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Mandating Central Counterparty Clearing of OTC Derivatives

Extraterritorial Provisions and Cross-Border Solutions

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Table of Contents

Summary.....	4
Abbreviations.....	6
1 Introduction.....	7
1.1 Background.....	7
1.2 Objective.....	9
1.3 Method and Theoretical Framework.....	9
1.3.1 Introduction.....	9
1.3.2 Chosen Method and Basic Assumptions.....	10
1.3.3 Benefits from and Challenges of Chosen Method.....	12
1.3.4 Material.....	12
1.4 Delimitations.....	13
1.5 Disposition.....	14
PART I – CENTRAL COUNTERPARTY CLEARING AND REGULATORY DEVELOPMENT.....	15
2 Central Counterparty Clearing.....	15
2.1 G20 Objectives.....	15
2.2 The Role of and Benefits from Central Clearing.....	16
2.2.1 The CCP as a Central Counterparty.....	16
2.2.2 Clearing Membership.....	17
2.2.3 Client Clearing Arrangement.....	18
2.2.4 The CCP’s Protection.....	18
2.2.5 The Nature of the Derivatives Contract.....	20
2.2.6 Actions in Event of Default.....	22
2.2.7 Benefits from Central Clearing.....	23
3 Regulatory Round-trip.....	25
3.1 Participants Subject to Clearing Obligation.....	26
3.1.1 The US.....	26
3.1.2 The EU.....	27
3.1.3 Asia Pacific.....	28
3.1.4 Key Takeaways.....	28
3.2 Products Subject to Clearing Obligation.....	29
3.2.1 The US, The EU and Asia Pacific.....	29
3.2.2 Key Takeaways.....	29
3.3 Cross-Boarder Transactions Subject to Clearing Obligation.....	30
3.3.1 The US.....	30
3.3.2 The EU.....	30
3.3.3 Asia Pacific.....	31
3.3.4 Key Takeaways.....	32
3.4 Eligible CCPs.....	32
3.4.1 The US.....	32
3.4.2 The EU.....	33
3.4.3 Asia Pacific.....	34
3.4.4 Key Takeaways.....	36
PART II - IDENTIFICATION OF PROBLEMS CAUSED.....	37
4 Identification of Problems.....	37
4.1 Participant Perspective.....	38
4.1.1 Re-structuring of Transactions.....	40
4.1.2 Multiple Clearing Memberships.....	40
4.1.3 Key Takeaways.....	43
4.2 CCP Perspective.....	43
4.2.1 Multiple Clearing Memberships.....	44
4.2.2 Recognition Projects without Certain Outcomes.....	44
4.2.3 Higher Standards.....	45
4.2.4 Equivalence in Standards.....	46
4.2.5 Key Takeaways.....	46
4.3 Market Perspective.....	47

4.4 Reasons for Protectionist and Extraterritorial Approaches	49
PART III – PROPOSED SOLUTIONS AND WAYS TO MITIGATE PROBLEMS CAUSED.....	51
5. Solutions.....	51
5.1 International Harmonisation	51
5.2 Regimes for Recognition of Overseas CCPs	53
5.2.1 Recognition Regimes Proposed to Date.....	53
5.2.2 Alternative Recognition Regimes	55
5.2.3 Key Takeaways	58
5.3 Interoperability	59
5.3.1 What is interoperability?	59
5.3.2 Interoperability Development to Date	60
5.3.3 Benefits from Interoperability	62
5.3.4 Interoperability – a Risky Business?.....	64
5.3.5 Interoperability in the OTC Derivatives Space.....	68
5.3.6 Key Takeaways	69
6 Final Remarks.....	70
6.1 Introduction	70
6.2 Concluding Discussions	72
6.2.1 The Overall Level	73
6.2.2 The Legislative Level	73
6.2.3 The Constructive Level	74
6.3 So, What Happens Now?	75
References	77

Summary

“Taken together, interconnectivity and opaqueness were a perfect recipe for disaster. Interconnectivity meant high contagion risks and the ability for a single failure to spread to the entire financial system. Opaqueness meant that many firms were simply unaware of these contagion risks and therefore failure to implement appropriate risk management practices. This was compounded by the fact that even regulators lacked the information required to properly assess the build-up of exposures in the market and devise preventive measures.”¹

Against this background, regulators worldwide came together to work on a reform of the over-the-counter (“OTC”) derivatives market. Central counterparty (“CCP”) clearing of these OTC derivatives was identified as one of the key ways of mitigating the weaknesses seen in the financial crisis that culminated in the fall of 2008. Therefore, the G20 leaders agreed that all standardised OTC derivatives should be cleared through CCPs by end 2012. Over the last years regulators across the globe have developed legal frameworks governing this central clearing mandate.

Despite the efforts for international harmonisation, it seems like various regulators have not conquered the vastly troublesome task of regulating an international market on a national basis. Extraterritorial and protectionist approaches, especially seen in the US and the EU frameworks, cause participants and CCPs operating cross-border transactions great problems. International participants will have to comply with an overlapping multi-layered web of regulatory requirements, which may force them to re-structure their trades and hold multiple clearing memberships or multiple client clearing arrangements. CCPs face the prospect of not being able to clear transactions for their international participants. In turn, these problems bring about detrimental effects to the financial market on the whole.

¹ Extract from speech held by Edmond Lau, Executive Director of Hong Kong Monetary Authority (<http://www.hkma.gov.hk/eng/key-information/speech-speakers/eyplau/20111025.shtml>) (All websites visited on 4 August 2012).

There are no perfect ways of solving the problems identified. Nevertheless, there are ways to mitigate the negative effects of these extraterritorial and protectionist provisions either by slight changes to the frameworks or through other means.

On an overall level, further harmonisation across jurisdictions would be preferable. On the legislative level, well-balanced regimes for recognition of overseas CCPs are identified as the best, and most likely, way of solving the problems. Examining the proposed regimes for recognition of overseas CCPs, it would be beneficial to require CCPs to meet requirements on par with international standards instead of requiring them to meet requirements equivalent to domestic laws as seen in today's recognition regimes. Alternatively, applicant CCPs' standards should be assessed in relation to domestic laws, but on an effect-based level. Stepping outside the legislative world, interoperability between CCPs clearing OTC derivatives is recognised as a possible problem solver. However, due to the risks associated with interoperability in combination with the immaturity of the OTC frameworks and lack of experience in clearing these OTC products, introducing interoperability as a solution to the problems identified cannot be justified to date.

Abbreviations

AML/CFT	Anti-money Laundering/Combating the Financing of Terrorism
ATS	Automated Trading Services
AUD	Australian Dollar
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
CCP	Central Counterparty
CDS	Credit Default Swaps
CEA	Commodity Exchange Act
CFTC	The US Commodities Futures Trading Commission
DCO	Derivatives Clearing Organisation
EBA	European Banking Authority
ECSDA	European Central Securities Depositories Association
EIOPA	European Insurance and Occupational Pension Authority
EMCF	European Multilateral Clearing Facility
EMIR	European Market Infrastructure Regulation
ESAs	European Supervisory Authorities (EBA, EIOPA and ESMA)
ESMA	European Securities and Markets Authority
FESE	Federation of European Securities Exchanges
FINMA	Swiss Financial Market Supervisory Authority
FIs	Financial Institutions
FSB	Financial Stability Board
FSR	The Financial Services Roundtable
GFMA	The Global Financial Markets Association
G20	Group of 20
HKMA	Hong Kong Monetary Authority
IBFed	The International Banking Federation
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
IRS	Interest Rate Swaps
ISDA	International Swaps and Derivatives Association
MAS	Monetary Authority of Singapore
MiFID	Market in Financial Instruments Directive (2004/39/EC)
MTFs	Multilateral Trading Facilities
NDFs	Non-Deliverable Forwards
OTC	Over-The-Counter
RCH	Recognised Clearing House
SEC	The US Securities and Exchange Commission
SFA	Securities and Futures Act
SFC	Hong Kong Securities and Futures Commission
SGX-DC	Singapore Exchange Derivatives Clearing Limited
SIFIs	Systemically Important Financial Institutions
USD	US Dollar

1 Introduction

1.1 Background

The global financial crisis exposed vulnerabilities in the business models of financial institutions (“FIs”), in particular in relation to the practice of wholesale investment banks. These vulnerabilities include opacity, high leverage, risk management weaknesses and a high degree of interconnectedness between FIs.

One can mention several reasons why the recent financial crisis grew to be one of the greatest of all times, but arguably no factor was and remains more singularly associated with the detrimental interconnectedness between FIs than their active presence in the OTC derivatives market.² By definition, the OTC derivatives market does not have a central marketplace where all trades occur.³ These contracts are traded off-exchanges on a bilateral basis, which means lack of transparency and limited abilities to assess exposures and interconnections of participants in this market.⁴

At the apex of the financial crisis in the fall of 2008 even the best capitalised FIs came under great stress due to the fear of inextricably connection between the market participants. Major dealers were connected through tens of thousands of bilateral OTC contracts – a system which includes the consequence that when a dealer fails, its surviving counterparties are left with outstanding positions and a need to replace “orphaned” contracts in a volatile market. This is what happened when Lehman Brother defaulted.⁵

In the wake of the financial crisis it became apparent that neither market participants nor regulators had a good understanding of exposures and linkages within the OTC derivatives markets. The poorly utilised bilateral risk management tools, the inherent interconnectedness and opacity of the markets were factors identified as key issues that needed to be dealt with to achieve stability. This understanding led to a search for new market institutions that could reduce the likelihood and severity of financial

² Yavorsky, *OTC derivatives market structure and the credit profiles of wholesale investment banks* p. 144.

³ Acharya, Cooley, Matthew and Walter (2011) p. 368.

⁴ Acharya, Cooley, Matthew and Walter (2011) p. 368.

⁵ Acharya, Cooley, Matthew and Walter (2011) p. 368-369.

crises.⁶ Alongside three other key measures, clearing through CCPs was identified as a problem solver.

Given the highly globalised nature of the OTC derivatives market, it was acknowledged that the OTC reform had to be internationally coordinated. Such movement emerged in 2009 when the G20 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.”⁷

The year of 2012 is here, the deadline for implementation of the G20 objectives is rapidly approaching and regulators are urged to aggressively push ahead to achieve full implementation.⁸ The, up until now, largely unregulated OTC derivatives market currently faces major changes as legal frameworks⁹ are being proposed across the globe. Despite all good intentions however, these regulatory regimes are causing great obstacles to overcome for participants¹⁰ and CCPs.

The trading of OTC derivatives is to a great extent executed on an international basis with cross-border trading and international participants.¹¹ This in itself is as a reason for imposing extraterritorial provisions. However, the extraterritorial and protectionist provisions seen in these new frameworks cause great distress to both participants and CCPs in trying to comply with several regulatory regimes put forward in various jurisdictions. Duplicative rules will cost, ultimately impacting the real economy, while not necessarily serving any regulatory goal.

⁶ Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 5.

⁷ G20, Pittsburgh Summit Leader’s Statement, 24-25 September 2009 (www.g20.org/images/stories/docs/eng/pittsburgh.pdf).

⁸ FSB, *Overview of Progress in the Implementation of the G20 Recommendations* p.18

⁹ Throughout, I use the term “frameworks” to mean laws and regulations governing the G20 objectives, and the central counterparty clearing mandate in particular.

¹⁰ “participants” are for the purpose of this paper defined as the institutions that will be subject to the clearing mandate, i.e. traders being clearing members or clients to clearing members of CCPs.

¹¹ A very high proportion of the trading in the OTC derivatives market is cross-border, and this trend is apparent across most currencies and counterparty types. For example, almost 65% of transactions (by value) in OTC interest rate derivatives take place between counterparties resident in different countries. Please refer to BIS, *The macrofinancial implications of alternative configurations for access to central counterparties in OTC derivatives markets* p. 5.

1.2 Objective

The objective of this thesis is to:

- (i) Identify problems caused by the new regulatory regimes governing the central clearing mandate across the globe, focusing on extraterritorial and protectionist provisions that will bring about problems for (a) participants and (b) CCPs, from a cross-border point of view; and to
- (ii) Identify and analyse possible solutions or ways to mitigate the problems identified.

1.3 Method and Theoretical Framework

1.3.1 Introduction

Reading this paper expecting a traditional student essay, it would perhaps appear that this has little to do with law or legal research and that the author in question largely must have misunderstood the task in front of her. The reason why this thought or opinion may surface is because the method and theoretical framework used in this thesis is not the average of a traditional legal research. The area of law and objective chosen simply do not allow for such traditional method to be applied for the following reasons:

- This is a brand new area of law generated by weaknesses in a market and created to mitigate these weaknesses. Naturally, it is tightly connected to the economics of the financial market and the practice and business of key institutions in this market, why research from a market perspective is essential.
- The law concerned in this thesis lack of classic legal sources – such as doctrine, case law and traditional legal research – and as a consequence demands a different approach to analysing the relevant legal questions asked.
- The approach of this thesis is neither national nor international law. Instead, the thesis focuses on the problems that can emanate from a legislative structure where national law regulates an international market. Likewise, the research performed on how to resolve these problems is not from a specific country's perspective, but on a global multi-jurisdictional level. This approach requires a method that focuses on the structural issues rather than the traditional legal questions related to specific jurisdictions' laws.

The method and the theoretical framework that are described in the following are chosen to comply with the criteria set out above.

1.3.2 Chosen Method and Basic Assumptions

As indicated in the introduction of this chapter, the traditional legal dogmatic method has not been applied in this thesis.¹² The reason why another methodical approach has been chosen is – in short – because the legal dogmatic method could and cannot answer the legal questions raised in this thesis, in particular with regard to the following.

The legal dogmatic method generally aims to describe and interpret the law. Furthermore it presupposes that the aim of legal research is to serve the judges in their judgements, to outline a consensus on how a matter of law ought to be interpreted. The main perspective is therefore that of a judge.¹³ A natural consequence of this method's aim is the usage of the authoritative frame of the doctrine of sources of law, even if other sources may be used as a complement when aiming to determine a legal unclarity.¹⁴ The legal dogmatic method may not be a necessity for legal research, but nevertheless permeates the other broadly accepted methods and theories seen in legal science, at least from a Swedish perspective.¹⁵

The aim of this thesis is, on the contrary, not to in depth examine “existing law”. Neither is the purpose to provide interpretive guidance to legal practitioners such as judges and lawyers, but rather to analyse a brand new area of law from a market perspective in order to come up with legal and practical solutions to the structural problems identified in these frameworks.¹⁶ To fulfill this aim the method described in the following has been used.

¹² Part I in this paper describes the role of a CCP and the legal frameworks that are analysed in this thesis. Of course, at least a “light version” of the legal dogmatic method was used in this part. However, describing the frameworks is actually not a part of the objective of this thesis, but rather a necessary step to enable the analysis performed to achieve the objective. For this reason the legal dogmatic method used in Part I is left aside for the purpose of framing the method used to achieve the objective of this thesis.

¹³ Ross (1953) p. 47 *et seq.*

¹⁴ Sandgren (2006) p. 534-536.

¹⁵ This assumption is predominant in most analysis of what legal science is and which methods that may be used in legal research. See e.g. Sandgren (2006), Olsen (SvJT 2004).

¹⁶ That said, not meant that judges and lawyers do not need to take part of or consider new legal and practical solutions.

Three perspectives have been applied throughout the paper;

1. the participant perspective;¹⁷
2. the CCP perspective; and
3. the market perspective.

The market perspective itself, i.e. what serves the stability and resilience of the market, is closely connected to the other two perspectives. To put it simply, an overall market perspective is applied, but analysed through the eyes of the two most relevant stakeholders: the participants and the CCPs. It may not be ideal to distinctly separate these three perspectives at all times. After all, both the participants and the CCPs somewhat constitute the market. As a consequence these three perspectives may not necessarily represent opposing interests.

