OTC DERIVATIVES CLEARING

PERSPECTIVES ON THE REGULATORY LANDSCAPE AND CONSIDERATIONS FOR POLICYMAKERS

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INTRODUCTION

In 2009, the G20 stated an ambition of moving standardised over-the-counter (OTC) derivatives from a bilaterally cleared to a centrally cleared model by the end of 2012. This kicked off a wave of new regulations in the US, EU and elsewhere, as well as major investments by banks, clearinghouses, custodians, and data providers.

However, over the last few years, the scale and complexity of the G20 ambition has become clear. The number and variety of end-user clients creates a massive challenge for clearinghouses and client-clearers. The regulatory landscape is fragmented across multiple jurisdictions. The structure and capitalisation of the central clearinghouse industry itself is proving contentious, and questions have arisen over the potential operational and systemic risks of the large scale move to central clearing.

2012-13 is likely to be a decisive period. The nature and timing of many vital regulations will be clarified, including Dodd-Frank, CPSS-IOSCO, Basel III, and EMIR. These regulations and the responses to them will determine whether central clearing remains a credible and beneficial near-term goal at the scale currently envisaged.

Policymakers’ choices on the detail of regulation will be vital, and these choices are by their nature complex. We offer four core pieces of advice to policymakers:

• **Keep safety and simplicity as first principles.** In any move of this nature, the risks of unintended consequences are significant. Phased timing and a conservative approach to the change are appropriate. Linked to this, some areas of regulation would benefit from simplification – particularly the initial target product scope, and the extent of the push towards exchange-like market-making and price discovery that is often bundled with clearing regulation.

• **Ensure adequate incentives for central OTC derivatives clearing.** If large parts of the OTC derivatives markets are to be smoothly transferred to central clearing, market participants will need realistic economic incentives. We see a risk today that these incentives will either be insufficient or even negative, potentially resulting in damage to liquidity or a migration to non-standardised products/jurisdictions. This is most notable in the Basel proposals for capitalisation of exposures to clearinghouse default funds, and capital rules for “client-clearer” banks. These proposals in our view strike the wrong balance between “safety” and “adequate incentives” by adding capital to the system but adding it in the wrong place and in the wrong structure.

• **Seek more transatlantic consistency, and adjust the ambition in smaller G20 markets.** Although the FSB is attempting to ensure that G20 members have a level of consistency here, we see three issues to be addressed. First, we still see important inconsistencies between EMIR and Dodd-Frank. Second, the timing of Basel implementation remains a major transatlantic difference. Third, many G20 members outside the EU and US have yet to decide on how to implement the central clearing mandate (and indeed it is unclear whether central clearing would be of benefit in smaller markets); we see a need for more realism in the G20/FSB ambitions here.
• **Strengthen clearinghouse risk management requirements.** While the CPSS-IOSCO requirements for central counterparties are a useful starting point, more is needed to ensure a safe and secure clearinghouse industry. The current requirements risk acting as a ‘bare minimum’ in key areas, and therefore risk creating a race to the bottom in terms of margining/collateral/default fund policies. Particularly in an environment where the major central counterparties (CCP) will be too big to fail, we see a need for stronger global guidelines in these areas.

This paper reviews the regulatory challenges facing OTC derivatives clearinghouses and clearing participants today, and is structured as follows:

**Section 1: Market context.** The original G20 ambitions and rationale. The performance of the central clearing model in past defaults. The OTC clearing landscape today.

**Section 2: The regulatory landscape.** Profile of the key regulations that will determine the shape of clearing. The timing of the decisions and implementation of these regulations. International differences.

**Section 3: Basel capital requirements.** Profile of the regulations. Analysis of the incentives/disincentives to clear OTC derivatives trades centrally.

**Section 4: Considerations for policymakers.** Safety and simplicity. Adequate incentives. Transatlantic consistency, adjusted ambitions in smaller G20 markets. Strengthened IOSCO requirements.
1. MARKET CONTEXT

1.1. THE ORIGINAL G20 AMBITION AND RATIONALE

The first G20 meeting in Washington in November 2008 hinted at the push towards central clearing, tasking finance ministers with:

“Strengthening the resilience and transparency of credit derivatives markets and reducing their systemic risks, including by improving the infrastructure of over-the-counter markets”

By the Pittsburgh G20 in September 2009, it had taken a fuller form, with the leaders’ communique stating 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. We ask the FSB and its relevant members to assess regularly implementation and whether it is sufficient to improve transparency in the derivatives markets, mitigate systemic risk, and protect against market abuse.”

