing an ever greater volume of trading going through fewer and fewer exchanges. Just as with FCMs and customer funds, we are seeing more risk going down fewer pipes.

### External factors

Of course, as they say, past performance is no guarantee of future results. There are a lot of external factors that will affect this industry in 2014, some negative and others positive, so I won't try to predict which way the cards will fall in 2014. But I can see at least three factors that could prove to be important drivers this year for the continuation of these trends.

First, we are going to hear a lot more conversation between FCMs and their customers about the cost of clearing. Once we start getting into the nuts and bolts of how clearing will function under the new regulatory framework, we will be faced with difficult decisions about the costs and benefits of different models.

Second, after years of discussion, this might be the year when collateral efficiency in clearing becomes a more urgent priority. There has been lots of talk about the benefits of portfolio margining across swaps and futures, but people are now looking to realise those benefits, and that is spurring a lot of work on bringing these products together under a uniform margining system that recognises the offsetting risks of these products.

Third, the regulatory pendulum may start swinging toward pragmatism as all of these regulatory changes come to light. The CFTC has largely completed the rule-writing phase of Dodd-Frank. The challenge facing the CFTC shifts from rule-writing to implementing those rules for the industry and the thousands of transactions that are now coming into its purview.

### Limited resources

Earlier this year Congress approved a $20 million increase in the CFTC's budget. Undoubtedly the CFTC will be delighted to receive that additional funding, but the reality is that the agency still has limited resources and the leadership will have to make tough decisions about what they can and cannot do with their resources.

Obviously one way to stretch a dollar is to rely on other regulators, including the domestic self-regulatory organisations such as the National Futures Association, and overseas regulators, through substituted compliance and mutual recognition.

The key question is whether the post-crisis regulatory framework proves to be so burdensome that it becomes a significant disincentive for new entrants into our markets. I certainly hope not, but much depends on whether regulators take a pragmatic approach and work with the industry as the new rules enter into force. ■