1.3.3.1 Identification, Creation and Justification – from Three Perspectives

The three perspectives follow the objective of this paper. Firstly, the frameworks are analysed from the three perspectives to identify problems from a global standpoint. Secondly, analysis of the problems for the purpose of creating solutions to the same is provided, this also through the method of applying the three perspectives. In the creation process, the analysis also steps outside the legal frameworks to investigate if any other legal devices seen in associated markets would benefit the three perspectives. Finally, by applying the three perspectives on the proposed solutions, assessments are made whether these can be justified or not. It may, as indicated above, not be beneficial to differentiate the market perspective from the participant and CCP perspective at all times, i.e. it serves no purpose to distinguish the perspectives when the arguments from both sides coincide.

Naturally, the best solution is reached when it furthers both the participant and the CCP perspective, but not on the cost of a less resilient and stable market. This statement invokes a slightly controversial passus, namely; what is deemed good for the participants, the CCPs and the market on the whole - *is trading for the greater good?*

¹⁷ The participant perspective is that of the institutions that will be subject to the clearing mandate, i.e. traders being clearing members or clients to clearing members of CCPs.

1.3.3.2 The Axiomatic Perception – Trading is for the Greater Good!

In most markets it is fairly accepted that increased trading is good and foster prosperity, in general one could say that it is an axiomatic assumption. Simply put, phenomena that obstruct trading are generally deemed bad. When it comes to the trading of (some) OTC derivatives however, opinions part. There have been calls for prohibiting the trading, as it may be recognised as only benefit some financial institutions, but possibly being largely detrimental to the economy on the whole. Nevertheless, national regulators and international bodies seem to have come to the conclusion that the trading of OTC derivatives is good, albeit under controlled circumstances. Thus, adopting the same conclusion, the method used in this thesis is based on the assumption that - *trading is for the greater good!*

1.3.3 Benefits from and Challenges of Chosen Method

The method chosen benefits the objective of this paper by means of keeping the practical perspective on this new area of law. In many ways these frameworks are not ready to be studied from a strictly classic legal perspective. Applying the method of three perspectives from a global standpoint allows an analysis of the new legal frameworks without getting into too many details that are not yet finalised, but to on a structural level discover what problems there are at this stage and to propose legal and practical solutions.

The challenge is not so much of a methodological issue, but rather the lack of reliable and authoritative sources. The scientific level can thereby be questioned. Nevertheless it is at least an attempt to combine knowledge of an industry with legal thinking, and the thesis itself shows the necessity to as a lawyer, scholar, judge, or whichever perspective you may apply, know the surroundings where your legal thinking touches ground.

1.3.4 Material

Indicating the lack of reliable and authoritative sources, it may be worthwhile saying a few words on material used. This is a rapidly developing area of law, thus changes in the legal frameworks analysed may be underway. However, both the US and the EU legal frameworks are properly adopted, but all relevant details are not yet finalised in subsidiary legislation. When it comes to the other jurisdictions' frameworks, these are merely in the consultation stage, thus less reliable.

In addition to legislative frameworks, the materials studied are mainly reports and recommendations issued by internationally recognised organisations and institutions. These sources are reliable and authoritative within this area of law. However, one can argue that these sources tend to be less “objective” compared to information and analysis available in relation to areas of law penetrated by legal scholars and judges. To conclude, even though the most reliable sources are used, legislations are possibly subject to change and recommendation and analysis may vary depending on the author, who generally is supported by a certain stakeholder.

1.4 Delimitations

Given CCPs’ increased importance in mitigating counterparty risk and interconnectedness in the OTC derivatives markets, which were predominant reasons for the failure and great stress FIs faced in the financial crisis, this paper focuses on the regulatory regimes governing the central clearing obligation. For the purpose of this paper, the remaining three G20 objectives are largely left aside. Although, a brief description of the other objectives is provided and attention is drawn to these when needed for deeper understanding.

References will be made to legislation proposed or implemented in the jurisdictions holding the largest OTC market, which foremost are the EU and the US. To get a better overview and to take account of Asia’s growing importance in the international financial market, references will also be made to countries in Asia Pacific where relevant. Even though Japan holds a large OTC derivatives market, the regulation in Japan is largely left aside due to difficulties in analysing primary sources. The aim is not to give an exhaustive detailed description of legislation proposed, but rather to emphasise problematic national provisions in an international context, by way of example, in line with the thesis’ objective.

The phenomenon to regulate extraterritorially may be interesting to discuss from an international law perspective, however this discussion does not fit within the objective of this thesis and is thus left aside.

1.5 Disposition

This paper is structured in three parts. Part I gives the reader a background as to the role of and benefits from central counterparty clearing and the regulatory development seen in various jurisdictions governing the clearing mandate. Part I provides the reader an understanding of the regulations' structure and information necessary to thoroughly follow Part II and III. In Part II problems caused by the regulations described in Part I are being identified. The problems will also be exemplified by certain scenarios, which hopefully benefit the reader's understanding. Subsequently, analysis as to why regulators persist in proposing these regulations despite its problems caused will be provided. By doing so, the reader will enhance its ability to recognise the complexity in regulating the OTC derivatives markets. Finally, Part III analyses and proposes possible solutions or ways to mitigate the problems caused. Reaching the end, some concluding remarks and personal points of view are outlined.

PART I – CENTRAL COUNTERPARTY CLEARING AND REGULATORY DEVELOPMENT

2 Central Counterparty Clearing

Prior to addressing the frameworks governing the central clearing mandate it is relevant to firstly give a brief account of the G20 objectives and their purposes respectively and more thoroughly explain the role of and benefits from central counterparty clearing.

2.1 G20 Objectives

One of four objectives set out by the G20 prescribes that all standardised OTC contracts shall be cleared through CCPs, which is the main focus in this paper.¹⁸ In addition G20 prescribed three closely connected objectives: on-exchange trading of OTC derivatives where appropriate, reporting of OTC derivatives transactions to trade repositories and higher capital requirements for non-centrally cleared products. In 2011 G20 agreed to add margin requirements on non-centrally cleared derivatives.¹⁹

The main purposes of the objective of requiring on-exchange trading of OTC derivatives are to achieve standardisation, increase transparency, enabling oversight and to protect against market abuse.²⁰ The regulatory development as regards this objective has not progressed to the same extent as the other objectives.

The reporting mandate is likewise introduced to increase transparency, enabling proper oversight. The idea is that trade repositories should play an important role in providing information, enabling authorities to ascertain accurate information concerning the OTC contract shortly after it is entered into, as well as information concerning any changes to the contract throughout its existence. In turn this available information could serve to promote financial stability, assist in detection and prevention of market abuse and enhance the transparency of information relevant to authorities and the public.²¹

¹⁸ The G20 objective of requiring clearing through central counterparties is in this paper commonly referred to as the "clearing mandate" or "clearing prescription".

¹⁹ G20, *Cannes summit final declaration* (www.g20.org/images/stories/docs/eng/cannes.pdf).

²⁰ IOSCO, *Report on Trading of OTC Derivatives* p. 4.

²¹ BIS and IOSCO, *Report on OTC derivatives data reporting and aggregation requirements* p. 2.

Recognising that not all OTC derivatives would be suited for central clearing due to lack of standardisation and insufficient liquidity, participants trading non-centrally cleared products will be subject to higher capital requirements and posting of collateral instead. Imposing capital and margin requirements on non-centrally cleared contracts will not mitigate the systemic risk for the purpose of reduction of interconnectedness, neither mitigate the counterparty risk associated. However, margin requirements for non-centrally-cleared derivatives would be expected to reduce contagion and spillover effects by ensuring that collateral are available to offset losses caused by the default of a counterparty. Furthermore, if the participants need to post collateral regardless of using a clearing house, this could promote voluntary clearing making the G20's reform programme more effective.²² Regulations concerning margin and capital requirements for non-centrally cleared products are underway.²³

2.2 The Role of and Benefits from Central Clearing

Widely spoken, a CCP may be understood as a market-generated “legal device”, an institution designed to manage risks in the markets by means of the interaction of various private law techniques.²⁴ To be clear, the central counterparty is just an ordinary company whose only business is to act as a central counterparty. Its shares can be owned by the participants who are using the company, or the shares can be owned by independent shareholders or by for example an exchange.²⁵ Realising that the reader of this paper may not be familiar with the concept of clearing through central counterparties, it is necessary to give an account of how the CCP actually works. This knowledge is essential to understand the clearing mandate's impact on participants, CCPs and the market, as being analysed in Part II and III of this paper.

2.2.1 The CCP as a Central Counterparty

Simply put, the CCP becomes the buyer to every seller and the seller to every buyer. As a consequence the buyer and seller of a product will not be counterparties, but

²² BCBS-IOSCO, *Margin requirements for non-centrally-cleared derivatives* p. 2.

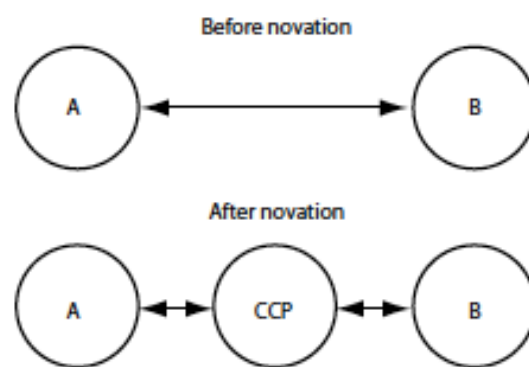
²³ See for example the ESAs, *Joint Discussion Paper on Draft Regulatory Technical Standards on risk mitigation techniques*. The paper analyses possible options for the regulatory technical standards on the level of capital and collateral counterparties to derivatives transactions need to maintain, type of collateral and segregation arrangements.

²⁴ The CCP as being a legal device comprising several private law techniques is meritoriously analysed by Braithwaite, *Private Law and the Public Sector's Central Counterparty Prescription*.

²⁵ Wood (2009).

contractually liaise solely with the CCP. As indicated by its name, the CCP becomes a central counterparty to the original counterparties. This is perhaps the most fundamental legal point about CCP clearing, the contracts in question are between the CCP and the members of the clearing system rather than between members themselves.²⁶ Depending on the structure of the clearing system, this outcome may be achieved in two different ways. Either member A and B, who wish to trade e.g. a derivative, contract in the first instance directly with the CCP, or A and B contract with each other initially, after which their contract is replaced by new ones between each member and the CCP.²⁷

The latter arrangement depends on the legal technique of novation, which allows for the bilateral contract between A and B to be replaced by two parallel contracts between A and the CCP and B and the CCP, with no rights or obligations remaining between the original parties.



Source: IMF (2010)

The CCP assumes responsibility for the obligations associated with the transaction, thus naturally takes on the counterparty risk. In event of a clearing member's default,²⁸ the CCP would still owe the corresponding obligations to the surviving member.

2.2.2 Clearing Membership

In order to clear a transaction through a CCP, the participant must be a clearing member to the CCP. A participant would only be admitted as a clearing member if meeting various requirements and are required to at all times comply with the clearing rules as set out by the CCP.²⁹

²⁶ Braithwaite, *Private Law and the Public Sector's Central Counterparty Prescription* p. 13.

²⁷ IOSCO, *Principles for financial market infrastructures* p 9 and 24.

²⁸ Throughout, I use the term "default" to mean "fail to perform on contractual obligations", and "defaulter" to refer to a party that does not perform in accordance with its contractual obligations.

²⁹ Clearing houses are often self regulatory organisations which set out their own rules for the market participants to follow in order to utilise their services. For example, see SGX-DC's Clearing Rules (http://rulebook.sgx.com/en/display/display_main.html?rbid=3271&element_id=1903).

For admittance the participant must show sufficient capital funds, have well-established risk management procedures, fulfil fit and proper criteria, and in some cases it must have a bank parent, or be guaranteed by a bank with sufficient capital funds, etc.³⁰ Usually it is also a prerequisite to be authorised by relevant authority, i.e. to hold relevant license for carrying out the regulated activity.

The membership criteria ought to be high, since the survival of the CCP, being a systemically important financial institution, to a great extent is dependent on its members' stability.³¹ The set requirements and clearing rules differs both between jurisdictions and between clearing houses, even though harmonisation is desirable considering regulatory arbitrage and moral hazard issues.³² Once admitted as a clearing member, it is allowed to clear its transactions executed with the CCP's other clearing members in accordance with the clearing rules.

2.2.3 Client Clearing Arrangement

Some participants will not be able to meet the membership criteria and ongoing compliance with the clearing rules. Such participants must find a clearing member to act for them, allowing them to clear its transactions through that clearing member. This is known as *client clearing* or *indirect clearing*. The client³³ contracts with the clearing member, which in turn contracts with the CCP clearing the transaction. Since the client and the CCP are not counterparties, the CCP cannot directly set up requirements to be met by the client. Although, a clearing member not only clearing proprietary positions, but also client positions will be subject to an additional set of rules and criteria relating to the client clearing arrangement. Thus, the CCP imposes requirements on the clients through its clearing members.

2.2.4 The CCP's Protection

As described above, the CCP assumes counterparty risk and owes obligations to the surviving counterparty in event of another's default. Naturally, the CCP must protect itself against defaulting members and have sufficient funds to preform its obligations

³⁰ See for example LCH.Clearnet's admittance requirements (<http://www.lchclearnet.com/membership/ltd/>) and SGX-DC's admittance requirements (www.sgx.com/wps/wcm/connect/96c2e60048e8fc9fa6bdefdd0ab5b648/SGX%2BMembership%2BBrchure%2BEnglish.pdf?MOD=AJPERES).

³¹ Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 2.

³² Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 2.

³³ A "client" may also be referred to as a "customer".

towards surviving members. Otherwise the benefits from central clearing would be replaced with great systemic risk. The CCP's protection is managed by requiring collateral and the building up of a default fund.

To clear transactions, the clearing member must post collateral (margin) with the clearing house, which is the CCP's first line of defence in a situation of a clearing member's default. The amount of margin required depends on the clearing member's exposure, how big the current and future credit risk of the transaction is.³⁴ Firstly, the member is required to post an initial margin. CCPs typically set initial margin to reflect the estimate of the riskiness of the underlying transaction. For instance, they tend to charge higher margins on instruments with more volatile prices, and on less liquid instruments that take a CCP longer to cover in the event of a default.³⁵ In other words, the amount of margin depends on the characteristic of the product. This is the reason why the contracts need to be standardised and liquid enough to be eligible for clearing, otherwise the CCP would not be able to thoroughly calculate the margin and protect itself against default.³⁶

In addition, the member is required to, daily or intra-daily, post variation margin. The amount of variation margin is based on changes in price since last mark-to-market calculation. Those whose contracts have declined in value as a result of these price changes are obligated to pay the CCP an amount equal to this change in market value. In turn, the CCP is obligated to pay those whose contracts have increased in value an amount equal to this change in market value, albeit the clearing member may choose to keep the excess collateral in the CCP for future fluctuations.³⁷ Recognising that it is costly to post margins at CCPs due to the type of collateral accepted, it is impractical to utilise a pure "defaulters pay" model.³⁸ Thus CCPs do not collateralize against all possible price movements. As described, CCP margin typically does not depend on

³⁴ "Exposure" can also be described as the risk that a bankrupt cannot pay, see Wood (2009).

³⁵ Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 8 and 16.

³⁶ For criteria to be assessed when determining clearing eligible products, refer to FSB, *Implementing OTC Derivatives Market Reforms*, p. 13 *et seq.* Among other relevant criteria the products need to be standardised, surrounded by reliable pricing sources and liquid enough to be eligible for clearing. Please also refer to para. 3.2 below for an account of regulations governing the determination of clearing eligible products.