The rationale for this was straightforward. The financial crisis and Lehman / Bear Stearns / AIG experiences had highlighted major deficiencies within the OTC derivatives markets, with two issues particularly relevant:

- **Counterparty credit risk interconnections.** The default of a major market participant could result in “spill over” risk transmitted through OTC contracts.
- **Lack of transparency.** Regulators and the market as a whole cannot accurately gauge any deterioration in the creditworthiness of OTC derivatives counterparties until “it is too late” due to the limited transparency of this market.

Central clearing of OTC derivatives contracts was considered an effective way of solving these problems, by removing spill over risk by absorbing defaults in a contained way, and making derivatives exposures easier to observe. As the market has evolved however, the difficulties of moving large parts of the OTC industry to a central clearing model – as well as the potential systemic and operational risks that would result from a poorly managed/poorly regulated transition – have become apparent.
1.2. THE PERFORMANCE OF THE CENTRAL CLEARING MODEL IN PAST DEFAULTS

The handling of Lehman’s default is still considered an advertisement for central clearing. Lehman’s failure imposed heavy losses on its bilateral trading counterparties in the OTC markets. In contrast, its trades backed by central clearinghouses were unwound and the losses absorbed by Lehman’s initial margin commitments, without broader systemic issues. This is illustrated in the graph below.

**IMPACT OF THE LEHMAN FAILURE ON A CENTRAL CLEARINGHOUSE (LCH.CLEARNET)**

- $9 TN LEHMAN BROTHERS SPECIAL FINANCING INC. SWAPS PORTFOLIO
- IN EXCESS OF 60K TRADES, HEDGED AND SOLD OFF AT AUCTION
- $1 TN LEHMAN BROTHERS INTERNATIONAL EUROPE REPOS, EQUITIES, EXCHANGE TRADED COMMODITY, ENERGY AND FINANCIAL DERIVATIVES
- NO LOSS TO MEMBERS

<table>
<thead>
<tr>
<th>CLOSING OPEN POSITIONS</th>
<th>LEHMAN’S VARIATION MARGIN</th>
<th>LEHMAN’S INITIAL MARGIN</th>
<th>LEHMAN’S DEFAULT FUND CONTRIBUTION</th>
<th>RESERVES OF CCP</th>
<th>DEFAULT FUND</th>
<th>REPLENISHMENT OF CCP CAPITAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>If a clearing member (CM) fails, all open positions will be closed</td>
<td>Any open balances are compensated by the CM’s margins – variation margin covers daily/intraday gains/losses</td>
<td>Initial margin is the amount required to be collateralized in order to open a position</td>
<td>Any further open balances will be covered by the contribution of clearing member to the default fund of the CCP</td>
<td>Next, the reserves of the CCP will be used to cover losses</td>
<td>The default fund contribution of all other CMs will be used</td>
<td>Final line of defense is the equity of the CCP</td>
</tr>
</tbody>
</table>

There have been also been several historic failures or near failures of central clearinghouses. In each case, deficiencies in risk management and margining practices coupled with insufficient central counterparty financial resources were major contributing factors. In recent years, more stringent regulations and a move to more consistent standards have helped mitigate many of these risks.
A summary of notable central clearinghouse failures/near failures is shown in the table below:

