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The impact of regulation on the structure of European over-the-counter derivative markets

EMEA Centre for Regulatory Strategy

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Executive summary

Financial markets, and all those who transact in them, are facing unprecedented regulatory change. One of the key elements of the post-crisis reform agenda relates to the over-the counter (OTC) derivative markets where the G20 has repeatedly reaffirmed its commitment to the manner in which derivatives are traded and risk managed. This commitment is being taken forward by the relevant authorities in the EU, US and Asia against an end-2012 target for implementation.

The consequence of these reforms are far-reaching and will, either directly or indirectly, affect all users of OTC derivatives, from the largest global investment bank to the smallest corporate. And the nature of these reforms is such that they will reach into many aspects of a firm's business – pricing, collateral management, risk management and reporting.

This note which considers the implementation of these OTC derivative reforms in the EU, identifies five main areas of impact:

- **Impact on volume of business traded OTC**
  We expect to see a significant shift in business away from OTC execution. Banks and broker-dealers will need to consider what this means for their business and users (both regulated and non-regulated, e.g. corporates) will need to consider where and how they execute their derivatives in future.

- **Impact on venues**
  There will be a change to both the type and number of trading venues for OTC derivatives with both expected to increase. Banks as liquidity providers in the current OTC model will need to rethink how products are distributed to clients. Market participants will need to consider where they execute their derivatives business and the associated connectivity implications.

- **Impact on product offering**
  There will be a significant change in the current mix of products with a shift expected away from complex and bespoke products to more standard, vanilla products. These drivers will come from multiple regulations and will be both supply and demand led.

- **Impact on pricing**
  The way counter-party credit risk is managed will change dramatically. Multiple factors point to a sizeable increase in the costs of transacting in a product that will need to be cleared in the future. There is a risk that the price of cleared derivatives will be higher than those which are not cleared, a consequence that would be counter to policy objectives. All market participants will need to consider what this means for their business.

- **Impact on market liquidity**
  The impact on market liquidity will depend on finer details that have yet to emerge of the regulations and in particular the calibration of the transparency regimes; the products that will be mandated to trade on an 'exchange'; on what constitutes an 'exchange'; and the timing for implementation. In the short term, at least, the risk on liquidity is to the downside.

Whilst derivative markets are global, the current importance of the EU as a centre for derivatives trading will mean that the reforms proposed at the EU level will have a significant impact on the structure of the global market.

Introduction

OTC derivative markets face unprecedented regulatory reform. Regulators and policymakers are seeking more transparent and liquid markets that are subject to robust and effective risk management processes. The EU will primarily introduce these changes through the Review of the Markets and Financial Instruments Directive (MiFID)[1] and the European Markets Infrastructure Regulation (EMIR)[2]. Firms will also need to take into account changes to the Capital Requirements Directive (CRD IV)[3].

In aggregate these reforms will change fundamentally the way OTC derivatives are traded and the resulting risks managed. There is broad agreement on several outcomes: significantly less business will be transacted bilaterally; new trading venues will enter the market; and much more information will be available to market participants. But there is less clarity on the likely impact for end-users and market liquidity. This note sets out our view on how the structure of OTC derivatives markets will change as a result of these historic reforms.

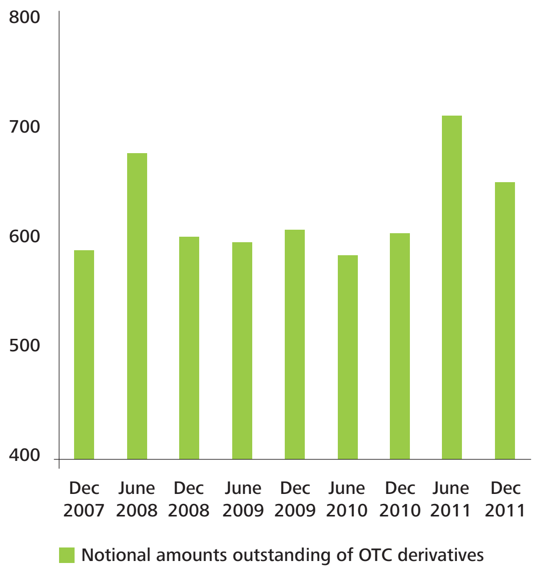
… changes to the regulation of OTC derivatives in Europe will have a significant impact on the shape of the global market.

Overview of current market

As at December 2011 the notional amount of outstanding OTC derivative contracts was around $648 trillion[4], a decline of just over 8% from the previous market peak in June 2011 of $708 trillion.

Europe dominates OTC derivatives trading with 66% of all transactions executed there[5]. This compares to 26% in North American markets and 8% in Asian and Australian markets. At the country level the UK is by far the single largest centre for OTC derivatives trading, currently accounting for some 47% of global traded volumes. The US is the second largest market currently capturing 24% of activity. It is therefore clear that changes to the regulation of OTC derivatives in Europe will have a significant impact on the shape of the global market.

OTC derivative markets (USD trillion)



Source: BIS

There are five main asset classes within OTC derivatives markets: interest rate, credit, foreign exchange, equity and commodity. Trading in interest rate derivatives accounts for the greatest proportion of activity and this sector has grown steadily over time.[6]

Trading in financial instruments either takes place on an 'exchange' or on a bilateral OTC basis. As at December 2011, over 90% of all interest rate, FX and equity derivatives trading was OTC.