³⁷ Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 7-9.

³⁸ CCPs typically require that margins be posted in liquid assets, normally cash or government securities, which yield less than other investments. However, if other less liquid assets were accepted, the positions may be under-margined due to changes in the value of the collateral. See Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 8 and 32.

the creditworthiness of a clearing member, but on product risk characteristics. This may be problematic since the CCP only calculates the risk in relation to the clearing member's exposure to the CCP, and not the clearing member's exposure to other CCPs or non-derivatives-related risks.³⁹

Besides the need to post margins, the clearing members also have to contribute to the CCP's default fund. Taken together, the margins and the default fund make up the CCP's "default waterfall", out of which it has to cover its losses upon default of a clearing member. How CCPs may use its resources differs from jurisdiction to jurisdiction, and from clearing house to clearing house. Generalising, it would be fair to say that the CCP firstly may use the collateral posted by the defaulting member. Secondly, the CCP may use the default fund contribution of the defaulting clearing member, and thirdly the rest of the default fund.⁴⁰ By using the default fund, the default losses are mutualised among the clearing members contributing to the default fund. The CCP may not use surviving members' collateral to cover losses emanating from another member's default, therefore the CCP must hold segregated accounts for its clearing members.⁴¹

When it comes to client clearing the same principles apply. The client must post collateral with the CCP, but within its member's customer account. A member clearing both proprietary and client positions has both a *house account* and a *customers account* in the CCP for posting of collateral. To what extent CCPs must have segregated accounts for customers' collateral is under debate, but for example EMIR prescribes that a CCP must offer segregated accounts to its customers.⁴² The level of segregation is foremost a question of protection for the clearing members and their clients, but it is also a matter of facilitating the transfer of clients' assets and positions (i.e. porting) in event of a clearing member's default.⁴³

2.2.5 The Nature of the Derivatives Contract

In order to get a clear picture of how the CCP manages its risks, it is necessary to be reminded of the nature of a derivatives contract. A clearing facility can be used for

³⁹ Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 13-14.

⁴⁰ Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 21.

⁴¹ IOSCO, *Principles for financial market infrastructures* p.78-80.

⁴² EMIR, Article 39.

⁴³ EMIR, Recital 64.

clearing securities and other “immediate” contracts as well. In such case the transaction will be concluded once the security, and the agreed upon consideration for the security, has been exchanged. Then the transaction is out of the clearing system. In contrast, an OTC derivatives transaction results in the creation of an ongoing contractual relationship, which may last for years.⁴⁴ Derivatives contracts can easily be described as promises to pay amounts that depend on some market price on an underlying. The underlying can be for example an interest rate, commodity or an event such as a bankruptcy of a particular company. The main forms of OTC derivatives are swaps, options and forwards.⁴⁵ Swaps enable the counterparties to swap obligations, for example swapping an obligation to pay a floating rate of interest on debt for a fixed rate of interest (i.e. an interest rate swap).⁴⁶ An option entitles the buyer to sell or buy a specified amount of an underlying product at a specific date, if exercising that right would be profitable for the buyer (i.e. the buyer may choose to buy or sell the underlying or not).⁴⁷ By contrast, a forward obliges the buyer to sell or buy the specified amount of the underlying at a specific date, regardless of whether it would be profitable or not.⁴⁸ Derivatives are traded for two main purposes, either to protect against price fluctuations as a sort of insurance (“hedging”) or for pure speculation, simply to earn profit.⁴⁹

The value of derivatives contracts varies with market conditions and prices, and changes in market conditions subsequent to the creation of a derivatives contract generally causes the contract to become an asset to one counterparty and a liability to the other. If a party for whom the contract is a liability defaults, then its counterparty is at risk of losing the whole value of the contract. During the derivative’s longevity, the CCP assumes the counterparty risk in relation to both original counterparties, and as a protection collects margins accordingly. To conclude, the long maturity and bespoke nature of many OTC derivatives contracts create heavier risks than on-exchange traded derivatives or other securities, which are highly standardised and typically of quite short duration.

⁴⁴ IOSCO, *International Standards for Derivatives Market Intermediary Regulation* p. 9.

⁴⁵ Hudson (2009) p. 1087.

⁴⁶ Hudson (2009) p. 1099 *et seq.*

⁴⁷ Hudson (2009) p. 1095 *et seq.*

⁴⁸ Hudson (2009) p.1098-1099.

⁴⁹ Hudson (2009) p.1091 *et seq.*

2.2.6 Actions in Event of Default

If the buyer or seller defaults, the CCP is contractually obliged to pay all that is owed to the non-defaulting counterparty; the CCP would need to close outstanding positions, which is facilitated through netting.⁵⁰ Netting of positions across multiple parties typically reduces the total number of positions that need to be replaced. Position netting could be described as follows: Picturing a bilateral transaction where A sells a contract to B, who sells the contract to C. In event of B's default, its positions would remain open, thus have contractual obligations to both A and C. However, if the transaction is cleared through a CCP, B's contracts would be netted out and B's contractual obligation extinguished. In this latter scenario neither A nor C would suffer from B's default as long as the CCP remains solvent. Furthermore, the CCP facilitates exposure netting. A clearing member may suffer some losses in relation to some of its contracts, and gains in relation to others. In such case the gains are netted against the losses, which limits the exposure of the CCP since the amount owed to a member (i.e. the member's gain) is netted against its losses.⁵¹ To orderly replace the outstanding positions after netting, the CCP may auctioning off the defaulter's contractual obligations.

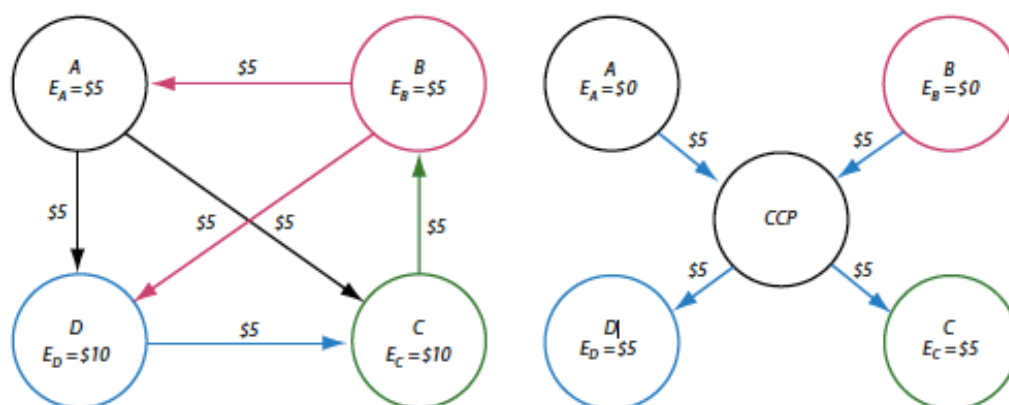


Illustration of netting benefits when clearing through a CCP

Source: IMF (2010)

⁵⁰ For example, in a bilateral transaction, if A owes B 100 and B owes A 100 and B becomes bankrupt, then, if A can set off, its exposure is zero. If A cannot set off, its exposure could be up to 100 if B has no assets. The result of a central clearing arrangement is that, if B becomes bankrupt, the central counterparty can set off or net against B since all the trades are mutual as between the central counterparty and B, see Wood (2009).

⁵¹ For a description of the netting procedure, please refer to Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 7.

As to customers' positions in a situation of its clearing member's default, the CCP can facilitate transfer of the defaulting member's customer positions to another financially sound clearing member. This is commonly referred to as porting of customers' positions. Such portability eliminates the need to close-out positions held in a defaulted clearing member's customer account. From a client point of view, this mechanism reduces the risk of clients suffering losses as a result of a clearing member's default. Furthermore, if segregated properly, this also protects customers' collateral from being encumbered by a possible bankruptcy process.⁵²

2.2.7 Benefits from Central Clearing

That the CCP becomes the buyer to every seller and the seller to every buyer underpins some of the most important benefits of the CCP prescription, since the CCP can act as a shock absorber on the insolvency of a market participant. In other words, the CCPs are intended to increase the likelihood that contractually promised payments will be done. The use of central clearing can enhance the resilience of the market through a range of direct and indirect channels as follows:

- The multiple bi-lateral relationships would be replaced with a single relationship with the CCP. The use of a CCP shields the counterparties from other participants' default with the primary benefit of reduction of system-wide counterparty credit risk and interdependencies of market participants. There would still be a counterparty risk towards the CCP, but this poses less risk since the CCP is prudently regulated, well capitalised and hold enough collateral to "guarantee" performance of transactions. (*See illustration below*)

⁵² Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 11.

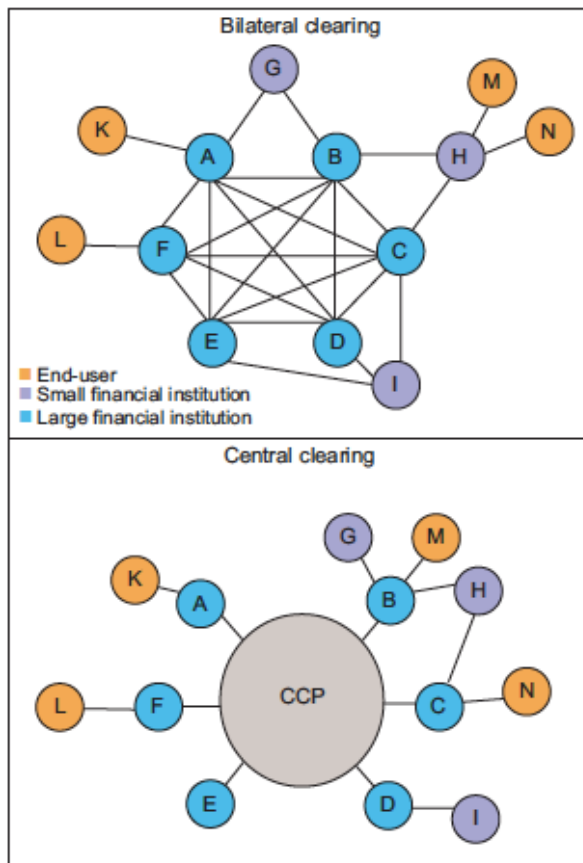


Illustration of reduction of counterparty risk

Source: Council of Financial Regulators, Central Clearing of OTC Derivatives in Australia

- All trades would be subject to daily, or intra-daily, margining which would protect the CCP against a member's default. The margin requirements would in turn create economic disincentives against taking on undue risk exposures.⁵³
- CCPs would be able to impose concentration limits and impose requirements to be met by their clearing members. Further, the CCP would have up to date information on their clearing members' exposure thus improving itself and regulators' ability to prepare for and react to situations of stress. In turn, the increased transparency, through reporting of prices, quantities and other transaction details, lead to enhanced liquidity.⁵⁴
- Participants would enjoy the benefits from position and exposure netting (multilateral netting), which have the potential of substantially reducing the size of individual counterparties' outstanding obligations relative to bilateral arrangements. Instead of posting collateral on several bi-lateral ends, posting

⁵³ Yavorsky, *OTC derivatives market structure and the credit profiles of wholesale investment banks* p. 149.

⁵⁴ Yavorsky, *OTC derivatives market structure and the credit profiles of wholesale investment banks* p. 149.

collateral at a CCP means the need for less assets tied up in margins while still increasing stability and reducing credit and counterparty risk.⁵⁵

The attentive reader may have recognised the increased concentration of risk placed within the CCP itself. Central clearing does not eliminate the risks, but alters its allocation. Naturally, with extended use of central clearing the CCPs will grow to be of greater systemic importance. Given the central role of CCPs, any failure by such facility would have serious consequences for the financial markets.⁵⁶ Regulators are well aware of this and major measures to mitigate such risks are underway.⁵⁷ Besides being subject to prudential oversight, CCPs will have to implement high standards in risk management and stress testing procedures and will be subject to higher capital requirements. Taking into account all these risk mitigating measures and the vast regulatory oversight, these institutions should be deemed bankruptcy remote and hopefully sufficiently robust ready to bear the responsibility of creating stability in these markets.

3 Regulatory Round-trip

Regulatory regimes covering the central clearing requirement, reporting obligation, exchange-trading obligation and the imposed higher capital and margin requirements on non-centrally cleared products are being proposed and implemented in all countries with a substantial OTC derivatives markets, i.e. not only in the G20 countries. As mentioned above, the OTC derivatives market has up until now been largely unregulated and clearing of OTC derivatives has only been executed on a smaller scale on a voluntary basis.⁵⁸ In this section we will look at the regulatory landscape governing the coming mandatory central clearing obligation. For the

⁵⁵ IMF, *Making OTC Derivatives Safe – A Fresh Look* p. 4-5.

⁵⁶ Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 15.

⁵⁷ For instance see BIS, *Collateral requirements for mandatory central clearing of over-the-counter derivatives*. The regulatory reform in this area is progressing in the EU, see EBA, *Discussion Paper on Draft Regulatory Technical Standards on the capital requirements for CCPs*. Furthermore, the mere fact that approximately 50 % of the provisions set out in EMIR governs CCPs, is a clear signal of the vast efforts in trying to deal with CCPs' systemic importance.

⁵⁸ ISDA, *Testimony of Robert Pickel* p. 3. Although, the volume of uncleared IRS has declined 40 % between 2007 and 2011, this on a voluntary basis. A recent FSB report shows that approx. 35 % of all IRS and 12 % of all CDS were cleared through CCPs in December 2011, please refer to FSB, *OTC Derivatives Market Reforms Third Progress Report on Implementation* Appendix V.b. p. 59.

purpose of this paper, the regulations governing the three remaining G20 objectives are left aside.

Framing the objective of this paper, identifying problems for cross-jurisdictional participants and CCPs, the focal point when describing the regulations is on extraterritorial and protectionist provisions proposed and/or implemented by the jurisdictions holding the major OTC derivatives markets. For the purpose of providing an understanding of the regulatory framework on the whole, it is commendable to focus on four areas of provisions, namely: (i) which participants that will be subject to mandatory clearing obligation; (ii) which products that will be subject to mandatory clearing obligation; (iii) which cross-border transactions that will be subject to mandatory clearing obligation, and; (iv) which clearing facilities that may be used by the participants seeking to discharge their clearing obligation. The reader should hereby be reminded of the nature of these frameworks as being rapidly developing, not narrowed down in detail, nor fully in force to date.

3.1 Participants Subject to Clearing Obligation

3.1.1 *The US*

The implementation of The Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank Act”) in the US means mandatory clearing obligation and obligation to register as a Swap Dealer for all US persons, if not exempted. A US person is defined as a legal entity that (a) is organised or incorporated under the laws of the US; (b) has a principal place of business in the US; or (c) is directly or indirectly owned by one or more US persons that are also responsible for such entity's liabilities.⁵⁹ It is further clarified that non-US branches of US persons are regarded as US persons, being the same legal entity. As to non-US subsidiaries of US persons, they are regarded as US persons if the US parent is responsible for the subsidiary's liabilities. In addition, non-US persons are obliged to register as Non-US Swap Dealers, thus being obliged to clear under Dodd-Frank Act, if the non-US person is dealing with a US person to a certain extent (threshold to be decided).⁶⁰

⁵⁹ CFTC, *Cross-Border Application of Certain Swaps Provisions of the Commodity Exchange Act* Section II B p. 41218 *et seq.*

⁶⁰ The proposal of cross-border application of the clearing mandate is quite complex, thus simplified in this paper for the purpose of providing an understandable structure of the clearing mandate in the US.