<table>
<thead>
<tr>
<th>CCP</th>
<th>COUNTRY</th>
<th>DATE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caisse de Liquidation</td>
<td>France</td>
<td>1974</td>
<td>• Steep rise in sugar prices attracted speculative investors, who were</td>
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<tr>
<td></td>
<td></td>
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<td>caught out by a sharp correction, leading to inability to meet margin calls</td>
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<td></td>
<td></td>
<td></td>
<td>• CCP failed to increase margin in response to greater market volatility</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Lack of coordination between clearing house and exchange</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Allocation of losses among GCMs were not transparent</td>
</tr>
<tr>
<td>Kuala Lumpur Commodity Clearing House</td>
<td>Malaysia</td>
<td>1983</td>
<td>• Crash in palm oil prices led to the default of six brokers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• CCP slow to respond to market conditions – 12 day delay between</td>
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<td></td>
<td></td>
<td></td>
<td>market crash and broker default</td>
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<td></td>
<td></td>
<td></td>
<td>• Lack of management experience and coordination among</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>market participants</td>
</tr>
<tr>
<td>Hong Kong Futures Exchange</td>
<td>Hong Kong</td>
<td>1987</td>
<td>• Trading suspended for four days in the wake of “Black Monday”</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Bailed out by consortium of banks supported by government once it</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>was clear the guarantee fund would be insufficient</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Guarantee fund separate from clearing house and</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>exchange – clearing house responsible for risk management, but</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>was not exposed to losses</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• CCP did not increase margin despite sharp growth in trading volumes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• No position limits and high concentration of brokers</td>
</tr>
<tr>
<td>BM&amp;F</td>
<td>Brazil</td>
<td>1999</td>
<td>• Sudden $/Real devaluation caused two small clearing banks to default</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Margin and default funds insufficient as banks were beyond BM&amp;F</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>operational limits, and margin stress tests were inadequate for</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>major move</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Central bank intervened and bailed out the banks</td>
</tr>
</tbody>
</table>

1.3. THE OTC CLEARING LANDSCAPE TODAY

Following the G20 in Pittsburgh, central clearing preparations gathered momentum. Regulations were drafted and consulted on (more detail in the next section). Major investments were made by banks, clearinghouses, and other market participants to ready themselves for the new world of mass OTC central clearing.

A wide range of OTC products are cleared today – interest rate swaps, select credit products, a range of commodity contracts, some FX products – but is largely limited to inter-dealer flows (particularly in standardised interest rate swaps). Dealer-end client flows remain largely bilateral.
The OTC clearing landscape today contains a wide range of market participants.

- **The clearinghouses themselves.** Globally, banks clear through over 30 central clearinghouses today. However, a much smaller number of clearers dominate OTC flows – notably LCH.Clearnet, CME, ICE, Eurex, and DTCC – each with different strengths and weaknesses across OTC products (a range of interest rate swaps, credit indices, CDS, repo, FX, commodities). Many clearinghouses have been investing in developing and marketing their OTC offerings further, as end-client clearing is likely to remain a ‘sticky’ activity with incumbents advantaged over new entrants.

- **The tier 1 sell-side.** The top 10-15 broker-dealers have all made major infrastructure investments to become client clearers – that is to say, to be able to clear trades through central clearinghouses on behalf of end-clients (largely buy-side clients). However, at this point the economics of client-clearing are opaque for the sell-side. The upsides are clearing fees, new revenue pools in collateral transformation, positive multipliers into execution business and custody, and likely market share consolidation around the best clearers. But uncertainties remain around volumes to be included, potentially punitive capital and balance sheet requirements, growth in infrastructure costs, internal organisational disruption, and unclear and potentially lower-than-expected client demand. Many firms are in a difficult place on the clearing issue: keen to see a return on investment to date and benefit from new revenue streams and market consolidation, but concerned about the end-economics and potential scale of the business.

- **End-Fi clients.** Corporates and some other entities are exempted from regulatory requirements to clear centrally, but the majority of financial institutions are being instructed by regulators to clear in this way. This means that thousands of asset managers, hedge funds, and banks must ready themselves for a major change in the way they do business. Levels of preparedness vary wildly. The largest and most sophisticated institutions have already established clearing relationships with the sell-side and have a strategy for the change. Many other institutions have done very little, and face major challenges – notably accessing the collateral required to post as margin with clearinghouses, and readying their infrastructure. Some are considering aggressively reducing their OTC derivatives activities and replacing them with cash bond positions and listed futures positions.

- **Adjacent players.** Custodians, inter-dealer brokers, and exchanges all have businesses that are adjacent to central clearing. These institutions are looking for ways to take on the new business opportunities that may result from the move, potentially competing with the sell-side for client clearing roles, collaborating with sell-side institutions to build joint clearing offerings, or looking for new areas of electronic trading/collateral management/data provision that may offer attractive new revenue pools.
2. THE REGULATORY LANDSCAPE TODAY

2.1. PROFILE OF THE KEY REGULATIONS THAT WILL DETERMINE THE SHAPE OF CLEARING

Four main sets of regulation will determine the future shape of the OTC derivatives clearing markets: EMIR/MiFIR, Dodd Frank, Basel III, and CPSS-IOSCO. These are summarised in the table below.