Typically under an exchange model there is little, if any, adjustment to the underlying terms of the contract. This is in contrast to the bilateral model where individual negotiation of the contract terms, in order to meet the underlying need of the user, is a core element of the transaction. This need typically drives the choice of execution venue and to date is one of the factors that has limited the volume of 'exchange' trading.

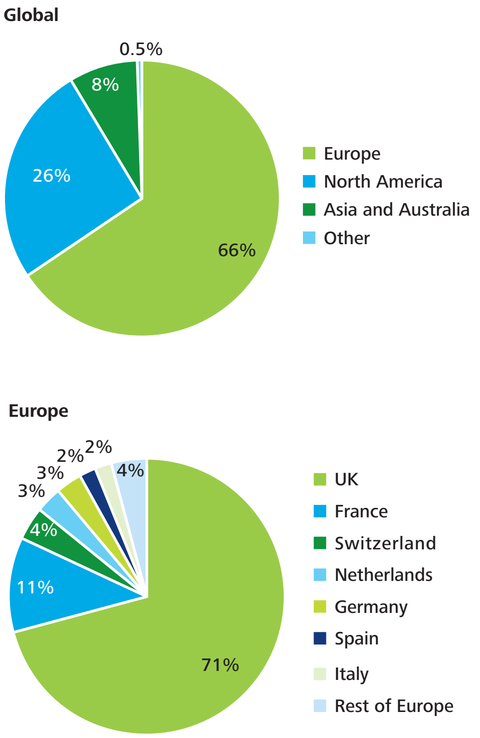
A further difference between the two models of execution is that under the bilateral model the identity of the two counterparties is known. However, under an 'exchange' driven model the meeting of buying and selling interests will typically be on an anonymous basis with multiple buying and selling interest coming together to create a central pool of liquidity. Currently, under MiFID there are two categories of 'exchange': regulated market (RM)[7] and multilateral trading facility (MTF)[8]. Both relate to a system that brings together multiple third-party buying and selling interest, although there are some differences in the way the venues are regulated.

Summary of key legislative proposals and the problems they will tackle

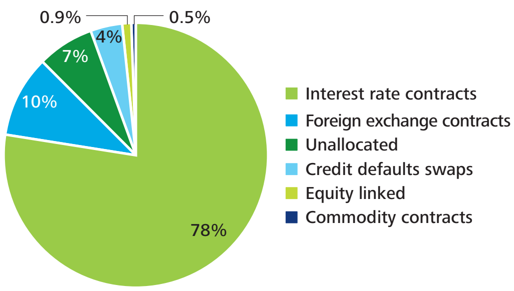
The crisis highlighted many weaknesses within OTC derivative markets. At the most extreme point of stress, wholesale counterparties were unwilling to trade with one another. At this time four main weaknesses were exposed:

- poor risk management and in particular weak management of counterparty risk of OTC derivative positions;
- a lack of transparency of derivative positions both to the market and to regulators;
- a severe liquidity shortage in times of market stress; and
- too much complexity – both in terms of the web of relationships and the products traded.

Geographical distribution of global interest rate derivatives turnover, April 2010



Composition of OTC derivative markets by product, Dec 2011



Source: BIS

At the Pittsburgh G20 summit in 2009, Leaders agreed that 'all standardised OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by end-2012 at the latest. OTC derivative contracts should be reported to trade repositories. Non-centrally cleared contracts should be subject to higher capital requirements'. This statement is central to the set of regulatory changes aimed at OTC derivative markets. Individually and in aggregate they will fundamentally change the shape and nature of how these markets operate.

At the EU level two key pieces of regulation will implement these goals. EMIR will impose stringent new requirements for the risk management of OTC derivative positions and MiFID II will impose wide ranging requirements in relation to the trading and transparency of OTC derivatives contracts. MiFID II in particular will have a dramatic impact on the future structure of these markets. In addition Basel III, and the subsequent EU legislation, will define the capital treatment for OTC derivatives which we expect will affect the supply of and demand for these products.

The table in the Annex summarises some of the key weaknesses exposed for OTC derivatives during the crisis and the regulatory solutions to tackle them. It also identifies where some key decisions remain to be taken.

As host to the largest OTC derivative trading activity, EU-driven regulation will force significant changes on the global market. Other jurisdictions are at various stages of designing or indeed implementing change. The best developed legislation in this area is Title VII of the Dodd-Frank Act which will implement the US equivalent requirements in EMIR and MiFID II.[9]

Lessons from MiFID I

Prior to the introduction of MiFID I in 2007, equity markets were characterised by singular, dominant exchanges in each domestic market; for example in the UK this was the London Stock Exchange, where regulatory rules and approval processes, membership requirements and technology costs created barriers to entry.

One of the key aims of MiFID was to introduce competition in equity markets. This was done by introducing a new category of trading venue – a MTF. This significantly changed the structure of EU equity markets and encouraged new entrants which in turn successfully captured market share.

There are two important observations to be made. Firstly, since the introduction of MiFID, the proportion of equity trading taking place OTC has significantly reduced. For example, in 2011, nearly 36% of FTSE 100 trading, in terms of turnover, took place OTC, compared to just over 50% in 2008.[9] Secondly MTFs have very successfully captured market share – rising from 6% of all EU turnover in 2008 to 27% in 2011.[11] We are now seeing a degree of consolidation amongst the venues although their share of the market remains strong.