As indicated, the US regime introduces a new licensing regime for swap dealers, if exceeding the relevant threshold the entity must register with the US Commodity Futures Trading Commission (“CFTC”) accordingly and will be subject to the central clearing obligation.⁶¹ The regime provides for an end-user exemption, allowing non-financial entities that use swaps solely for hedging purposes or to mitigate commercial risk not to clear their contracts.⁶²

3.1.2 The EU

As opposed to the Dodd-Frank Act, the European Market Infrastructure Regulation⁶³ (“EMIR”) does not provide for a new licensing regime for participants. The structure of EMIR is somewhat easier to overview. Financial counterparties as defined in Article 2 subsection 8, EMIR, would be under the obligation to clear eligible transactions.⁶⁴ Non-financial entities whose positions in qualifying derivatives fall below the relevant threshold are exempted, thus end-users are granted a similar exemption under EMIR as in the US regime.⁶⁵

The territorial scope of EMIR is still unclear. EMIR applies, inter alia, to "financial counterparties" which includes investment firms, credit institutions etc. as defined in relevant directives.⁶⁶ A non-EU branch of a EU bank will probably fall within this definition as it is the same legal entity as the EU-authorized bank, despite the fact that the branch is also licensed and supervised in the jurisdiction in which it

Cont'd. For further details, please refer to memorandum by Clifford Chance, *CFTC Releases Cross-Border Swaps Guidance*.

⁶¹ CFTC and SEC have steadily been increasing the proposed threshold, first proposed at a level of USD 100 million in December 2010. However, CFTC and SEC recently adopted rules defining swap dealers as firms conducting swaps of derivatives with a notional value of USD 8 billion a year. See Sloan and Hamilton, *Regulators Approve \$8 Billion Threshold for Swaps Dealers* (Bloomberg).

⁶² CEA, Sections 2(h)(7) and 3C(g) provide an exception from the mandatory clearing requirement for swaps if one of the swap counterparties: (1) is not a financial entity; (2) is using swaps to hedge or mitigate commercial risk; and (3) notifies the CFTC (for swaps) or the SEC (for security-based swaps) how the counterparty generally meets its financial obligations associated with entering into non-cleared swaps.

⁶³ References are to the text of EMIR published by the Council on 4 July 2012.

⁶⁴ 'financial counterparty' means an investment firm authorised in accordance with Directive 2004/39/EC, a credit institution authorised in accordance with Directive 2006/48/EC, an insurance undertaking authorised in accordance with Directive 73/239/EEC, etc. Please refer to EMIR, Article 2(8).

⁶⁵ Qualifying derivatives here in the meaning of derivatives transactions not used solely for hedging purposes or to mitigate commercial risk. EMIR, Article 10(1)(b), in reference to Article 4, provides for the end-user exemption.

⁶⁶ "financial counterparties" as defined in EMIR, Article 2(8).

operates.⁶⁷ Similarly, EMIR is possibly applicable to non-EU banks with EU branches.⁶⁸ In line with other EU legislation such as the Market in Financial Instruments Directive⁶⁹ (“MiFID”), this may be a likely interpretation. The definitions of “investment firms”, “credit institutions”, etc. in the relevant directives are not limited to investment firms, credit institutions, etc. that are established or carry out business in the EU. For example the definition of “investment firm” in Article 4(1), MiFID, includes non-EU entities.⁷⁰

3.1.3 Asia Pacific

In Asia Pacific the EU approach is taken, requiring participants exceeding the relevant threshold to clear its trades.⁷¹ The extraterritorial reach of the Singapore and Hong Kong regimes are not further clarified. Similar end-user exemptions are provided for.

3.1.4 Key Takeaways

In summary, the determination of relevant thresholds in relation to entities’ exposure in the OTC derivatives market, whether by product or across all product classes, will eventually decide which entities that will be subject to the central clearing obligation. It is yet to be seen whether regulators across the globe will manage to harmonise their thresholds. In terms of extraterritorial aspects, both the EU and the US approaches are troublesome. The definition of a US person is broadly extraterritorial. Further, the US regime prescribes an obligation for non-US participants to register as a non-US Swap Dealer and comply with the US clearing obligation if engaging in swap dealing activities with US persons. Together, this brings about a wide application of the US clearing prescription, which will affect participants well outside the US’ borders. Likewise, the definition of “financial counterparties” in EMIR is broad and likely to include branches and possibly legal entities outside the EU.

⁶⁷ This is in line with the US proposal, refer to para. 3.1.1 above. Please also refer to GFMA, FSR, IBFed and ISDA, *Re: Extraterritorial legislation: the problems posed for markets, clients and regulators* p. 15, issue 9.

⁶⁸ GFMA, FSR, IBFed and ISDA, *Re: Extraterritorial legislation: the problems posed for markets, clients and regulators* p. 15, issue 9.

⁶⁹ Directive 2004/39/EC.

⁷⁰ For a discussion on EMIR’s extraterritorial reach, please refer to ISDA, *Brief on Territorial Scope in the Context of EMIR* p. 1.

⁷¹ This approach is taken in the Hong Kong and Singapore proposed regulations. HKMA, *Consultation paper on the proposed regulatory regime for the over-the-counter derivatives market in Hong Kong* p.25-26, and MAS, *Consultation Paper on Proposed Regulation of OTC Derivatives* p. 8-9.

3.2 Products Subject to Clearing Obligation

3.2.1 *The US, The EU and Asia Pacific*

All swaps, broadly defined, are caught by the Dodd-Frank Act. Albeit remaining ambiguity of the swap-definition, it is fairly clear that the most common OTC derivatives will be included. EMIR includes all asset classes in the OTC derivatives market.⁷² Likewise, regulators in Asia Pacific have proposed fairly broad definitions of derivatives caught in the frameworks. However, neither of these regulators has yet specified which products that will be subject to the clearing mandate.

All jurisdictions are proposing to use both the “bottom-up” and “top-down” approach for the purpose of determining which products to subject to the clearing mandate.⁷³ The “top-down” approach gives the relevant authority the opportunity to initiate the process of mandating products, while the “bottom-up” approach gives eligible CCPs the means to initiate the process of mandating products to be centrally cleared by applying to the relevant authority.⁷⁴

At the outset Interest Rate Swaps (“IRS”) denominated in local currencies, Non-Deliverable Forwards (“NDFs”) and Credit Default Swaps (“CDS”) seem to be recognised as products meeting relevant criteria of sufficient level of standardisation, depth and liquidity of the market, fair and reliable pricing sources and international harmonisation.⁷⁵ However, it is yet to be seen which products that will be caught by the clearing mandate.⁷⁶

3.2.2 *Key Takeaways*

All jurisdictions are proposing to use both a “top-down” and a “bottom-up” approach when determining which products to subject to mandatory clearing requirement. The

⁷² EMIR, Article 2.

⁷³ EMIR, Article 5, CFTC, *Joint Report on International Swap Regulation* p. 33-34, MAS, *Consultation Paper on Proposed Regulation of OTC Derivatives* p. 4 *et seq.* and HKMA, *Consultation paper on the proposed regulatory regime for the over-the-counter derivatives market in Hong Kong* p. 15.

⁷⁴ For a more detailed description of the “bottom-up” and “top-down” approaches, please refer to IOSCO *Requirements for Mandatory Clearing* p. 14 and 25.

⁷⁵ Refer to note 73 above. Further, Gary Gensler, chairman of CFTC, recently said that credit index and rate swaps will be the first OTC derivatives to face the clearing mandate, refer to Brush, *Credit Index and Rate Swaps Will Be First Cleared, Gensler Says* (Bloomberg).

⁷⁶ For criteria to be assessed when determining eligible products, refer to FSB, *Implementing OTC Derivatives Market Reforms* p. 13 *et seq.*

troublesome issue as regards products to be mandated does not lie within the extraterritorial reach. In event of non-harmonised rules however, it may drive trading of a mandated product in state X to another state Y, where it is not mandated in order to escape the clearing obligation.

3.3 Cross-Boarder Transactions Subject to Clearing Obligation

3.3.1 The US

Activities outside the US are caught by Dodd-Frank Act if such activities have a “*direct and significant connection with activities in, or affect on, commerce of the US*”, or if it is “*necessary or appropriate to prevent evasion*”.⁷⁷ CFTC recently released guidance on the extraterritorial reach of the Dodd-Frank Act, unfortunately it does not provide the type of bright lines that are essential to those that hope for legal certainty.⁷⁸ As described above however, all transactions executed by US persons (broadly defined) will have to clear eligible transactions, also when trading with non-US persons. Further, non-US Swap Dealers (being non-US persons that transact with US persons to an extent reaching above a certain threshold, thus required to register as a Swap Dealer), will be obliged to clear transactions executed with non-US participants if this entity is guaranteed or supported by a US person. To date it remains unclear how to interpret these guidelines on extraterritoriality in detail. But by the face of it, it seems like Robert Pickel, CEO, International Swaps and Derivatives Association, may be right in his statement “*...this proposed guideline is extremely broad, covering the activities of anyone, anywhere doing business as, or with a ‘US Person’*”.⁷⁹

3.3.2 The EU

Up until a more recent version of EMIR, as per 19 March 2012, there was no provision corresponding to the extraterritorial provision as seen in Dodd-Frank Act described above. Under Article 4(1)(v) of the latest text however, “*...contracts concluded between third country entities that would be subject to the clearing obligation if they were established in the EU, shall clear those contracts that have a direct, substantial and foreseeable effect within the EU*”. European Securities and Markets Authority (“ESMA”) has not yet specified which contracts that may be

⁷⁷ Section 2, Commodity Exchange Act, as amended by Dodd-Frank Act, Section 722 (d).

⁷⁸ CFTC, *Cross-Border Application of Certain Swaps Provisions of the Commodity Exchange Act*.

⁷⁹ ISDA, *Testimony of Robert Pickel* p.6.

considered to have a direct, substantial and foreseeable effect within the EU.⁸⁰ Furthermore, a transaction between a EU counterparty and any third country entity, where the transaction would be subject to clearing obligation if both parties were established in the EU, is caught by EMIR.⁸¹ In reference to section 3.1.2 above, some transactions between non-EU financial counterparties are likely to be caught by the clearing prescription in EMIR, as falling within the definition of “financial counterparty”. Conclusively, it remains to be seen which effect Article 4(1)(v) will have on non-EU participants that are not caught by the definition of “financial counterparties”.

3.3.3 Asia Pacific

For clearing eligible products the Hong Kong regime proposes to mandate clearing for overseas incorporated financial institutions where they are either counterparty to a transaction involving a Hong Kong financial institution or where the transaction is originated or executed through their Hong Kong branch. A transaction is considered “originated or executed” if a person has negotiated, arranged, confirmed or committed to the transaction on behalf of himself or any of the counterparties.⁸² If both counterparties are overseas persons however, an exemption will apply if the transaction is subject to mandatory clearing under the laws of an acceptable overseas jurisdiction and the transaction has been centrally cleared there, or exempted from central clearing under those laws. Overseas jurisdictions whose laws are on par with international standards and practices in relevant areas will qualify as acceptable.⁸³

The Monetary Authority of Singapore (“MAS”) proposes to require transactions to be cleared in accordance with Singapore laws, where at least one leg is booked in Singapore and either (i) both parties to the transaction are resident or have presence in Singapore and are subject to the clearing mandate; or (ii) one party to the contract is resident or has presence in Singapore and subject to clearing mandate, and the other

⁸⁰ ESMA is in the process of consulting on this matter, please refer ESMA, *Consultation Paper on Draft Technical Standards for the Regulation on OTC Derivatives, CCPs and Trade Repositories*.

⁸¹ EMIR, Article 4 (1)(iv).

⁸² HKMA, *Consultation paper on the proposed regulatory regime for the over-the-counter derivatives market in Hong Kong* p. 17 and 26.

⁸³ HKMA, *Consultation paper on the proposed regulatory regime for the over-the-counter derivatives market in Hong Kong* p. 3-4.

party would have been subject to clearing mandate if it had been resident or had presence in Singapore.⁸⁴

3.3.4 Key Takeaways

Regulatory regimes in both the US and the EU extend to activities outside respective jurisdiction where such activities are connected to and affect the local market. The Hong Kong regime is not equally extraterritorial, but wide in its scope including transactions originated or executed through an overseas financial institution's Hong Kong branch. Singapore has the least extraterritorial proposal, only requiring transactions where at least one leg is booked in Singapore to be cleared and does not propose to catch any transactions conducted between two third country entities under any circumstances. Aside from the problems caused by these extraterritorial provisions itself, the remaining uncertainty as to which transactions that actually will be caught under the regimes respectively causes great distress and incurs costs for participants and CCPs, especially considering the rapidly approaching deadline for implementation end 2012.⁸⁵

3.4 Eligible CCPs

3.4.1 The US

Swaps designated by CFTC as clearable and accepted by a clearing house for clearing, are to be cleared through a derivatives clearing organisation (“DCO”).⁸⁶ Thus, an entity acting as a CCP for swaps must be registered with CFTC as a DCO if not exempted (for clarity, a DCO is a US incorporated CCP). CFTC may exempt, conditionally or unconditionally, a foreign CCP from the requirement of holding DCO-status, if it is subject to comparable, comprehensive supervision and regulation in its home country.⁸⁷ However, the US regulators have not yet presented to what extent this exemption would apply and what areas to assess when determining whether to allow a foreign CCP, not holding DCO-status, to clear trades caught by the US clearing obligation. Consequently, currently the only way of securing ability for CCPs to clear swaps for US persons or non-US Swap Dealers is to be registered as a

⁸⁴ MAS, *Consultation Paper on Proposed Regulation of OTC Derivatives* p. 7.

⁸⁵ ISDA, *Testimony of Robert Pickel* p. 1.

⁸⁶ Dodd-Frank Act, Section 723(a).

⁸⁷ Dodd-Frank Act, Section 725(b).

DCO, and US persons or non-US Swap Dealers can only meet the clearing obligation by clearing through a DCO.

3.4.2 The EU

Pursuant to EMIR, the clearing obligation is met if the eligible contracts are cleared through designated clearing houses, i.e. either through a EU CCP authorised by relevant national (EU member state) authority or through a third country CCP recognised by the ESMA. A CCP established in a third country (i.e. outside the EU) may provide clearing services to clearing members or trading venues established in the EU only if the CCP is recognised by ESMA. Pursuant to article 25, EMIR, ESMA may recognise a third country CCP if (i) the Commission has adopted an implementing act; (ii) the CCP is authorised in the relevant third country, and is subject to, effective supervision and enforcement ensuring a full compliance with the prudential requirements applicable in that third country; (iii) cooperation arrangements have been established between ESMA and relevant foreign authority; and (iv) that the relevant third country is considered as having equivalent AML/CFT⁸⁸ systems to the EU. The Commission may adopt an implementing act if (a) the CCP authorised in that third country complies with legally binding requirements which are equivalent to the requirements set out under EMIR; (b) that the CCP is subject to effective supervision and enforcement in that third country on an ongoing basis; and (c) that the legal framework of that third country provides for an effective equivalent system for the recognition of CCPs authorised under third country legal regimes.

Of relevance in this regard is when a clearing member or trading venue is regarded as *established* in the EU. If a non-EU CCP's participants are *established* in the EU, the CCP must be recognised by ESMA in order to clear for their EU-established participants. ESMA has not yet provided any clarity on this matter, but frights are that not only firms incorporated in EU is regarded as established, but also:

- (i) Firms incorporated outside the EU, that have a branch in the EU and clear through the EU branch;
- (ii) Firms incorporated outside the EU, with a branch in the EU, but clears through the non-EU establishment; and

⁸⁸ Anti-money Laundering /Combating the Financing of Terrorism.