<table>
<thead>
<tr>
<th>REGULATIONS</th>
<th>TIMELINE</th>
<th>CORNERSTONES OF REGULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. EU: EMIR and MiFIR</td>
<td>End 2012</td>
<td>• Mandatory exchange trading and central clearing of “standardised” OTC derivative contracts&lt;br&gt;• Assure broad scope of derivatives covered&lt;br&gt;• Exemptions for end-users below certain threshold&lt;br&gt;• Pre- and post-trade transparency requirements for prices and volumes</td>
</tr>
<tr>
<td>2. US: Dodd-Frank and CFTC</td>
<td>Q2 2012</td>
<td>• Robust CCP risk and liquidity management processes&lt;br&gt;• Minimum CCP capitalisation and margin requirements&lt;br&gt;• Segregation and portability of customer funds&lt;br&gt;• Reporting of all cleared and OTC transactions to trade repositories</td>
</tr>
<tr>
<td>3. Basel III</td>
<td>Gradual phase in by 2019</td>
<td>• Incentivise central clearing&lt;br&gt;  – Higher capital charges on bilaterally cleared trades (e.g. CVA charge, higher margin period of risk)&lt;br&gt;  – Preferential treatment of centrally cleared trades – low risk weight on trade exposure, but CEM in default fund exposure calculation&lt;br&gt;  – Encourage collateralisation – CVA heavily penalises uncollateralised trades</td>
</tr>
<tr>
<td>4. CPSS-IOSCO</td>
<td>End 2012</td>
<td>• Updated principles for CCPs, including&lt;br&gt;  – Higher financial resources and collateral requirements&lt;br&gt;  – More robust and frequent stress tests&lt;br&gt;  – Processes for orderly resolution of CM positions in event of default&lt;br&gt;  – Enhanced governance&lt;br&gt;  • CCPs need to comply to receive preferential treatment under Basel III</td>
</tr>
</tbody>
</table>
2.2. TIMING OF THESE REGULATIONS

2012-13 will be a vital period in which regulations are finalised, and many are planned to move to implementation.

1. EMIR/MIFIR

<table>
<thead>
<tr>
<th>EMIR final text</th>
<th>Technical specifications</th>
<th>All products transferred</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adopted by European Parliament in March 2012</td>
<td>ESMA to propose EMIR technical specifications (incl definitions of “standardised” contracts) by September 2012; EC to finalise by end 2012</td>
<td>Expected that all products are transferred to central clearing (IR, CDS, maj. FX) by mid 2015</td>
</tr>
</tbody>
</table>

2. DODD-FRANK

<table>
<thead>
<tr>
<th>Final DF regulation</th>
<th>All products transferred</th>
</tr>
</thead>
<tbody>
<tr>
<td>All DF-rules expected to be published and implemented by mid 2012</td>
<td>Expected that all products are transferred to central clearing (IR, CDS, maj. FX) by mid 2014</td>
</tr>
</tbody>
</table>

| 2012 | 2013 | 2014 | 2015 |

3. BASEL III

<table>
<thead>
<tr>
<th>Final BCBS 206</th>
<th>New capital requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finalised rules for capitalisation of CCP exposures by end 2012</td>
<td>Minimum capital requirements will be implemented earliest Jan 2013 and gradually phased in until 2019</td>
</tr>
</tbody>
</table>

4. CPSS-IOSCO

<table>
<thead>
<tr>
<th>Final report</th>
<th>Assessment methodology and disclosure requirements</th>
<th>Final rules expected end 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final updated principles published April 2012</td>
<td></td>
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</tr>
</tbody>
</table>
2.3. INTERNATIONAL DIFFERENCES

The Financial Stability Board (FSB) is attempting, on behalf of the G20, to ensure international consistency in regulations relating to central clearing. However, we see several international inconsistencies in regulation. Between EMIR and Dodd Frank, the cornerstones of US and EU regulation, there are some important differences, notably:

• Product definitions. There is still no internationally accepted definition of which products are ‘standardised’ and which must be centrally cleared.

• Central clearinghouse ownership. The US and EU are suggesting different regulatory approaches to determining which institutions and what sort of ownership structures are suitable. These regulations are also becoming political as they may have implications for which existing clearinghouses will be successful in which jurisdictions.

• Clearinghouse interoperability. This is considered within EMIR but not in Dodd-Frank.