In this regard it can be said that MiFID I achieved its competition-oriented objective, but competition brought unintended consequences, such as the fragmentation of trading information for price formation purposes. MIFID II aims to address these weaknesses as well as to capture OTC derivatives and other asset classes within the same regulatory framework.

Current market structure for derivatives

Whilst trades are predominantly executed OTC there is some exchange trading currently, the use of which varies by asset class. There are broadly two models which are classed as OTC: the basic bilateral model and the inter-dealer broker model. Within the 'exchange' category some business is executed on an MTF or, typically for listed derivatives, on a RM. Some execution also takes place on hybrid models (i.e. part voice part electronic execution) or electronic platforms which are operated by an inter-dealer broker but which are not regulated as an MTF. Somewhat of a grey area are bank operated electronic trading platforms – so called single-dealer platforms. Whilst these look like an 'exchange', especially as they tend to be fully automated systems, they are essentially a bilateral execution model and therefore more akin to OTC. The different types of execution models used and how we expect this to change is discussed later.

> ... the underlying desire is to move trading away from a bilateral basis to a more transparent environment.

MiFID II proposals

It is important to note that the MiFID II package is still under negotiation. This is likely to prove a lengthy process and final agreed legislative text is not expected until 2013. But whilst much of the detail is subject to change the over-arching aim of the current proposal is unlikely to alter significantly.

The aim of MiFID I was to increase competition. The goal of MiFID II is much more about financial stability and ensuring transparent and well functioning markets across a broader set of asset classes than originally covered by MiFID.

Central to this will be the mandatory trading requirement. Derivatives that are cleared and have the appropriate degree of liquidity will have to be traded on a MiFID-defined and regulated trading platform. This category will include the existing RM and MTF venues, as well as a new category of trading venue: an Organised Trading Facility (OTF).

The desire to introduce the OTF category is to reflect market changes since the introduction of MiFID (for example the use of so-called broker-crossing networks in the equity space) and to implement the G20 commitment for trading OTC derivatives. In both instances the underlying desire is to move trading away from a bilateral basis to a more transparent environment.

As with a RM and a MTF the proposal is that an OTF will bring together multiple buying and selling interest within a centralised system. Other key proposed requirements for an OTF will be:

- Mandatory and harmonised pre-trade transparency requirements.
- Transparent and non-discriminatory access rules.
- Market surveillance capability.
- Conduct of business requirements.
- Ban on the use of proprietary capital to execute orders.

The goal of MiFID II is about financial stability and ensuring transparent and well functioning markets.

There will though be one important difference. Operators of an OTF will be allowed to exercise discretion in executing orders. This is to cater for the role that inter-dealer brokers play in the intermediation of OTC derivatives and will allow the OTF operator a small degree of flexibility, with a client's consent, when executing orders. Nevertheless far-reaching structural change is expected across the market.

Expected impact of regulatory reform

When considering the impact of regulatory change, it is important to acknowledge that OTC derivative markets are very different from markets such as equities. This manifests itself in a number of ways: participants are predominantly wholesale counterparties; the value of the transaction is typically high; the frequency of trading is low; and the number of underlying product types is very high. This is in contrast to equity markets which include retail participants and where high turnover and low value transactions dominate.

We have identified five main areas of impact of the proposed regulation:

- volume of business that will be traded OTC;
- number and types of trading venues that will emerge;
- product offering;
- pricing of derivatives; and
- level of market liquidity.

- **Impact on volume of business traded OTC**
  We expect to see a significant shift in business away from OTC execution. Banks and broker-dealers will need to consider what this means for their business and users will need to consider where and how they execute their derivatives going forward.

EMIR will require that standardised derivatives which are sufficiently liquid to enable a clearing house to risk manage them effectively are cleared across the EU on a mandatory basis. This population of derivatives will form the starting point for the products that will need to be traded on organised trading platforms, i.e. RM, MTF or OTF. But MiFID II will also apply an additional liquidity test to determine suitability for venue trading. This is because there needs to be a relatively high volume of transactions as well as possible buying and selling parties to make such an approach viable.