- (iii) Firms incorporated in the EU, with a branch outside the EU and clears through the non-EU branch.⁸⁹

Recital 59, EMIR, states that "*in order not to hamper the further development of crossborder investment management business in the Union, a third country CCP providing services to clients established in the Union through a clearing member established in a third country, should not have to be recognised by ESMA*". The International Swap and Derivatives Association ("ISDA") promotes that recital 59 indicates that the legislative intent was to allow non-EU CCPs to provide clearing services outside the EU.⁹⁰ However, recital 59 only mentions client clearing. Furthermore, what is meant by the term "established" is not set out and there are no references to branches. Conclusively, it remains unclear to what extent recital 59 provides for an actual relief.

3.4.3 Asia Pacific

In Hong Kong it is proposed that only a recognised clearing house ("RCH") or an automated trading services ("ATS") provider (authorised under Hong Kong law) should be permitted to be designated as a CCP for the purpose of mandatory clearing obligation. The ATS regime is described as suited for overseas CCPs who wish to provide services in the Hong Kong market, since it is more flexible and primarily governed by the laws in the home jurisdiction.⁹¹ The Hong Kong Monetary Authority ("HKMA") has, at least not yet, proposed any framework for recognition of overseas clearing houses who wish to clear trades caught by the Hong Kong clearing obligation, but instead would require the overseas CCP to be authorised as an ATS under Hong Kong laws. Notably, transactions executed between two overseas entities, would not be caught by the clearing mandate in Hong Kong provided that the transaction is cleared in an acceptable jurisdiction, acceptable as in on par with international standards. By way of speculation, this may be an indication of HKMA considering structuring their recognition regime of overseas CCPs in a similar way, i.e. to assess overseas CCPs in relation to international standards rather than in relation to Hong Kong requirements. That is, if HKMA will provide for a regime recognising overseas CCPs whatsoever.

⁸⁹ ISDA, *Concerns regarding the Application of Article 25(1) EMIR* p.3.

⁹⁰ ISDA, *Concerns regarding the Application of Article 25(1) EMIR* p.4.

⁹¹ HKMA, *Consultation paper on the proposed regulatory regime for the over-the-counter derivatives market in Hong Kong* p. 4 and 33.

The Hong Kong regulator has not yet come to any conclusion whether they find it suitable to only designate domestic CCPs to clear transactions as regards systemically important products subject to mandatory clearing under Hong Kong law.⁹² Considering recent development, with Australia withdrawing their proposal to require local clearing and the heavy criticism relating to location requirement, Hong Kong regulators will probably pull back on this proposal.⁹³

In its consultation paper the MAS introduces a new authorisation regime for recognition of overseas clearing facilities in Singapore. Clearing eligible contracts must be cleared through either an approved clearing house under Singapore law or through an overseas recognised clearing house.⁹⁴ MAS may, when considering recognising an overseas clearing facility, have regard to whether the applicant CCP is “...subject to requirements and supervision comparable, in the degree to which the objectives specified in section 47 are achieved, to the requirements and supervision to which approved clearing houses and recognised clearing houses are subject under this Act”.⁹⁵ The objectives of section 47 are (a) to promote safe and efficient clearing facilities; and (b) to reduce systemic risk. Furthermore, MAS envisages the possible need for imposing a requirement on overseas clearing houses to establish presence in Singapore to be regulated as a local approved clearing house, but only limit this to cases where it may not be sufficient to place reliance on the home regulator of overseas clearing houses.

In its June 2011 consultation paper, the Australian regulator proposed to mandate clearing through an Australian domiciled CCP as regards products on a systemically important market, which in the case of Australia means clearing of AUD-denominated interest rate derivatives.⁹⁶ In recent developments however, the Australian regulator has stepped back on this point and allows clearing elsewhere for

⁹² HKMA, *Consultation paper on the proposed regulatory regime for the over-the-counter derivatives market in Hong Kong* p. 33.

⁹³ “location requirement” refers to a requirement to clear a specific product through a domestic clearing house, under all circumstances, i.e. exemptions or recognition regimes for overseas CCPs would be irrelevant.

⁹⁴ MAS, *Consultation Paper on Proposed Regulation of OTC Derivatives* p. 31 *et seq.*

⁹⁵ MAS, *New Part IIA of SFA*, Section 52(2)(b).

⁹⁶ Council of Financial Regulators, *Central Clearing of OTC Derivatives in Australia* p. 37.

these products. As a matter of fact, the Australian regulator leaves the whole clearing mandate open, for the market participants to clear products at their own discretion but keeps the gun loaded ready to impose clearing obligation in due course.⁹⁷ Among other things, the newly issued paper indicates that in some circumstances Australian regulators may ultimately insist on particular entities establishing presence in Australia in order to be granted allowance to carry out the function of a CCP.⁹⁸

3.4.4 Key Takeaways

Evidences are that all jurisdictions are adopting protectionist approaches, taking Australia apart, requiring clearing mandated transactions to be cleared through designated clearing houses. Nevertheless, regulators recognise the need for either an exemption for or recognition of overseas CCPs.

The EU, the US and Singapore regulators are proposing to only recognise overseas CCPs that are subject to equivalent or comparable requirements and supervision in relation to domestic legislation. However, it is possible to recognise slight differences between the EU proposal and the Singapore proposal (which are the only jurisdictions examined here that have proposed recognition regimes in a bit more detailed way). EMIR requires overseas CCPs to be subject to requirements *equivalent* to EMIR in order to be eligible for recognition. Singapore proposal prescribes that the applicant CCP should be subject to *comparable* requirement to Singapore law, but possibly through an effect-based approach (“*in the degree to which the objectives specified in section 47 are achieved*”). As noted above, Hong Kong has not proposed a recognition regime for overseas CCPs to date. However, more interestingly, the Hong Kong proposal makes references to international standards when determining if foreign jurisdictions are deemed acceptable. Why the Singapore proposed recognition regime of possibly being effect-based and the Hong Kong proposal as referring to international standards (albeit not in relation to recognition of overseas CCPs) are of relevance will be analysed in Part III below.

⁹⁷ The Treasury, *Implementation of a framework for Australia's G20 over-the-counter derivatives commitments* p. ix-x.

⁹⁸ Japan is mandating domestic clearing as regards credit default swaps referring to an index of iTraxx Japan. Furthermore, India, China and South Korea will probably either partly or fully impose a location requirement. See Noyes, *How Asia is progressing towards OTC clearing deadline* (Asia Risk) and FSB, *OTC Derivatives Market Reforms Third Progress Report on Implementation* p. 14 and 85.

PART II - IDENTIFICATION OF PROBLEMS CAUSED

4 Identification of Problems

To regulate an international market on a national basis naturally brings difficulties in terms of conflicting laws and possible regulatory arbitrage. The extraterritorial and protectionist provisions force participants to take costly and troublesome actions in complying with multiple regulatory regimes. The CCPs are facing a brand new clearing market, which brings great obstacles to overcome in order to keep their current international members and customers, but also new business opportunities.

This Part II identifies problems caused by the provisions presented in Part I above. For clarity, problems caused for participants and CCPs will be analysed separately. Subsequently these problems will be applied to the intended benefits from central clearing, thus an account of their impact on the market. Lastly, analysis as to why regulators insist on implementing these rules albeit the problems caused follows. This insight is relevant reaching the final Part III of this paper, setting out proposed solutions to the problems identified.

For ease of assessment and overview, one may categorise extraterritorial and protectionist provisions as follows:

- (1) “Extraterritorial provisions” refers to provisions that are broad in its scope, requiring compliance by participants as regards transactions that do not have their main origin or course of business in the jurisdiction in question. Extraterritorial provisions are, by way of example, the provisions seen in EMIR and Dodd-Frank Act, which require clearing of transactions concluded by third country branches and subsidiaries to EU/US incorporated entities and by third country entities with branches in the EU/US. Also the Hong Kong proposal of catching transactions originated or executed through a Hong Kong branch would belong in this category.
- (2) “Protectionist provisions” refers to provisions that show lack of reliance on foreign regulators and urges participants to stay within the jurisdiction to clear their trades. For the purpose of this paper, the most predominant example is

the provisions requiring participants to clear its transactions through specific clearing houses without efficient and well-balanced recognition regimes.

4.1 Participant Perspective

The combination of extraterritorial provisions and protectionist provisions means problems for participants trading on a cross-border basis. Creating an understanding of the problems caused, it is beneficial visualising two scenarios as follows:

Scenario 1

BankA is a participant with international presence, incorporated in the US with a branch in Singapore. BankB is a Hong Kong-incorporated bank with a branch in London. Both BankA and BankB have large exposures in the OTC derivatives market thus exceeding relevant thresholds and consequently are subject to the central clearing mandate in all jurisdictions. BankA and BankB are about to execute a transaction as regards USD IRS. USD IRS is a product likely to be subject to the clearing mandate in all jurisdictions in this example. The transaction is negotiated through BankA's Singapore branch and BankB's head office in Hong Kong. One leg of the transaction is booked in Singapore (BankA) and one in London (BankB). Where and pursuant to which laws should the transaction be cleared?

- BankA is incorporated in the US, why BankA and also its branch must comply with Dodd-Frank Act, which means the need to register accordingly and clear all its eligible swaps through a DCO (or through an overseas exempted CCP). In addition, since the transaction is booked in Singapore, BankA's Singapore branch would also need to comply with the frameworks set out in Singapore, this means that the transaction must be cleared by an approved clearing house in Singapore or by a recognised overseas clearing house.
- BankB is incorporated in Hong Kong, and even if the transaction is booked in London, it is still negotiated by the Hong Kong office, why the transaction is caught by the Hong Kong regime and must be cleared through a clearing house or an automated trading services provider authorised under Hong Kong law. At the same time, the

London branch books the transaction, thus probably being subject to EMIR's requirement of clearing either through a EU CCP or through a by ESMA recognised overseas clearing house.

As seen, this transaction would be caught in four different jurisdictions, all requiring them to comply with each law respectively. It may not be very likely that participants would structure their transactions like this, but the scenario above sheds light on the complexity of being caught in several jurisdictions imposing protectionist provisions. A simpler, and likely, scenario would be that a EU branch of an US-incorporated bank, executes trades with a EU bank. The same principles apply, but only involve two jurisdictions. Scenario 1 illustrates the impossibility of complying with several clearing requirements simultaneously.

Scenario 2

A Singapore Bank trades eligible OTC contracts with both a US-incorporated bank and with a EU-incorporated bank. The Singapore bank would then be subject to three regulatory regimes, unless it structures its trades so it does not get caught by the Singapore regime, i.e. if booking the transaction abroad. The Singapore bank would then need to be a clearing member to a CCP in the US and a CCP in the EU. Scenario 2 illustrates the need of holding multiple clearing memberships.

The reader should hereby be reminded that it is only possible to clear a transaction through one CCP.⁹⁹ Obviously then, the participants cannot comply by clearing a transaction in all jurisdictions at the same time. In the scenarios above two structural problems are identified:

- (a) When a single transaction is caught in several jurisdictions, it is impossible to execute the transaction in compliance with several regulatory regimes. This requires the involved participants to structure their trade differently, so that the transaction only is caught in one jurisdiction.

⁹⁹ This given the absence of interoperability between clearing houses as regards clearing of OTC derivatives. Allowing interoperability as an option is being discussed in Part III of this paper.

- (b) When each transaction is caught in one jurisdiction, but the participants trade with several counterparties that are caught in different jurisdictions, participants are required to become clearing members or set up client clearing arrangements with multiple CCPs.

4.1.1 Re-structuring of Transactions

This problem (refer to Scenario 1, problem (a) above) encourages participants to make venue choices based on avoidance of the clearing mandate and administrative complexity, potentially reducing the focus upon execution quality and causes fragmentation of international markets.¹⁰⁰ It would also be impossible for some participants to structure their trades accordingly, bearing in mind the broad extraterritorial scope of Dodd-Frank and EMIR. In such case, the participants would have to refrain from trading with each other. Conclusively, participants would then have fewer potential counterparties to trade with, which would hamper the trading volume thus reduce the liquidity.¹⁰¹ Even if the participants would be able to structure their transaction to only be caught in one jurisdiction, they would still need to hold multiple clearing memberships if wanting to trade with several counterparties from different jurisdictions.

4.1.2 Multiple Clearing Memberships

As described above, a participant must be a clearing member or have client clearing arrangements in place in order to clear its trades with a CCP.¹⁰² In a regulatory environment where jurisdictions are requiring eligible transactions to be cleared through a designated clearing house, this in turn requires participants to become clearing members or be clients to designated CCPs. The reason why the proposed regulations would as an effect oblige participants to be members/clients to multiple CCPs is the nature of this market as consisting of transactions executed on a cross-border basis (refer to scenario 2, problem (b) above). In other words, if the CCPs are not allowed to offer its services in multiple jurisdictions, participants on their side must become members of multiple CCPs in various markets, or set up client clearing arrangements with clearing members around the globe.

¹⁰⁰ GFMA, FSR, IBFed and ISDA, *Re: Extraterritorial legislation: the problems posed for markets, clients and regulators* p. 6.

¹⁰¹ Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 42.

¹⁰² Please refer to paras. 2.2.2 and 2.2.3 above.

4.1.2.1 Drawbacks of Holding Multiple Clearing Memberships

So, what are the downsides of holding multiple clearing memberships? Being a clearing member entails the need to fulfil high admittance requirement, including being licenced by relevant authority, and continuously comply with the CCP's clearing rules. This incurs costs and operational burdens.¹⁰³ The need for holding *multiple* clearing memberships naturally increases these costs.

One of the clear benefits from central clearing from a participant perspective is the possibility of multilateral netting, which reduces the need to post collateral on several bilateral ends. The extraterritorial and protectionist approaches fragments the market and forces participants to split up their portfolios to be cleared through different CCPs, thus the benefit from netting gets lost.

The need to post collateral to multiple CCPs means that more liquid assets are tied up in CCP margins. Posting of various margins would also be increasingly burdensome given the enhanced requirements on type of collateral accepted, namely mainly cash or government securities.¹⁰⁴ On this note, it is also relevant to acknowledge the new (proposed) requirements on participants with respect to their OTC derivatives transactions not being centrally cleared. Posting of initial margin, variation margin and possibly increased capital requirements will be required on those transactions as well.¹⁰⁵ An overall increased obligation to post margins would constrain participants and might render in decreased trading activity thus reduced liquidity. In addition, participants that must meet large margin calls may respond by selling assets and reducing its positions in ways that may exacerbate the price changes that caused the initial margin calls. If a participant is subject to large margin calls from several CCPs, this effect could be detrimental not only to the participant but also destabilising price movement and liquidity.¹⁰⁶

¹⁰³ Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 42.

¹⁰⁴ Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 8. By way of example, the requirement of these types of collateral is proposed in the EU, refer to ESMA, *Discussion Paper Draft Technical Standards for the Regulation on OTC Derivatives, CCPs and Trade Repositories* p. 32-33.

¹⁰⁵ Please refer to para. 2.1 above. In the EU it is proposed that only the same type of collateral posted with CCPs should be allowed as collateral in bilateral transactions, refer to the ESAs, *Joint Discussion Paper on Draft Regulatory Technical Standards on risk mitigation techniques* p. 17, and ESMA, *Discussion Paper Draft Technical Standards for the Regulation on OTC Derivatives, CCPs and Trade Repositories* p. 32-33.

¹⁰⁶ Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 12.

Recalling the possibility to clear its transaction as a client through a clearing member instead of holding multiple clearing memberships, might at a first glance seem to solve the problems imposed. This assumption may be correct in relation to some aspects, but client clearing is connected to other drawbacks.