• Minimum default fund requirements. EMIR and Dodd-Frank have different formulations for minimum size of default funds.

• Systemically important/unimportant clearinghouses. This is considered in the US (and some institutions have been flagged as systemically important). It is not considered in a similar way in European regulations.

• Basel III capital regulations. The EU is targeting initial phasing in of Basel III as early as Jan 2013, while the US has longer term targets for implementation.

Leaving aside the US and EU, many other G20 members remain uncertain about their approach to central clearing. Regulations have been drafted or considered in some economies (e.g. Japan, Hong Kong, Singapore Brazil, India and South Africa), but the regulatory environment and target approach in others is a long way from being finalised.

In many of these markets, as well as some EU countries outside the Eurozone, there are large risks to requiring all local market participants to use a local OTC clearing house. The efficiency of central clearing depends on the ability to net across a large set of trades. In many local markets where volumes are low, there is little netting efficiency to be gained from moving to central clearing, while there are likely to be real operational challenges from any such move.

A clearing house works best with a relatively homogenous group of clearing banks who are able to pull together in the event of a clearing bank default and quickly unwind the trades of that bank. The structure of many local markets, with low volumes and only a small number of sizeable players, would likely result in high risk concentrations residing in the clearinghouse.

Further the suggestion that this problem could be circumvented by requiring interoperability between local and major global clearing houses is not credible because it could create major systemic exposures between clearinghouses. Pragmatism is required here to differentiate between the trading and risk profiles of a few, sizeable local banks in each market vs. many smaller market participants that need a different solution.
3. BASEL CAPITAL REQUIREMENTS

3.1 PROFILE OF THE REGULATIONS

Under the current proposed Basel approach, banks will be required to hold capital against two types of exposures to central counterparties (CCPs):

- Trade exposures of banks to CCPs – to be applied to trade positions and margin collateral posted to the CCP
- Default fund exposures – to be applied to the default fund contribution of a clearing bank

A bank’s trade exposure to CCPs continues to be calculated in a method consistent with the bank’s other bilateral OTC derivative exposures e.g. using the Current Exposure Method (CEM), Standardised Method, or Internal Model Method (IMM), but receives a preferential risk weight of 2% (provided the CCP complies with the new CPSS-IOSCO principles).

This results in a much lower risk weight than a bilaterally-cleared trade (the small positive risk weight is applied to incentivise counterparties to monitor risks). The trade exposure is also exempt from CVA charges.

However, the capital requirement for default fund exposure is potentially much larger than the trade exposure. The calculation of this capital requirement involves the following key steps:

1. A hypothetical capital requirement is calculated for the CCP by summing up the exposures the CCP has against all of its clearing banks using CEM, deducting collateral and then applying a risk weight (20%) and capital multiplier (8%). The CEM calculation in this instance has slightly higher recognition of the Net-to-Gross Ratio (NGR) – currently proposed at 0.7 compared to 0.6 for bilateral trades.
2. The hypothetical capital requirement is then compared to the overall financial resources of the CCP – default fund contributions plus own funds – in order to derive an aggregate capital requirement for all clearing banks.
3. Finally, the aggregate capital requirement is distributed to all clearing banks based on the size of their default fund contribution.

For client trades (i.e. where the bank is clearing trades on behalf of a client), the bank’s exposure to the client likely to remain subject to bilateral capital charges.

Fundamentally this approach risks limiting the incentives for centrally cleared trades vs. bilateral trades, as we discuss in more detail in the next section. If large parts of the OTC derivatives markets are to be transferred to central clearing, market participants will need clear economic incentives as well as specific legal requirements.

In addition to this, as CEM is based primarily on notional volumes, it is not sophisticated enough or risk sensitive enough to play such an important role in the calculation. This causes a probable over-estimation of risk and a structurally insufficient recognition of netting benefits (the latter being one of the main reasons to encourage central clearing).

1 Initial and variation margin, and clearing bank-specific prefunded default fund contribution
3.2. ANALYSIS OF THE INCENTIVES OR DISINCENTIVES TO CLEAR OTC DERIVATIVES TRADES CENTRALLY

We have analysed the capital costs for banks to clear bilaterally vs. centrally under the current Basel proposals. We have two concerns:

- For inter-dealer trades that are already heavily collateralised, there could be limited incentives to move some trades to central clearing under the proposed Basel III requirements.
- For end-client trades, the higher capital requirements proposed by Basel risk limiting incentives for banks to become client clearers.