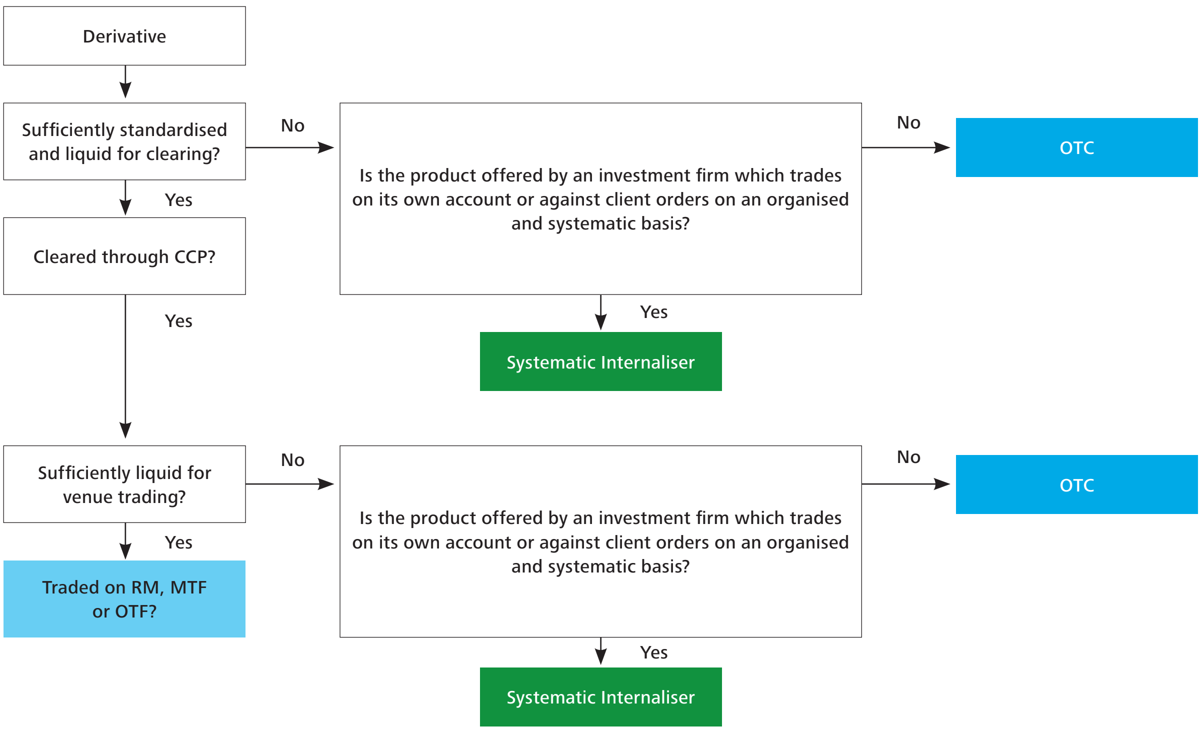
Whilst MiFID I led to a shift in business away from OTC to regulated trading venues this was done under a permissive approach i.e. it was a second order impact of the requirements. However, MiFID II will be much more restrictive and there will be a legal requirement for a wide set of products to be traded on a MiFID-defined and regulated venue. We expect to see a shift in business from the outset, and indeed we are already seeing some signs of this. As pools of liquidity develop and venues become more established we expect this will lead to a significant shift over time.

Impact on venues

The reforms will have a big impact on both the type and number of trading venues with both expected to increase. Banks as liquidity providers in the current OTC model will need to rethink how products are distributed to clients. For products which are mandated to be traded on a certain type of venue, banks will need to establish links with third party venues as a market maker. For products which are not caught by the mandatory trading requirement, liquidity providers – whether as a dealer or broker – will need to consider the implications of the systematic internaliser (SI) regime. Market participants will also need to consider where they execute their derivatives business and the associated connectivity implications.

The diagram below outlines the decision-making process for where different types of products will need to be traded.

Trading revenue decision tree



- Highly transparent regulated venue for standardised and liquid products
- Bilateral arrangement for products with much lower levels of standardisation and liquidity and subject to some mandatory pre-trade transparency requirements
- Bilateral arrangement for highly bespoke and illiquid products that is not subject to mandatory pre-trade transparency requirements

The introduction of the OTF venue will change the way business is transacted. The two proposed requirements that will lead to the biggest changes are:

- the requirement for multi-laterality i.e. the bringing together of multiple buyers AND multiple sellers within the same system; and
- a ban on the operator of the OTF executing orders against its own capital.

These requirements, as currently formulated, will mean that single-dealer platforms will not meet regulatory requirements in the new world of derivatives trading.

In order to respond to these changes, banks with single-dealer platforms will need to re-engineer the way in which they offer derivatives to their clients. We expect that such platforms will only offer non-cleared derivatives and asset classes such as corporate bonds and spot FX. This will be a big change for some banks. But such a change is needed if they are to maintain the execution platforms in which they have invested significantly, albeit for a reduced product set with lower transaction flows. This will not be without further implications as we expect some of the population of non-cleared derivatives to be captured by the pre-trade transparency requirements for 'systematic internalisers' (SIs) (see diagram on page 6).

Wholesale brokers will need to think about how they adapt their offering to clients in order to meet the new regulatory requirements. Whilst the inter-dealer broker model typically executes trades on an agency basis i.e. facilitates the bringing together of the buyers and sellers, there are some instances in which the broker will act as principal. This is particularly the case for less liquid instruments when it may be preferable for the broker to take the position 'on risk' before passing on to an interested buyer/seller. The extent to which this will be permitted by the OTF regime is unclear as this effectively involves the execution of orders against own capital.

There is, however, some comfort for the wholesale broking market. The proposed definition of an OTF envisages that hybrid models (i.e. non-fully automated systems) will meet regulatory requirements for trading derivatives.

This degree of flexibility will be important, especially given the lower levels of liquidity and turnover for derivatives, and should support the transition away from OTC trading over time.

In addition to the introduction of an OTF venue, MiFID II proposes to extend the SI regime to non-equity markets including OTC derivatives. This will, intentionally, broaden the impact of this little used category by the introduction of mandatory pre-trade transparency requirements. We expect this will capture some derivatives that are currently traded OTC but will not be subject to a mandatory trading requirement. And, as noted above we expect this will capture some business currently executed on single-dealer platforms. The key impact of this will mean that banks will need to publish and keep constantly updated live, fully executable prices. This will prove challenging in fast-moving environments and the risk for users is that bid-offer spreads are placed sufficiently wide to allow banks to adapt to rapid market movements.