A client clearing arrangement is not equally regulated by the CCP, since the CCP do not liaise with the client directly, but normally only through a clearing member. In other words, the client is not directly obligated to follow the clearing rules or admittance requirements imposed by the CCP. However, the regulatory development shows evidence of CCPs imposing requirements on their clearing members to in turn require their clients to meet certain criteria as to financial standards and risk management etc.¹⁰⁷ Thus clients are obligated to comply with various requirements, which is of course costly especially if setting up *several* client clearing arrangements.

Just as a clearing member, a client must post collateral in relation to their exposure and suffers the same drawbacks as clearing members in relation to lost netting benefits and increased posting of collateral if required to clear through multiple CCPs.

Moreover, compared to clearing members', the clients' collateral may not be equally protected. If a client defaults, and the clearing member cannot cover the loss, the CCP can utilise the customer margins of non-defaulting customers (this as opposed to using surviving clearing members' collateral, which generally is not allowed), if the collateral is held in omnibus customer accounts. To date it is common that clients' collateral is comingled, even though there is a call for finer segregation also for the clients' collateral. If regulators and CCPs adopt individual segregation of customer accounts, the clients may be afforded greater protection, although to a higher cost. Finer segregation is more costly, and bankruptcy remote segregation typically requires the payment of additional fees.¹⁰⁸ In addition to the posting of collateral with

¹⁰⁷ LCH.Clearnet recently introduced new client clearing rules, whereby the client will be subject to the full rulebook, via obligating the clearing member to contract accordingly with its clients, refer to LCH.Clearnet, *FCM Regulations of the Clearing House*, Regulation 4, available at: www.lchclearnet.com/Images/FCM%20Regulations_tcm6-57089.pdf. Also SGX-DC is currently developing a new client clearing framework, imposing requirements on the clients.

¹⁰⁸ Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 30.

the CCP, the use of an intermediary (the clearing member) means additional fees and increased counterparty risk against the clearing member.

4.1.3 Key Takeaways

There are two main areas of problems brought about by the regulatory regimes affecting the participants. Firstly, the extraterritorial and protectionist approaches fragment the markets and force participants to structure their trading to only get caught by a limited number of jurisdictions, and only one jurisdiction per transaction. Secondly, the protectionist approaches require participants to clear with designated clearinghouses, thus requiring them to become members or clients to multiple clearing houses if wishing to trade with participants from other jurisdictions. As will be seen in Part III, there are ways to mitigate these problems through well-balanced recognition regimes and the possibility of interoperability between CCPs.

4.2 CCP Perspective

The mandatory clearing obligations being implemented around the globe means increased and new business opportunities for CCPs, but in a never before seen competitive environment.¹⁰⁹ On the other hand, the protectionist approaches cause CCPs having international members and clients great distress in trying to keep their business with these members.

Scenario 3

A US participant clearing its positions through a Singapore CCP (either as a member or a client), would after the implementation of the Dodd-Frank Act clearing mandate, not be able to meet its clearing obligation by clearing through the Singapore CCP. The US participant would need to clear through a DCO (or an exempt DCO). Conclusively, the Singapore CCP would need to apply and be granted DCO-status in order to keep its business with the US participant.¹¹⁰

¹⁰⁹ The new regulations have vast impacts on CCPs, interesting reading on the subject is Harrison, *Clearing at the Crossroads*.

¹¹⁰ The same principle would apply if the Singapore CCP wished to clear for a EU participant, thus being forced to get recognised by ESMA.

4.2.1 Multiple Clearing Memberships

Even though it is the participants that suffer the greatest loss of possibly being obligated to hold multiple clearing memberships, this also affects the CCPs. Fragmentation of markets, where participants need to split up their portfolios and clear through several CCPs may incur increased risks and larger exposure to the CCP. In particular, a CCP can contribute to the stability of the financial system by facilitating efficient, coordinated replacement of defaulted position. This is managed through netting.¹¹¹ If a CCP's clearing member cannot clear all its trades through that CCP, the CCP would not be able to net the participant's exposure to the same extent thus possibly face increased costs and risks of position replacement in event of the participant's default.¹¹²

Another important feature of the CCP is the information and concentration of risk monitoring. CCPs are able to impose concentration limits on their clearing members. Highly concentrated positions pose particularly a great risk for CCPs, since price movements in that product class may impose large losses, making a default more likely. Moreover, it is more difficult to replace concentrated positions. It is therefore important for a CCP to closely monitor concentration of positions. If a member needs to clear the same class of products through several CCPs, the monitoring of that member's exposure in a product class is more troublesome to carry out.

4.2.2 Recognition Projects without Certain Outcomes

In order for e.g. a clearing member (who is caught by Dodd-Frank Act) to a Singapore CCP to fulfil the clearing requirement pursuant to US regulations, the clearing member must clear its trades through a DCO in the US or through an exempt DCO. Lacking of set out regimes for how the exemption will apply, clearing houses who wish to continue clearing their US costumers' transactions must by the time of implementation of the US clearing mandate be an approved DCO. In the EU, a recognition regime is proposed requiring equivalence to EMIR standards for recognition. However, the proposed recognition regime is at an immature stage

¹¹¹ Please refer to para. 2.2.6 above.

¹¹² C. Pirrong, University of Houston *The Economics of Central Clearing: Theory and Practice* p 42.

without any details provided. At the moment therefore, CCPs are left in limbo not knowing what will be required and when or if they can be recognised.¹¹³

The current confusion and uncertainty as to how rules will apply and how they will calibrate with other jurisdictions' laws impose great costs on CCPs.¹¹⁴ Among other measures taken in trying to stay ahead and be in compliance, non-US CCPs apply to CFTC for grant of DCO-status.¹¹⁵ The project of applying for becoming a DCO in the US means an overwhelming amount of work for a CCP. In these immature regimes, where neither the foreign regulator, the home regulator or the applying clearing house knows/have yet decided what is required by the applicant CCP, vast resources are put into project without certainty of outcome or thorough knowledge of rules to comply with. After all, this is a business decision where the CCP in question must decide whether it is worthwhile putting vast resources into projects without certain outcomes, but nevertheless an interesting effect of the extraterritorial provisions.

4.2.3 Higher Standards

A higher level of competition between clearinghouses is to expect. Since the extraterritorial and protectionist approaches force CCPs to get established or recognised in foreign jurisdictions this means that, in accordance with proposed recognition regimes, these CCPs must comply with standards imposed in its home jurisdiction and additionally in for example the EU (if seeking to get recognised in the EU). In order to ensure compliance the CCP must always take on the higher of the two standards. Higher standards are equivalent to higher costs. Recognising the likeliness of participants not choosing a CCP because of its level of standards and relevant regulatory platform, but rather where the cost benefits are highest, a CCP that has to comply with several different requirements will naturally not be able to offer the same competitive clearing fees etc. Thus, an un-level playing field is created. From a regulatory perspective it might be tempting to impose lower standards than

¹¹³ Please refer to Noyes, *How Asia is progressing towards OTC clearing deadline* (Asia Risk).

¹¹⁴ ISDA, *Testimony of Robert Pickel* p. 1.

¹¹⁵ For example SGX-DC currently applies to CFTC to become a DCO and to UK SFA to be recognised as an overseas clearing house. As opposed to the US, UK has a recognition regime in place. Although, once EMIR takes effect, the UK recognised clearing houses will need to be recognised pursuant to EMIR. Clearing houses currently applying for recognition under the UK regime hope for some kind of grandfathering treatment into the EU market once EMIR takes effect. Notably, it is unclear whether such grandfathering actually will mean that applying CCPs will save resources, but at least they will be able to continue clearing for its EU members and customers.

motivated from a risk management perspective, to enable the local CCPs to be competitive on an international market. A regulatory race to the bottom would not only undermine the G20 objectives but also incur risks in the market place. Taken together, differences in CCP requirements may lead to regulatory arbitrage and competitive advantages not based on more efficient resource allocation or better strategic decisions, but on government fiat.

4.2.4 Equivalence in Standards

As seen above, EMIR is requiring a CCP to be subject to equivalent requirements as set out in EMIR in order to be eligible for recognition. Since the EU is leading the way in the regulatory space, there is a risk that the US and other jurisdictions will require the same level of comparability, i.e. equivalence in relation to domestic laws. This is causing problems for the CCPs, since they for recognition do not only have to show that they have sufficiently high standards in relation to certain criteria, but that the requirements imposed on the CCP are *equivalent* to the requirements set out in a foreign jurisdiction.

Due to differences in local markets and legal traditions it might be difficult to provide for equivalent requirements as set out in the EU and US regimes, either from the clearing house or from the home regulator's perspective, which would prevent CCPs domiciled in such jurisdictions to be recognised abroad. Furthermore, the "easy" solution of always taking on the higher of the two standards may not solve the problem, since requirements of local law may make it impossible for regulations identical to e.g. EMIR to be imposed.¹¹⁶

4.2.5 Key Takeaways

The problems present in relation to participants as being required to hold multiple clearing memberships/client arrangements, have in many ways corresponding negative effects on CCPs as well. Addressing the high-level recognition regimes proposed to date, regulators are requiring the foreign CCP to comply with legally binding requirements, which are equivalent or comparable to the requirements set out in the country recognising the CCP. That these regimes are referring to national legislation and require high level of compliance, will cause CCPs seeking to get

¹¹⁶ GFMA, FSR, IBFed and ISDA, *Re: Extraterritorial legislation: the problems posed for markets, clients and regulators* p. 10.

recognised great distress in complying with different jurisdictions' set of legislation. Furthermore, depending on country of origin, some CCPs may not be able to fulfil requirements as set out in for example the EU or US. As will be seen in Part III, well-balanced recognition regimes and the possibility of interoperability between CCPs could be the solution also to the problems CCPs are facing.

4.3 Market Perspective

The effects that the extraterritorial and protectionist approaches have on the participants and CCPs naturally have consequences also for the market. The best way of showing this is to reconnect these problems identified to the intended benefits from central counterparty clearing.¹¹⁷

- The multiple bi-lateral relationships would be replaced with a single relationship with the CCP. The use of a CCP is intended to increase the probability of contractual obligations being fulfilled: *If a CCP's clearing members have to split their portfolios and clear through multiple clearing houses, the CCP's exposure may be larger due to reduced netting possibilities. In turn, this may affect the CCP's ability to guarantee performance, which could entail systemic risk.*
- All trades would be subject to daily, or intra-daily, margining which would protect the CCP against a member's default. The margin requirements would also create economic disincentives against taking on undue risk exposures: *If participants are forced to tie up too much liquid assets in collateral in different CCPs, this would hamper the trading activity and large margin calls from several ends may drive participants to sell, thus being detrimental to price changes and liquidity.*
- CCPs would be able to impose concentration limits and impose requirements to be met by their clearing members. Further, the CCP would have up to date information on their clearing members' exposure thus improving itself and regulators' ability to prepare for and react to situations of stress. In turn, the increased transparency, through reporting of prices, quantities and other transaction details, lead to enhanced liquidity: *The need for clearing through several CCPs would possibly reduce the ability to assess concentration of*

¹¹⁷ Please refer to para. 2.2.7 above.

*positions which brings about greater risk to the CCP. Further, if information must be obtained from multiple CCPs to construct a complete map of exposures and connections this might be challenging when large dealers clear through CCPs across multiple jurisdictions, which would reduce authorities' ability to efficiently supervise the market.*¹¹⁸

- Participants would enjoy the benefits from position and exposure netting (multilateral netting), which have the potential of substantially reducing the size of individual counterparties' outstanding obligations relative to bilateral arrangements. Instead of posting collateral on several bi-lateral ends, posting collateral at a CCP means the need for less assets tied up in margins while still increasing stability and reducing credit and counterparty risk: *Multiple clearing memberships reduce the potential of netting benefits, and increase the amount of liquid assets tied up in margins.*¹¹⁹ *This may fragment the markets and lead to less liquidity.*

Extraterritorial and protectionist approaches impose the need for participants and CCPs to be in compliance with several regulatory regimes, if operating on an international basis. As long as this in itself benefits the fulfilment of creating stability and resilience in the OTC market, it might be worthwhile. However, as been seen above, the problems participants and CCPs are facing, also brings about detrimental effects to the market.

From a domestic perspective these regulations will most likely promote the intended benefits from CCP clearing, contributing to achieving the G20 objectives. Coming from an international perspective however, it is evident that the global characteristic of the OTC derivatives market has been given too little recognition.¹²⁰ It is now relevant to pay attention to why regulators have insisted on adopting the domestic, extraterritorial and protectionist approach when regulating this market.

¹¹⁸ Pirrong, *The Economics of Central Clearing: Theory and Practice* p. 26.

¹¹⁹ IMF, *Making OTC Derivatives Safe – A Fresh Look* p. 4-5.

¹²⁰ GFMA, FSR, IBFed and ISDA, *Re: Extraterritorial legislation: the problems posed for markets, clients and regulators* p. 6.

4.4 Reasons for Protectionist and Extraterritorial Approaches

Evidences are that regulators take on rather extraterritorial and protectionist approaches when regulating the OTC derivatives market. Proposed clearing mandates are generally wide in its scope with requirements on where to clear the trades. There are several reasons why regulators impose extraterritorial and protectionist approaches, in detail the following would be set forward:

- (i) Firstly, recognising the international characteristic of the OTC market, regulators also realise foreign participants' possible impact on the local market, why they want to regulate them as well.¹²¹ This may be regarded as a rather natural attitude in its endeavour to gain control over the financial market, but nevertheless vastly troublesome.
- (ii) Secondly, there is a competitive element to it. Naturally, each market wants to increase or at least keep their market share in the clearing business. Clearing facilities are closely connected to trading facilities. In a regulatory environment where regulators bound by G20 objectives will require on-exchange trading and clearing to a greater extent, each market wants to compete and foster growth in their market. In order to guard itself against the clearing and trading being moved elsewhere, regulators may feel urged to impose extraterritorial and protectionist provisions. Imagine a jurisdiction only requiring participants that are *booking* its trade in the relevant jurisdiction to clear its trades in accordance with the local regulation. Participants of such regime are likely to clear its trades elsewhere, where the scope of the clearing mandate is broader thus requiring their compliance anyway.
- (iii) Thirdly, allowing offshore clearing means that the home regulator would neither have the primary oversight over such CCP, nor primary involvement in a situation of default. The home regulator's lack of ability to directly influence default resolution processes by offshore CCPs and the home regulator's lack of presence and control as a potential lender of last resort in a CCP default, introduce risks to the local market. Having a domestic authority as the primary regulator of the CCP operating in the

¹²¹ FSB, *OTC Derivatives Market Reforms Third Progress Report on Implementation* p.37.

domestic market provides superior policy outcomes with respect to clarity, transparency and accountability. Moreover, the regulator's capacity to intervene in crisis management scenarios is likely to be more straightforward with regards to a local CCP.¹²²

- (iv) Finally, while the OTC derivatives market is global, clearing houses are local, grounded in local regulations and insolvency laws. Differences in insolvency laws with respect to collateral posted with CCPs, cause uncertainty as to whether local participants' collateral would be protected abroad and whether foreign participants' collateral posted in a local CCP would be at risk due to foreign insolvency proceeding. This uncertainty and lack of ability to put trust in foreign CCPs default management rules, makes regulators inclined to increase their control and impose protectionist provisions.¹²³

As seen above it is, at least to some extent, understandable why regulators impose extraterritorial and protectionist provisions. However, the lack of reliance on foreign regulators is less legitimate. If regulators could consider a change in this approach, the solutions proposed in the following would face greater prospects of becoming reality.

¹²² IOSCO, *Requirements for Mandatory Clearing* p. 39.

¹²³ Please refer to para. 5.3.4.2 below for an account of possible differences in insolvency laws causing CCPs problems.