3.2.1. INTER-DEALER TRADES

Post-financial crisis, most trades between major dealers (i.e. the institutions that are most likely to be clearing banks) are heavily collateralised and typically subject to daily re-margining, with zero threshold and no initial margin. Under IMM (which most major banks use), these bilaterally-cleared trades have relatively low exposure\(^2\) and attract correspondingly low capital charges.

The introduction of Basel III will require banks to hold more capital against these trades by introducing a capital charge for credit valuation adjustments (CVA), a higher floor on margin period of risk and higher asset value correlations (AVC). These will on average increase the capital charge on bilaterally-cleared trades by up to ~2x, and should in theory incentivise central clearing, which is exempt from these charges.

However, the benefits of central clearing are not unambiguous for all trades under proposed rules. By moving to central clearing, dealers will benefit from a combination of:

- Lower exposures due to position and mark-to-market (MTM) netting
- Lower risk weights (2%) on trade exposure
- Potentially lower variation margin requirements (due to MTM netting)

But these are offset – or sometimes more than offset – by

- Additional default fund exposure capitalisation
- Potentially higher initial margin requirements

As a result, central clearing may in fact be more expensive in capital terms than bilateral clearing, especially for fully collateralised trades between well-rated counterparties, as shown in the following analysis:

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2 MTM is fully covered by variation margin – remaining exposure mostly due to margin period of risk.
RWA REQUIREMENTS FOR AN INTEREST RATE SWAP BETWEEN DEALERS, BILATERAL CLEARING VS. CENTRAL CLEARING

RWA AS PROPORTION OF NOTIONAL OUTSTANDING

<table>
<thead>
<tr>
<th>BILATERAL (IMM UNDER DAILY MARGINING)</th>
<th>CCP CLEARED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basel 2 RWA</td>
<td>Trade exposure</td>
</tr>
<tr>
<td>Basel 3 add ons</td>
<td>Default fund exposure¹</td>
</tr>
<tr>
<td>Total</td>
<td>Total</td>
</tr>
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</tbody>
</table>

¹ Including CCP own-funds requirement

The calculation is sensitive to the NGR weight embedded in the CEM calculation (currently the NGR weight is proposed at 0.7). This is shown in the graph below:

SENSITIVITY TO THE NGR WEIGHT

AGGREGATE RWA REQUIREMENTS UNDER DIFFERENT LEVELS OF NGR RECOGNITION AS PROPORTION OF NOTIONAL OUTSTANDING (BPS)

Under this analysis the NGR weight would need to be 0.9 or more to provide a (small) capital incentive for centralised clearing.
3.2.2. END-CLIENT TRADES

Current rules are likely to penalise banks who take on the role of client clearing – that is, of clearing trades on behalf of hedge funds, asset managers and smaller banks through a CCP.

This is because clearing brokers are likely to have to treat the exposure to end-clients as bilateral trades, causing one or both of capital and balance sheet requirements to increase on the bilateral part of the trades, as well as holding capital against the trades with the CCP. This is illustrated below:

Clearing brokers could respond in several ways:

- **Pass additional capital costs to clients.** This could be achieved by increasing fees, or by other indirect means, such as overcollateralisation. But this may not be possible given the cost of capital and lack of client appetite for higher fees.

- **Not provide client clearing services.** This will reduce the overall benefit to the system as volumes remain outside the CCP system. It will also reduce competition and limit choices for clients.

- **Cease being clearing brokers.** Banks can gain the full benefit of central clearing without being a direct clearing bank by routing trades through another clearing broker (potentially a non-bank).

- **Do nothing to move additional products towards central clearing.** Since moving additional products to central clearing would require a concerted industry effort, incentives for this move would need to be more powerful than currently constructed.
4. CONSIDERATIONS FOR POLICYMAKERS

Moving standardised OTC derivatives products to a centralised clearing model is a fundamentally difficult challenge for policymakers and market participants. The regulatory environment will be a vital lever in meeting this challenge, and in ensuring that market evolves in a beneficial and stable manner. We offer four core pieces of advice for policymakers that are described below.