The diagram below outlines, by execution venue, how we expect trading volumes to change and the types of products that we expect each venue to focus offerings on in future.

Overview of current and proposed trading revenues

Venue	Type	Execution method: Transaction overview	Voice	Electronic	Hybrid	Products: Product customisation	Products: Currently traded	Products: Traded Post MIFID II	Trade volume change
Current market									
Bilateral OTC	OTC	Banks → ← Clients	✓			High	Wide ranging derivatives products from highly bespoke contracts to large value plain vanilla	Highly bespoke, illiquid products	↓
Single Dealer Platform (SDP)	OTC	Bank (SDP) → ⇇ Clients		✓	✓	High	Standardised derivatives	Uncertain, likely non-derivatives	↓
Inter-dealer Broker (IDB) (a)	OTC	Banks ⇉ IDB ⇇ Clients	✓			High	Wide ranging derivatives products from highly bespoke contracts to large value plain vanilla	Non mandatory and some mandatory derivatives on hybrid/ electronic platforms; some voice execution for bespoke transactions	↓
Regulated market (RM)	Exchange	Banks ⇉ ⇇ Clients		✓		Low	Listed derivatives	Mandatory derivatives subject to ESMA trading requirements	↑
Multilateral Trading Facility (MTF)	Exchange	Banks ⇉ ⇇ Clients		✓	✓	Medium	Standardised derivatives	Mandatory derivatives subject to ESMA trading requirements	↑
Introduced with MiFID II									
Organised Trading Facility (OTF)	Exchange	Banks ⇉ ⇇ Clients		✓	✓	Medium	Does not currently exist	Mandatory derivatives subject to ESMA trading requirements	↑
Systemic Internaliser (SI)	OTC	Bank → ⇇ Clients		✓	✓	Medium	Currently exists for equities	Derivatives outside of the trading requirement that trade relatively frequently	↑

(a) This relates to pure voice execution. Some derivatives are currently executed on fully automated or hybrid platforms operated by IDBs. Some of this business already falls within the MTF category. It is expected that the buisness not captured currently by the MTF regime will either fall within the new OTF category or the existing MTF category.

Impact on product offering

Overall the reforms for OTC derivatives, will in our view, lead to a significant change in the current product offering mix with a steep shift expected away from complex and bespoke products to more standard, vanilla products. These drivers will come from multiple regulations and will be both supply and demand led.

A drive to remove complexity from the financial system is a conscious push from global regulators. The specific requirements to clear standardised derivatives and to trade them on MiFID-defined and regulated trading venues will in themselves set the framework for both automation of operational processes and simplification of contract terms. Our expectation is that volumes of standardised products will increase.

But which products will be subject to a trading requirement?

The starting point is that products which are cleared should be traded on an organised venue, subject to meeting a required liquidity threshold which will be determined by the European Securities and Markets Authority (ESMA). An important prerequisite for trading on regulated venues is a relatively high degree of product standardisation and of the accompanying pre and post-trade processes enabled by standardisation e.g. electronic confirmations. The table below provides an overview of current levels of standardisation per asset class.[13]

Overview of standardisation, clearing and trading levels per asset class

<table>
<tr><th>Asset class – product type</th><th>Electronically processed volume (a)</th><th>Electronically eligible volume(b)</th><th>Percentage of total volume cleared on a CCP</th><th>Voice (e)</th><th>Single Dealer Electronic Platform Trades (e)</th><th>Multi Party Electronic Platform (e)</th></tr>
<tr><td>As of</td><td>June 2011</td><td>Dec 2011</td><td>Dec 2011</td><td>April-June 2011</td><td>April-June 2011</td><td>April-June 2011</td></tr>
<tr><td>Interest Rates</td><td>88%</td><td>95%</td><td>35% (c)</td><td>93% average</td><td>4% average</td><td>8% to 0%</td></tr>
<tr><td>Credit</td><td>98%</td><td>98%</td><td>12% (d)</td><td>Bi-lateral voice: average 70%
Multi-lateral voice: average 23%</td><td>22% to 0%</td><td>20% to 0%</td></tr>
<tr><td>Equity</td><td>37%</td><td>41%</td><td>NA</td><td>97% Average</td><td>1% average</td><td>0%</td></tr>
<tr><td>Commodities – Energy</td><td>70%</td><td>89%</td><td rowspan="3">NA</td><td rowspan="3" colspan="3">NA</td></tr>
<tr><td>Commodities – Metals</td><td>61%</td><td>95%</td></tr>
<tr><td>Commodities – Other</td><td>17%</td><td>31%</td></tr>
<tr><td>FX – Non-Deliverable Forwards</td><td>86%</td><td>99%</td><td rowspan="3">NA</td><td rowspan="3" colspan="3">NA</td></tr>
<tr><td>FX – Vanilla Non-Deliverable Options</td><td>69%</td><td>84%</td></tr>
<tr><td>FX – Simple Exotic Options</td><td>33%</td><td>64%</td></tr>
</table>

(a) Population of transactions that is actually electronically confirmed, G-14 dealer data. Source: Financial Stability Board (FSB), OTC Derivatives Market Reforms, June 2012

(b) Population of transactions that could be electronically confirmed, G-14 dealer data. Source: Financial Stability Board (FSB), OTC Derivatives Market Reforms, June 2012

(c) TriOptima Data. Source: Financial Stability Board (FSB), OTC Derivatives Market Reforms, June 2012

(d) DTCC Data. Source: Financial Stability Board (FSB), OTC Derivatives Market Reforms, June 2012

(e) Source: International Securities and Derivatives Association (ISDA), G20 Standardisation Documents: Derivatives Matrixes for Q2 2011, March 2012. Where plausible, an average across base products has been calculated; this approach has not been undertaken in asset classes with a significant amount of outliers – typically more exotic products. Data aggregation completed by Deloitte.