PART III – PROPOSED SOLUTIONS AND WAYS TO MITIGATE PROBLEMS CAUSED

5. Solutions

There is no simple answer to the question of how to resolve the critical issues pointed out above. Regulating an international market on a national basis inevitably brings problems for international stakeholders. Worth noting is that regulations relating to the extraterritorial scope of the clearing mandate only account for a narrow area of law as being a smaller part of the whole OTC reform. Extraterritorial provisions relating to on-exchange trading, capital requirements and reporting to trade repositories etc. are equally troublesome. Thus, coming from a broader perspective, which is the reality for most participants, one can barely imagine how many obstacles there are to overcome all in all before a stable international financial market in the OTC derivatives space may face daylight.

5.1 International Harmonisation

The benefit from international harmonisation does not need detailed clarification. Simply, if jurisdictions impose equivalent provisions in all respects, neither participants nor CCPs would face difficulties in complying with different regulatory regimes.¹²⁴

There has been a frenetic activity among international bodies and stakeholders seeking to set out international standards and recommendations to regulators across the globe. The International Organization of Securities Commission (“IOSCO”), holds the highest authority in the international regulatory space and has issued a number of reports containing international standards and recommendations for implementation of mandatory central clearing.¹²⁵ IOSCO’s goal is to “*cooperate in developing, implementing and promoting adherence to internationally recognised and consistent standards of regulation, oversight and enforcement in order to protect*

¹²⁴ This still provided that all regimes allowed for recognition of overseas CCPs, otherwise participants would have to clear through several CCPs anyway.

¹²⁵ Among others, see: IOSCO, *Requirements for Mandatory Clearing*, IOSCO, *Report on Trading of OTC Derivatives* and IOSCO, *Principles for Financial Market Infrastructures*.

*investors, maintain fair, efficient and transparent markets, and seek to address systemic risks...*¹²⁶

Furthermore, the Financial Stability Board (“FSB”) and Bank for International Settlement (“BIS”) have published several reports.¹²⁷ Organisations such as the International Swaps and Derivatives Association (“ISDA”) have been very active in responding to various regulatory proposals promoting international standards.¹²⁸ On an overall note, regulators seem to be referring to IOSCO standards when proposing their respective regulations; this has to be considered a great success.

From an international trade perspective it would be desirable to have completely harmonised regulations across the globe. However, due to differences in local markets and regulatory traditions it is probably highly unlikely that this will ever become reality. For a fact, jurisdictions will impose clearing mandates as regards different products, participants exempted will vary from country to country and participants will be subject to different and sometimes colliding requirements. Further, CCPs will face a whole range of different requirements depending on country of operation.

Harmonisation is of paramount importance, but it is not easy to achieve overnight. Yet, hopes are that further harmonisation will be seen in the future, which would mitigate problems seen in today’s regulatory regimes. However, harmonisation would not resolve the problems identified if each framework does not provide for recognition regimes of overseas CCPs. Point is, if regulations across the globe were harmonised, such recognition would not be equally controversial.

¹²⁶ IOSCO members are drawn from, and regulate, over 100 jurisdictions and its number of members continues to grow. Its primary members are the financial market regulators in each jurisdiction (<http://www.iosco.org/about/> and <https://www.iosco.org/about/index.cfm?section=background>).

¹²⁷ FSB, *Implementing OTC Derivatives Market Reforms*, where FSB made 21 recommendations on issues to be resolved by regulators. FSB has since followed the implementation progress compiling reports covering multiple jurisdictions. See FSB’s most recent report on implementation, FSB, *OTC Derivatives Market Reforms Third Progress Report on Implementation*. See also BIS, *The macrofinancial implications of alternative configurations for access to central counterparties in OTC derivatives markets*.

¹²⁸ ISDA’s recommendations and comments available at: <http://www2.isda.org/functional-areas/public-policy/>.

5.2 Regimes for Recognition of Overseas CCPs

As indicated above, the key to success is spelled efficient and well-balanced regimes for recognition of overseas CCPs. Recalling Scenario 2 above, the Singapore Bank would have to be a member of a US DCO if trading with a US person, and a member of a EU CCP if trading with a EU counterparty. However, if for example the EU CCP was recognised by both Singapore and the US, the participants could clear all their trades through the EU CCP. Also the problem set out in Scenario 1 above, restructuring of transactions, would be solved if the chosen CCP was recognised in all four jurisdictions. From a CCP perspective, recognition in foreign jurisdictions is crucial enabling them to keep their business, why well-balanced recognition regimes would solve their problems as well.¹²⁹ If regulators do not manage to put these recognition regimes in place, in time, but still prompt the clearing obligation, this will be disastrous for participants seeking to trade with international counterparties.¹³⁰

The recognition models that have been put forward by regulators to date will be described and criticised below. Subsequently, analysis as to how regulators alternatively should design their recognition regimes to help mitigate the problems identified will be provided.

5.2.1 Recognition Regimes Proposed to Date

The recognition regimes put forward to date require a detailed level of equivalence in legally binding requirements. EMIR, Article 25, prescribes as a prerequisite for recognition that “... *the CCP authorised in that third country complies with legally binding requirements which are equivalent to the requirements set out under EMIR*”.¹³¹ The upside of this model is that it ensures high standards across jurisdictions and enables thorough oversight. Nevertheless, requirement for exactly “equivalent” regulation or legislation, in relation to domestic laws, runs into several problems.

¹²⁹ Please refer to Scenario 3, in para. 4.2 above.

¹³⁰ Note that if location requirements would be imposed, recognition regimes would not help the participants. However, such location requirement would hopefully have limited effects on international transactions, since it would only be applied to systemically important products, which are products that to a high extent are traded within that jurisdiction by local participants. Moreover, tendencies show that regulators seem to pull back from the location requirement (apart from in Japan, India, China and South Korea), why location requirements are left aside in the following.

¹³¹ The US, very high-level, proposal of exempting DCOs also refers to domestic legislation. Bearing in mind the US approach so far, of being reluctant to put reliance on foreign regulators, US will probably put forward a regime similar to EMIR’s.

Pursuant to this model, a CCP would have to ensure compliance with both domestic and other jurisdictions' regulatory frameworks (i.e. in the jurisdiction(s) where it seeks recognition). Firstly, as pointed out above, to comply with several legal frameworks is troublesome for CCPs and incurs great costs. In turn, this may put the CCP required to comply with several regimes in a competitive disadvantage. Naturally, this is a business decision, whether it finds it worthwhile to apply for recognition under these regimes. But facts are, that it would not serve the market on the whole since the participants in such case would have to split their portfolios and clear through several CCPs. Moreover, if CCPs decide not to go for recognition due to the costly procedure, this could lead to a market with very few operating CCPs in the OTC space. It is difficult to assess how many CCPs on the whole that would be suitable, but having very few CCPs would possibly increase systemic risk since too much risk would be accumulated in these few CCPs. A default of such internationally systemically important CCP would not only affect the regional market, but could be detrimental to the whole international financial market endangering the stability of real economy.¹³²

Secondly and more importantly, it might be impossible for a CCP to comply with equivalent regulations for a number of reasons: requirements of local laws may make it impossible for identical regulations to be imposed, the local market may not yet be sufficiently developed for identical regulations to be imposed, or there might be differences in local assets, local business models or local financing structures.¹³³

CCPs domiciled in a market not designed around the size and product range as seen in the EU and US would have problems getting recognised. The major OTC derivatives markets are concentrated to the US and the EU, whilst the market in for example Australia is concentrated to a few products.¹³⁴ Further, CCPs that are largely designed around the size and product range of the markets in the EU and US might have participants criteria that are not well calibrated with a local smaller market. Therefore, CCPs required to hold a lower level of admission requirements adjusted to the local

¹³² IMF (2010) p. 21 *et seq.*

¹³³ GFMA, FSR, IBFed and ISDA, *Re: Extraterritorial legislation: the problems posed for markets, clients and regulators* p. 10.

¹³⁴ Council of Financial Regulators, *Central Clearing of OTC Derivatives in Australia* p. 27 *et seq.*

market participants, would not be able to achieve equivalence with EU or US requirements. Furthermore, participants in these local markets may not be able to meet the clearing member requirements set forth by the CCPs in major OTC derivatives markets, thus forced to meet the clearing requirements through client clearing. Client clearing may not be as advantageous as direct clearing, since direct clearing might allow for greater netting opportunities and avoidance of an additional layer of fees etc.¹³⁵ Being a direct member may also signal a dealer's creditworthiness or market standing.¹³⁶ CCP membership criteria that do not commensurate with the level of risk to be managed in the domestic market might unduly limit the diversity of local participants and overtime render in higher costs, lack of innovation and greater concentration of exposure to end-users in the local smaller market.¹³⁷

Conclusively, to require equivalence to local laws for recognition is a too high requirement that may be impossible for CCPs to meet for the reasons stated above, which would also affect participants customised to smaller markets.

5.2.2 Alternative Recognition Regimes

From both a participant and CCP perspective, it might be tempting to simply propose recognition of overseas CCPs without this troublesome evaluations of requirements imposed on the overseas CCPs. However, not to assess the standards of the CCP applying for recognition would undermine the vast efforts to sufficiently regulate CCPs, and such order would inevitably pose a risk for regulatory arbitrage. After all, central counterparty clearing is introduced for the purpose of creating stability in the OTC derivatives market, thus CCPs must be able to bear the responsibility of facilitating this. Moreover, if overseas CCPs not equally regulated would be let into the domestic market this would create an un-level playing field between CCPs. Participants would, perhaps, choose the cheapest alternative thus putting the CCPs highly regulated out of business. To uphold a sufficient standard of the regulatory platform, financial standing, risk management procedure etc. of CCPs, it is necessary to require some kind of assessment in relation to the requirements imposed on the CCP in question.

¹³⁵ Please refer to para. 4.1.2.1 above.

¹³⁶ Council of Financial Regulators, *Central Clearing of OTC Derivatives in Australia* p. 14.

¹³⁷ Council of Financial Regulators, *Central Clearing of OTC Derivatives in Australia* p. 32-33.

Instead of assessing equality of legal requirements on the detailed level that is put forward in current frameworks, it would be beneficial to assess the CCP in relation to international standards. Alternatively, a broader concept of equivalence could be adopted, referring to *the effect* of the legal requirements.¹³⁸

5.2.2.1 On Par with International Standards

If assessing whether the CCP's standard and the supervision of the same are on par with international recommendations and standards, this would mean that the CCP would not need to prove equivalence in relation to multiple legislations for recognition. Pursuant to this model, IOSCO would play an important role as holding the highest authority in the international regulatory space. Given that IOSCO has issued a number of recommendations on international standards in recent years, which regulators refer to when legislating this area, thus largely accepted, assessing compliance with IOSCO principles would not be foreign to national regulators. The most authoritative and recent IOSCO principles are found in *Principles for financial market infrastructures*, updated version issued in April 2012.¹³⁹ There are 24 principles covering areas such as credit and liquidity risk management (including collateral management with corresponding segregation and portability issues), governance of the CCP, settlement procedures, default management procedures, admittance requirements of potential members and transparency etc.¹⁴⁰

By using this model, CCPs would, once deemed holding standards on par with IOSCO's, be eligible for recognition in all relevant jurisdictions. Naturally, the CCP would still be subject to its own regulator's supervision and possibly enhanced requirements correlating to the local market, but it would not need to go through the vast resource-consuming process of ensuring compliance with other regulatory regimes. Moreover, the possible need for legislators to change laws to enable a domestic CCP (that is seeking recognition in foreign jurisdictions) to be in compliance with foreign laws would not be necessary.

The risk for un-level playing field between CCPs will to some extent remain using this model, since overseas CCPs may not be subject to equally burdensome

¹³⁸ GFMA, FSR, IBFed and ISDA, *Re: Extraterritorial legislation: the problems posed for markets, clients and regulators* p. 10.

¹³⁹ IOSCO, *Principles for financial market infrastructures*

¹⁴⁰ In addition, IOSCO has issued 17 recommendations in relation to how the regulators should approach the clearing mandate, IOSCO, *Requirements for Mandatory Clearing*.

requirements compared to local CCPs. However, as long as the international standards are high enough, CCPs competing in the same clearing space would be on fairly equal footing. Further, some CCPs and participants domiciled in smaller markets may still have problems complying with IOSCO standards, but these problems would not be as extensive compared to the proposed recognition regimes described above. High standards would still be upheld and further harmonisation in the regulatory space would be a probable outcome.

An internationally accepted recognition regime that pushes for natural regulatory harmonisation would hopefully also help harmonising rules set out by the CCPs as self regulatory organisations. This would be beneficial from the participants' perspective, insofar they would face similar admission criteria and ongoing requirements regardless of liaising with multiple CCPs.

No regulator has proposed to refer to international standards in their recognition regimes. Notably however, the Hong Kong proposal refers to international standards when determining "acceptable" jurisdictions.¹⁴¹ This can be regarded as a support for international standards as being detailed and authoritative enough to be referred to in such legislation.

5.2.2.2 Effect-Based Approach

By face of evidence, regulators tend not to refer to international standards, but are eager to enforce their own legal and regulatory provisions on overseas participants and CCPs. If this continues to be the case, the prospect of a broader concept of equivalence, referring to *the effect* of the legal requirements might lend broader acceptance among regulators. A tendency in favour of this approach is seen in the Singapore proposal. To be eligible for recognition, the overseas CCP should be "*...subject to requirements and supervision comparable, in the degree to which the objectives specified in section 47 are achieved, to the requirements and supervision to which approved clearing houses and recognised clearing houses are subject under this Act*".¹⁴² The objectives of section 47 are (a) to promote safe and efficient clearing facilities; and (b) to reduce systemic risk. At the time being, it remains unclear to

¹⁴¹ For relevant description of Hong Kong proposal, please refer to paras. 3.3.3 and 3.4.3 above.

¹⁴² MAS, *New Part IIA of SFA* Section 52(2)(b).

what extent the regulator intends to take on this “effect-based approach” by referring to achieving these objectives, but it at least shows a willingness towards adopting a more pragmatic approach.

If this effect-based approach was to be acknowledged among regulators, CCPs and regulators would not have to stare themselves blind at legal details to be in compliance with in order to get recognition from a foreign authority. The risk of conflicting laws would be lower compared to the EMIR proposal. Under the effect-based model, as the name suggests, the outcome of requirements/legislation would be assessed instead of the requirements/legislation itself. There would still be a slight risk for un-level playing field between local and overseas CCPs, but at least the recognising authority would assess the CCP in relation to domestic legislation, albeit not in detail, to safeguard the objectives of the same.

5.2.3 Key Takeaways

The currently proposed regimes for recognition of overseas CCPs are imposing too high standards of equivalence required in relation to domestic laws. Troublesome obstacles to overcome are created, which would reduce the possibilities of efficient recognition regimes working in practice. If regulators were to refer to international standards instead, this would help mitigating the problems identified. CCPs would be able to get recognised without the need of being in compliance with several jurisdictions’ laws, which also would reduce the home legislator’s possible need to constantly amend domestic laws. Realising regulators’ reluctance to step away from their own regulatory frameworks, another workable approach would be the effect-based one. CCPs would still need to be in compliance with several regulatory frameworks, but rather on a high-level effect-basis. If either of these two proposed changes to the frameworks were adopted, it would mean a great step forward towards well-balanced and efficient recognition regimes. As mentioned before, this would benefit both the participant and CCP perspectives, which in turn would promote a sound financial market.

5.3 Interoperability

Realising the possibly limited willingness of regulators to change their regulatory frameworks as regards recognition regimes as proposed above, it may be beneficial to step outside the legislative world and see whether there are any other legal constructions seen in associated markets that may help mitigate the problems identified. Interoperability between CCPs could be an innovative solution and has recently been introduced in the European equities market.¹⁴³ Simply put, allowing interoperability would enable participants to meet the clearing obligation despite the original counterparties being members to different CCPs.