4.1. SAFETY AND SIMPLICITY

Safety and simplicity must be the first principles of regulation in this area, given the risks involved. Specifically we would suggest:

- Care over the initial mandatory product scope of central clearing. We would recommend a very tight initial focus on $, £, € and ¥ interest rate swaps, credit indices, and a small number of the most liquid CDS contracts. This would leave many commodities products, other CDS contracts, and other interest rate & FX derivative contracts to develop organically – i.e. as and when clearinghouses, end-users and banks are ready to do so. If this proved to move too slowly (and if the initial product moves to central clearing were successful), regulators always retain the option for further action at a later date.
- Phased transition to central clearing. A big-bang change is unlikely to be operationally feasible (not least given the number of end-user clients to be onboarded by clearinghouses and banks). A meaningful compliance phase is likely to be needed.
- Care over the prescriptions for exchange-like trading and price discovery (SEFs in Dodd-Frank parlance). We consider this to be an adjacent but distinct issue to central clearing that will take longer from this point to construct correctly. Rather than rush this or slow down the progress towards central clearing, we would recommend focusing on the OTC clearing environment, before making changes to the price discovery and execution layer of the market.

4.2. ADEQUATE INCENTIVES

Legal requirements to centrally clear OTC derivatives are one thing, but market participants will also need realistic economic incentives. Without such incentives, the outcome of OTC clearing regulation will not be more central OTC clearing, but a mix of damage to liquidity, slow or no expansion of central clearing to new products, and a shift from standardised, more regulated products to non-standardised products or jurisdictions where OTC clearing is not mandatory.

We would propose adjusting the proposed Basel rules which currently limit incentives for central clearing:

- Regarding default fund capitalisation
  - Replace CEM with an alternative capital calculation methodology that better reflects the actual exposure and multi-lateral netting benefits of central clearing. There are several options for this, most obviously using the IMM or Standardised Method.
  - If this is not a near-term option, the NGR weight or de facto overall capital ratio (trade exposure + additional default fund exposure) could be adjusted
- Regarding the capital treatment for “client clearer” banks
  - Re-assess the CVA and balance sheet treatment of these trades to ensure that there are sufficient incentives for banks to take on the important role of client-clearing
4.3. TRANSATLANTIC CONSISTENCY

We believe that more consistency between the US and EU is needed, but at the same time a more realistic ambition is merited in smaller G20 markets. Specifically:

- Regulators should aim for closer consistency between the key elements of Dodd-Frank and EMIR – notably the definitions of standardised products, approaches to central clearinghouse ownership, approaches to interoperability, and definitions/recognition of too-big-to-fail clearinghouses.
- The timing of Basel III implementation also requires attention. The gap between the US and EU, and between some EU members remains a barrier to progress.
- The approach for “non-EU and non-US G20 members” should be reassessed. We question whether all G20 members should be held to the same FSB standards on central clearing. In fact we think it is already very clear that they cannot be. In OTC derivatives markets with thin liquidity or very concentrated liquidity providers, central clearinghouses may in fact be ineffective and inappropriate. A near-term ambition focused on the US and EU is realistic (and ambitious enough). Many other countries will need more time to determine the best approaches to central clearing given the characteristics of their national markets.

4.4. STRENGTHENED CPSS-IOSCO REQUIREMENTS

The positioning of OTC clearing in the broader context of CPSS-IOSCO principles for market infrastructure is an important question. We believe that:

- Regulators should review the level of overlap of EMIR and Dodd-Frank with CPSS-IOSCO, especially with regards to risk policies, margining and collateral management practices, and minimum default fund requirements.
- Regulators should also provide guidance to market participants on areas where they consider CPSS-IOSCO to be more or less far-reaching than their own national regulation. This will help drive the compliance efforts of market participants. Also, any areas where regulators see a need for differentiated policies across OTC and listed markets should be clearly flagged.
- More work is needed to ensure a global level playing field for clearinghouses and avoid a “race to the bottom” in terms of risk and margining standards. CPSS-IOSCO leaves too much room to manoeuvre over initial margin calculation, stress test methodologies, credit risk management and liquidity risk management, particularly in an environment where the major clearinghouses will likely be too big to fail.
- The enforceability of the CPSS-IOSCO principles will depend on the degree of alignment with national regulation. Hence, the possibility of including references to EMIR and Dodd-Frank in the CPSS-IOSCO principles should be explored as a next step. By achieving CPSS-IOSCO compliance, CCPs would also achieve compliance with OTC regulations.
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