We expect the way a product is traded and therefore whether it is cleared or not will be a significant driver in the future product mix for clients. Of particular interest is the interest rate derivative sector – the largest sector of the OTC derivatives market. This sector currently exhibits very high levels of standardisation and has seen substantial take up of central clearing. Despite there being limited take up of platform execution to date, these factors support a relatively large proportion of this sector migrating to regulated venues.

To date there has been some modest take-up of venue execution for the most standardised and liquid segment of the credit derivatives sector (largely index CDS and on-the-run single name CDS). But given the lower liquidity levels seen for other credit derivative products the scope for a large scale migration to venue trading looks unlikely.

As we move further down the standardisation spectrum equity derivatives have very low levels of standardisation. Central clearing is also at a very early stage for this sector, suggesting there is currently much less scope for equity derivatives to move to venue trading. In part this is countered by the well-established futures and options market for listed derivatives which currently caters for the standardised element of the market, leaving the more bespoke transactions to the OTC space.

Impact on pricing

There are two key factors that will change how banks price OTC derivatives in future. First, the requirement under EMIR for central clearing of all standardised derivatives and for 'bilateral collateralisation' of those that are not; and second changes to the capital regime. Both of these elements are expected to make OTC derivatives more expensive than they are today.

The way in which counterparty credit risk is managed will change dramatically as a result of the proposed reforms. Currently both counterparties to a transaction are exposed to credit risk. In addition, and as exposed during the crisis, positions are not often collateralised as expected. Today, counterparties are eligible to apply a zero percent risk weight to exposures for derivative contracts that are centrally cleared. However in future, mark-to-market and collateral exposures to a central counterparty will be subject to a modest 2% risk weight, depending on whether the counterparty is a clearing member itself or a client clearing via a clearing member. In addition it is proposed that default fund contributions will be capitalised in accordance with the risk-sensitive 'hypothetical capital requirement' approach. This would impact the current business model of banks and brokers offering clearing services and would result in a direct increase in the cost of standardised (cleared) products and indirectly for non-standardised products.

Some of the primary cost drivers for cleared/ standardised products will be:

- the cost of posting initial and variation margin;
- the cost of account segregation at the clearing house;
- an increase in the capital charge for cleared trades;
- the associated cost of clearing member default fund contributions; and
- the operational cost associated with the IT enhancements to meet EMIR reporting and daily valuation requirements.

Specifically, there will also be the cost of having to post initial and variation margin over the lifetime of the position (a potentially lengthy period). Margins will need to be met with high quality and liquid collateral and the risk is that a collateral shortage will drive up costs. The requirements for account segregation will also be a determining factor – very stringent segregation requirements will be costly. In addition, the proposed Adjusted Current Exposure Method[15] for determining the hypothetical capital charge for default fund contributions may be difficult to determine and will depend on the clearing member having knowledge of the overall exposures of the CCP in question. Certain banks may not be able to do this with certainty and so the risk is that exposures will be conservatively priced with the additional costs passed on to clients.

Taken in aggregate, these factors point to a sizeable increase in the costs of transacting in a product (whether currently cleared or not) that will need to be cleared in the future. The proposed risk-sensitive capital charges will mean that banks with high volume and diversified portfolios will be in the best position to absorb the impact of these proposals. In practice we may see smaller players reassess the viability of being a clearing member or even of undertaking strategies involving derivative products.

The key cost drivers for non-cleared/non-standardised products will be:

- the higher capital charges for non-cleared trades (i.e. counterparty credit risk depending upon the creditworthiness of the bilateral counterparty and Credit Value Adjustment (CVA));
- the cost of collateralising bilateral exposures;
- the impact of collateralising exposures at the transaction level rather than the entity level; and
- the operational cost associated with the IT enhancements to meet EMIR reporting and daily valuation requirements.

The risk is that exposures will be conservatively priced with the additional costs passed on to clients.

In order to incentivise the use of clearing the capital charges for non-cleared trades will be set at a higher level than those for cleared transactions. As with cleared transactions, non-cleared positions will also need to be collateralised. The shape and form of these margins is still to be determined but it is clear that they will need to be met with high quality, liquid instruments, again adding to a potential collateral shortage which could drive up costs. Another key determining factor will be whether the bilateral collateralisation requirements are levied at a transaction level or an entity level. This has yet to be determined but clearly a requirement to collateralise at the transaction level will mean that banks will have to break-up netting sets and this could result in increased operational, transactional and capital costs.

In practice we expect that the CVA charge for non-cleared trades will not be as high as initially expected. There is therefore a risk that in the post-reform world the costs for cleared products will not be substantially more beneficial than those for non-cleared products, a consequence that would be counter to underlying policy objectives in this area.

Execution costs
We expect actual execution costs will form a negligible proportion of the costs of transacting in OTC derivatives, and over time the commoditisation of platform trading should lead to a reduction in execution costs. Indeed in the equity space the costs of execution have, since the introduction of MiFID, decreased by more than 60%[15]. We do though expect execution costs for OTC derivatives to be higher than those for platform executed contracts.

Impact on market liquidity
The impact on market liquidity, which is often referred to as the ability to execute a transaction quickly without exerting a material effect on prices, is less clear.

Four factors could impact market liquidity going forward:

- the calibration of the transparency regime – both pre and post-trade requirements;
- the actual products that ESMA determines must be traded on an organised platform;
- the definition of an OTF; and
- the timing for implementation.

Pre-trade transparency
MiFIDII proposes two new aspects in relation to pre-trade transparency: 1) a harmonisation of requirements across trading venues (RMs, MTFs and OTFs); and 2) the extension of the SI regime to non-equity markets and, with it, the associated quoting obligations.

In relation to the first aspect consideration will need to be given to 'request-for-quote' models and how responses (i.e. quotes) to client requests are disseminated across the trading platform. There is a concern from both the buy-and sell-side that public dissemination could lead to a price move prior to execution and disadvantage the executing party.

The envisaged pre-trade transparency requirements for the SI regime are more complex. As noted above, we expect that a large proportion of OTC derivatives could be captured under the SI regime. These are likely to be products with lower levels of liquidity. The requirement for an investment firm classified as an SI to publish constant, executable prices for these instruments could mean in practice that bid-offer spreads widen which in turn could reduce liquidity.

There is a risk that in the post-reform world the costs for cleared products will not be substantially more beneficial than those for non-cleared products …

Post-trade transparency
MiFID II will require that all OTC derivatives, regardless of where they are traded, are subject to mandatory post-trade transparency. This will require all firms to publicly disseminate the price at which the trade took place and the volume of the trade. Some exemptions for particularly large trades are envisaged. This approach is very much in keeping with the MiFID equity regime.

Some experience can be gained from the US bond markets where a mandatory post-trade transparency regime (known as TRACE) was introduced in 2002. An analysis of the wide range of academic literature suggests a diversity of views on the 'success' of the regime. Some argue that the regime had a negative impact on liquidity as the providers of capital withdrew from the market due to concerns that positions could be identified when 'on risk'. But others argue that greater transparency supports better price formation which ultimately improves market liquidity.

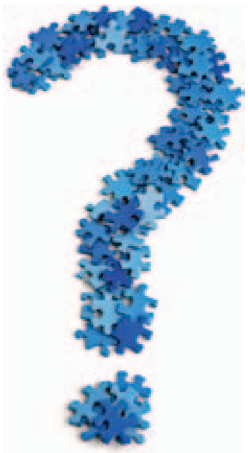
The key factor determining the impact on market liquidity will be how the transparency regimes are calibrated. Initial proposals in MiFID II indicate a preference for calibration by asset class and even within product set. It is therefore possible that we might see different reporting times per asset class or even product set depending on its liquidity, i.e. the more liquid products reported quicker and with fewer exemptions for large trades and the less liquid instruments reported with a longer delay and with higher size thresholds for exemptions. This is in recognition that a 'one-size fits all' transparency regime is not appropriate given the diversity of asset classes under consideration. Firms will need to monitor developments in this area closely.

Products caught within scope
The actual product set that ESMA designates as being within scope could impact future market liquidity. ESMA will have to determine whether cleared products are also liquid enough to trade on an organised trading platform. It is unlikely that an ESMA determination will in itself generate market liquidity. Ultimately, if illiquid products are caught within scope of the trading requirement this would hamper market participants ability to execute in a timely manner.

The final definition of an OTF
The final definition of what constitutes an OTF will be key in supporting market liquidity. A very narrow definition could force a trading model on products which prevents contract customisation when it is in fact needed to meet underlying needs.

However, a definition which recognises the nuances of OTC derivative products and its participants, for example not requiring venues to be fully automated, will support the migration of current OTC transactions to organised trading venues.

The timing for implementation
Equally a phased implementation timetable will support the successful migration to venue trading and will help preserve market liquidity. In addition, this would allow liquidity providers to develop solutions which best meet users' needs, again supporting liquidity preservation.



What will the future structure of OTC derivatives markets look like?

OTC derivatives markets are facing unprecedented regulatory change, the impacts of which will be far-reaching. Not only in terms of the magnitude and scope of change but also in terms of the sheer breadth of market participants affected.

The mandatory requirement to trade standardised derivatives on a regulated venue, as proposed under MiFID II, will physically change the future structure of derivative markets. Not only will there be considerably less OTC, but we will also see new trading venues emerge or existing venues adapt to meet regulatory requirements. In practice this means that banks and broker-dealers will need to re-engineer the way in which derivatives are distributed to their clients.

When combined with the proposals to clear standardised derivatives and bilaterally collateralise those which are not, the way derivatives are priced and as a result the types of derivatives offered to market participants will notably change. The regulatory desire is to incentivise the use of central clearing through the capital regime, but when the cost of the proposed requirements is taken in aggregate there is a risk that cleared derivatives become more costly than those that are not.

Much of the finer detail has yet to be agreed, but the overall framework is expected to remain broadly in line with current proposals. The impact on market liquidity will largely be determined by these finer details but, in the short term at least, the risk is to the downside.

Annex

The table below summarises some of the key weaknesses exposed for OTC derivatives during the crisis and the regulatory solutions to tackle them. It also identifies where some key decisions remain to be taken.

	Weakness	Regulatory solution	Outstanding issues
Risk management	Weak risk management	Strengthened operational processes such as daily valuations and electronic confirmations of trades [EMIR].	
	Poor counterparty credit risk management for standardised derivatives	Mandatory clearing requirements for sufficiently liquid and standardised derivatives [EMIR] Increase in risk-weighting for cleared derivatives [CRD IV]	Identification of products that will need to be cleared. The collateral that can be used for margins. Where threshold for participant exemptions is set. Exact risk weighting of products. The capital treatment of default fund contributions.
	Poor counterparty credit risk for non-standardised derivatives	Mandatory bilateral collateralisation, including the exchange of daily margins for non-standardised derivatives [EMIR]	The form of margins for bilateral trades: initial margin and/or variation margin. The collateral that can be used for margins.
Transparency	Lack of transparency to market participants	Public reporting of aggregate data on OTC derivatives positions [EMIR]. Introduction of mandatory publication of traded prices and volumes for OTC derivatives [MiFID II].	Exact data to be reported to trade repository and timings. Reporting times and threshold for delayed reporting.
	Lack of transparency on tradable prices to market participants	Introduction of a mandatory and harmonised pre-trade transparency regime [MiFID II].	Reporting times and threshold for delayed reporting.
	Lack of transparency of derivative positions to regulators	Mandatory reporting of position information to trade repositories [EMIR].	Exact data to be reported to trade repository and timings.
Liquidity	Lack of market liquidity	Mandatory trading of cleared and liquid derivatives on 'exchanges' is designed to foster the central pooling of liquidity [MiFID II].	What constitutes an exchange. The exact product set that will need to be traded on an exchange.
Complexity	Complexity and relationships of market participants	Mandatory clearing requirements for standardised products to reduce counterparty credit risk [EMIR]. Collateralisation of bilateral exposures so that impact of default of a counterparty is reduced [EMIR]. Mandatory reporting to trade repositories so that regulators are better placed to identify pockets of systemic risk [EMIR].	Identification of products that will need to be cleared. The form of margins for bilateral trades: initial margin and/or variation margin. The collateral that can be used for margins for cleared an uncleared trades. Exact data be to be reported to trade repository and timings.
	Overly complex products	Mandatory clearing and operational requirements such as electronic confirmation will support standardisation of contract terms and operational processes. [EMIR] This in turn will be the cornerstone supporting the mandatory trading of derivatives on 'exchanges'. [MiFID II].	The exact product set that will need to be traded on an exchange.

Footnotes

1 This will include the review of the existing Directive as well as introducing a new Regulation. This package is collectively known as MiFID II

2 Proposal for a Regulation of the European Parliament and of the Council on OTC derivative transactions, central counterparties and trade repositories (EMIR)

3 Changes to the capital regime include amendments to the existing Directive and the introduction of a new Regulation. This is collectively known as CRD IV

4 Bank for International Settlements (BIS), *Statistical Release: OTC derivative statistics at end-December 2011*, May 2012

5 Bank for International Settlements (BIS), *Triennial. Central Bank Survey Foreign exchange and derivatives market activity in April 2010*, September 2010

6 Bank for International Settlements (BIS), Statistical Release: OTC derivative statistics at end-December 2011, May 2012

7 MiFID defines a 'Regulated Market' as a multilateral system operated and/or managed by a market operator, which brings together or facilitates the bringing together of multiple third-party buying and selling interests in financial instruments – in the system and in accordance with its nondiscretionary rules – in a way that results in a contract, in respect of the financial instruments admitted to trading under its rules and/or systems, and which is authorised and functions regularly and in accordance with the provisions of Title III

8 MiFID defines a 'Multi-lateral trading facility' as a multilateral system, operated by an investment firm or a market operator, which brings together multiple third-party buying and selling interests in financial instruments – in the system and in accordance with non discretionary rules – in a way that results in a contract in accordance with the provisions of Title II

9 See Deloitte EMEA Centre for Regulatory Strategy, *EMIR: A giant stride forward, but further work to do,* February 22 for an overview of the key requirements of EMIR and the expected difference in approach with Dodd-Frank

10 Thomson Reuters, *Monthly Market Share Reporter: Share Reports by Index,* 2008-2011 (Data aggregated by Deloitte)

11 Federation of European Stock Exchanges (FESE), *European Equity Market Report,* 2008-2011 (Data aggregated by Deloitte)

12 MiFID defines a 'Systematic internaliser' an investment firm which, on an organised, frequent and systematic basis, deals on own account by executing client orders outside a regulated market or an MTF

13 FSB, OTC Derivatives Market Reforms: Progress report on Implementation, June 2012

14 The current exposure method is used to measure the cost of a default within a derivative agreement. Under this method an investor's total exposure is equal to the replacement cost of all marked to market contracts currently in the money, plus the credit exposure risk of potential changes in future prices of volatility of the underlying asset

15 EU Commission study 'Monitoring prices, costs and volumes of trading and post-trading services', 2009 & 2011

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