The fact of clearing requiring the counterparties to clear through the same clearing house is not a new phenomena, but has always been the case. Why this is of increased importance after the OTC reform, is because an enhanced number of participants will have to clear their trades to a greater extent. More importantly as described above, the extraterritorial and protectionist approaches further create difficulties for participants wanting to clear at their CCP of choice. Market participants are faced with the unsavory prospect of having to break up its netting sets and increase the amount of capital needed because of their need to hold multiple clearing memberships. If interoperability was introduced in the OTC clearing space, participants would not need to clear different parts of their portfolios through different clearing houses. It is now relevant to first describe what interoperability is. Subsequently, an account of interoperability developments to date, its benefits and risks and an assessment of whether it is feasible to introduce interoperability in the OTC space is provided.

5.3.1 What is interoperability?

Interoperability refers to arrangements between two or more CCPs, allowing them to clear transactions executed by participants that are members to different interoperable CCPs. To illustrate; interoperability between CCPA and CCPB would allow for clearing of a transaction between a clearing member to CCPA and a clearing member to CCPB. There are different ways of arranging these links. One being that CCPA becomes a member to CCPB (“participant” links), another that CCPA and CCPB interoperate on an equal basis (“peer-to-peer” links). To simplify, this means that CCPA will become some sort of “intermediary” between its own member and CCPB,

¹⁴³ BIS, *The macrofinancial implications of alternative configurations for access to central counterparties in OTC derivatives markets* p. 8.

who clears the trade, or vice versa. These two different models can be described as follows:

- Participant links allow a CCP to maintain a link with another CCP in a manner similar to that of a direct participant that acts as a general clearing member. In other words, one CCP (the participant CCP) becomes a member to the other CCP (the host CCP). The participant CCP is then subject to the host CCP's normal participants rules. The host CCP maintains an account for the participant CCP, and would typically require the participant CCP to provide margin, as would be the case for a participant that is not a CCP. Some harmonisation of risk management and operational requirements will be necessary to effectively manage the risks of trades cleared across the link. In contrast to a peer-to-peer link, cross-CCP risk management is not equal among CCPs since the participant CCP does not receive any financial resources to cover cross-CCP exposures.¹⁴⁴
- Peer-to-peer links allow CCPs to interoperate on an equal footing. Risk management between the CCPs is based on a bilaterally approved framework that ensures adequate coverage of cross-CCP exposures of all interoperating CCPs. In existing interoperability frameworks, CCPs exchange margin on a reciprocal basis, based on their individual margin models.¹⁴⁵

Both participant and peer-to-peer links enable clearing members to join only one CCP rather than having to join multiple CCPs. Further, these links can allow multilateral netting across commonly cleared products and participants of both CCPs.

5.3.2 Interoperability Development to Date

In 2006 an initiative was taken by participants active in the clearing space who wrote a voluntary code, "The European Code of Conduct for Clearing and Settlement", where signatories pledged to open up to competition through price transparency,

¹⁴⁴BIS, *The macrofinancial implications of alternative configurations for access to central counterparties in OTC derivatives markets* p. 17, and IOSCO, *Principles for Financial Market Infrastructures* p. 112-113.

¹⁴⁵BIS, *The macrofinancial implications of alternative configurations for access to central counterparties in OTC derivatives markets* p. 17.

access and interoperability.¹⁴⁶ Since then, EuroCCP and LCH.Clearnet have been the most driving parties among the CCPs to introduce interoperability.¹⁴⁷ Over the last six months Chi-X Europe, BATS Europe, Burgundy and Turquoise have launched full four-way interoperability, allowing for all trades executed on these platforms to be cleared on an interoperable basis through any of the four interoperating CCPs (EMCF, EuroCCP, LCH.Clearnet and SIX x-clear).¹⁴⁸

The interoperability agreements between the four CCPs are confidential commercial agreements, thus impossible to know for sure how these links are set up.¹⁴⁹ Available information show that each CCP respectively will calculate the additional risk imposed due to interoperability, and require each of its members to provide additional margin to cover open liabilities between interoperating CCPs. Operationally, where the seller of a security is using CCPA, and the buyer is using CCPB, it is the responsibility of CCPA to take delivery from its selling clearing member and deliver the security to CCPB for onward delivery to its buying clearing member. In event of a CCP's default, it will be subject to default management procedures from the surviving CCPs.¹⁵⁰

The newly introduced interoperability seen today is a great step forward, but nevertheless little helpful to participants required to clear OTC derivatives. Current interoperable links only allow for clearing of on-exchange traded products.¹⁵¹

¹⁴⁶ The European Code of Conduct for Clearing and Settlement, a voluntary Code, was written by FESE, EACH, ECSDA and the industry associations for European securities exchanges, central counterparties and central securities depositories, in November 2006.

¹⁴⁷ For an overview of the progress of establishing interoperability between these CCPs, please refer to <http://www.euroccp.co.uk/interoperability/milestones.php>.

¹⁴⁸ Also Nasdaq OMX was to offer interoperable clearing, but recently postponed its planned April launch "due to uncertainty surrounding interoperability requirements from regulators and industry groups", refer to <http://www.thetradenews.com/newsarticle.aspx?id=8471>.

¹⁴⁹ Refer to: <http://www.euroccp.co.uk/interoperability/milestones.php> and http://www.lchclearnet.com/cash_equities/equityclear.asp.

¹⁵⁰ LCH.Clearnet, *Frequently Asked Questions regarding Interoperability for Equities* p.4.

¹⁵¹ Interoperable links between CCPs clearing OTC derivatives are somewhat held back by regulators. In the OTC reform, EMIR only enshrines a right for CCPs to enter into interoperability arrangements as regards cash securities. ESMA will review the scope of interoperability arrangements first in 2014, please refer to Recital 73, EMIR. Both the Australian and Japanese regulators are positive to interoperable link arrangements, while other jurisdictions' regulators seem a bit more cautious staying quiet in their regulatory proposals.

5.3.3 Benefits from Interoperability

5.3.3.1 No Need for Multiple Clearing Memberships

Interoperability enables participants to meet the clearing obligation despite the counterparties being members to different CCPs.¹⁵² Recalling the Scenario 2 set out above, interoperability between the Singapore CCP and the US CCP would allow the counterparties to clear the transaction, using both CCPs, instead of requiring the participant to become a member or client to the other CCP as well. Furthermore, in event of a jurisdiction requiring local clearing, this would mean a deadlock in terms of recognition regimes. Interoperability however, would enable a local participant subject to the clearing location requirement to continuously use the local CCP, while the other party to the transaction may use an overseas CCP.¹⁵³ Conclusively, both major problems identified for participants above, i.e. the need for re-structuring trades and to hold multiple clearing memberships, would be mitigated if interoperability was introduced.

5.3.3.2 Multilateral Netting and Increased Liquidity

Through interoperability, participants would be allowed to use whichever CCP gives them greatest margin efficiency and lowest clearing fees, and have the two CCPs face each other. By using only one CCP, the participant would only need to put margin paid on net obligations to one CCP, instead of multiple pots of margin with several CCPs.

Links between CCPs give greater scope for multilateral netting compared to non-linked CCPs. By linking CCPs together, participants would have access to a larger pool of counterparties. The CCP could then facilitate netting to a greater extent, thus subject their participants to lower margin requirements.¹⁵⁴ This can be done either by allowing a participant to focus all of its clearing activity within one CCP, or by allowing CCPs to share collateral through cross-margining.¹⁵⁵ By way of illustration; Participant X is a clearing member to both CCPA and CCPB, and suffers losses on its

¹⁵² BIS, *The macrofinancial implications of alternative configurations for access to central counterparties in OTC derivatives markets* p. 17.

¹⁵³ Harrison, *Clearing at the Crossroads* p. 3.

¹⁵⁴ An interoperable CCP would probably require additional margin due to the interoperable link. However, according to calculations, the additional margin required for interoperability would still account for less than if required to post margin with several CCPs, EuroCCP, *Is Interoperability the model for the CCPs?* p.6.

¹⁵⁵ BIS, *The macrofinancial implications of alternative configurations for access to central counterparties in OTC derivatives markets* p. 17.

exposures in CCPA, but gains in CCPB. Interoperability between CCPA and CCPB would allow the participant to either (i) being a member to only CCPA and still clear with participants to CCPB, in such case Participant X would have all its exposure in CCPA, thus being able to net its losses against its gains; or (ii) if Participant X chooses to be a member to both CCPA and CCPB, its gains and losses in the two CCPs could still be netted through cross-margining between the interoperating CCPs. Furthermore, since netting could be facilitated to a greater extent, the CCP's total exposure towards its members would be reduced. The availability of a larger pool of counterparties may increase number of transactions. Together with multilateral netting and thereby a reduced demand for collateral, this may create higher liquidity in these markets.¹⁵⁶

5.3.3.3 Increased Competition

Interoperability as a concept means that competitors are forced to cooperate in order to provide choice and more efficient services to consumers, while still competing on price and quality. In the on-exchange traded market, participants are usually forced to clear its trades through the CCP appointed by the trading venue. When the clearing mandate for OTC derivatives enters into force, participants will be forced to clear through a CCP appointed by the regulator. Worth noting in this context is the on-exchange trading mandate for some OTC derivatives that is up and coming in line with the G20 objectives.¹⁵⁷ Participants are free to choose their trading venue (or over-the-counter), but must clear at a specific CCP. This arrangement means limited competition among CCPs. If interoperability was developed, participants would be able to choose their clearing facility, which would foster greater competition thus have a positive impact in the capital market.¹⁵⁸

5.3.3.4 Interoperability from the CCP Perspective

As been pointed out above, there are several benefits from interoperability both from the participant perspective and the market perspective. As to the CCP perspective, the benefits may not be as obvious. Due to the risks of interoperability, set out below, such links will probably be strictly regulated thus subject CCPs to meet requirements

¹⁵⁶ BIS, *The macrofinancial implications of alternative configurations for access to central counterparties in OTC derivatives markets* p. 17-18.

¹⁵⁷ Looking forward, trading venues will have an increasingly influential role in the participants' choice of clearing venue, why interoperability in the future is of even higher importance from a market perspective. Please refer to para. 2.1 above for a reminder of the G20 objectives.

¹⁵⁸ Chan, *Interoperability: Is it worth the effort?*

comparable to the recognition regimes described above. It may actually be rather likely that cross-border interoperability will require recognition of the CCPs in relevant jurisdictions. In such case, the problems identified for CCPs would not be solved by interoperability at the outset. Once in place however, interoperability has great advantages for CCPs. By interoperating with other CCPs, the CCP can (i) get access to new markets and clear for international participants; (ii) facilitate position netting to a greater extent thus limit its exposure towards its participants; and (iii) together with the interoperating CCP reduce costs of systems development and operational costs since they can share some of the expenses.¹⁵⁹

5.3.4 Interoperability – a Risky Business?

There is a fright that the regulatory reform would not remove the systemic risk from the trading of OTC derivatives, but rather shift the risks from banks to CCPs.¹⁶⁰ As noted above, CCPs will be of greater systemic importance to the financial market after the G20 objectives are met and will be regarded as systemically important financial institutions (“SIFIs”). Pundits’ views are that CCPs should not take on credit risk themselves or pledge their capital as collateral to another CCP since CCPs are meant to offer protection to its members, not to be risk-taking intermediaries.¹⁶¹ To link these CCPs up to each other would introduce a new form of interconnectivity into the financial system. It might seem contradictory to propose interoperability as a solution to the issues set out above, since regulators and stakeholders have spent the last three years trying to remove interconnectedness in the financial system. The main reasons for the, at the time being, not so very optimistic future of interoperability between CCPs clearing OTC derivatives can be divided in three risk categories: (a) contagion risks; (b) legal risks; and (c) operational risks.

5.3.4.1 Contagion Risks

As describes above, an interoperating CCP has to cover its exposure towards the other CCP by posting collateral to the other CCP. In line with IOSCO’s recommendations, each CCP in a link arrangement should be able to cover, at least on a daily basis, its current exposure to the linked CCP and its participants. At the same time, the link

¹⁵⁹ IOSCO, *Principles for Financial Market Infrastructures* p. 110.

¹⁶⁰ IMF, *Making OTC Derivatives Safe – A Fresh Look* p. 1.

¹⁶¹ EuroCCP, *Recommendations for Reducing Risks Among Interoperating CCPs* p.7.

arrangement should not affect the CCP's ability to address other risks.¹⁶² Today the CCP's only resources are the collateral from its participants and the default fund. The CCP could collect additional collateral from its participant and use that to post at the other CCP for its own exposure. However, tendencies show that re-use of participants' margin may not be allowed in some jurisdictions.¹⁶³ In such case, alternative financial resources must be used.¹⁶⁴ In addition, or instead of posting collateral, the CCP can contribute to the other CCP's default fund.

If a CCP posts margins in the other CCP, it is of foremost importance that the margin posted in the other CCP is sufficiently segregated and unencumbered to secure the CCP's standing in event of the other CCP's default.

If the CCP contributes to the other CCP's default fund, the CCP becomes exposed to the other CCP's participants' default. If the other CCP exhausts its default waterfall, it will use the linked CCP's default fund contribution. The CCP always face the risk of having to exhaust its default waterfall, but a linked CCP faces a greater risk to the extent that the CCP is unable to directly monitor or control the other CCP's participants.¹⁶⁵ To be clear, interoperable links create new channels for risk propagation. By CCPs contributing to each other's default funds, the CCPs may transmit the effect of a participant's default between each other.¹⁶⁶ Therefore, IOSCO recommends interoperating CCPs to hold a separate default fund. Furthermore, it is recommended that any default fund contributions or allocation of uncovered losses should be structured to ensure that (a) no linked CCP is treated less favourably than the participants of the other CCP and (b) each CCP's contribution to the loss sharing arrangements of the other is no more than proportionate to the risk the first CCP poses to the linked CCP.¹⁶⁷

¹⁶² IOSCO *Principles for Financial Market Infrastructures* p. 113.

¹⁶³ Please refer to para. 2.2.4 above and IOSCO, *Principles for Financial Market Infrastructures* p. 113-114.

¹⁶⁴ EuroCCP, *Recommendations for Reducing Risks Among Interoperating CCPs* p. 10 *et seq.* The use of bank guarantees to secure inter-CCP obligations would be a possible solution for CCPs not able to re-use members' margins. This could also be operationally simpler, as a bank guarantee of sufficient size could be exchanged to cover actual needs plus some headroom.

¹⁶⁵ IOSCO, *Principles for Financial Market Infrastructures* p. 114.

¹⁶⁶ BIS, *The macrofinancial implications of alternative configurations for access to central counterparties in OTC derivatives markets* p. 19.

¹⁶⁷ IOSCO, *Principles for Financial Market Infrastructures* p. 115.

In a non-linked CCP, the CCP only has to assess risks incurred by its members and its customers. If it is linked towards another CCP, it also has to consider risks posed by that CCP's members and customer. Links between three or more CCPs increasingly complicates the contagion risk assessment procedure. The nature of the current interoperability agreements as being confidential, adds on to the difficulties of assessing risks.¹⁶⁸

5.3.4.2 Legal Risks

Especially in a cross-border trading environment, which is of highest relevance in this paper, there are several legal issues that have to be dealt with in order to enable interoperability between CCPs operating in different jurisdictions.

Firstly, laws and rules governing settlement finality may differ between jurisdictions. Likewise, enforceability of the CCPs' obligation assumed by novation, or a similar legal device, may also differ. This could lead to a situation where a transaction is regarded as properly "transferred" to the CCP, or finally settled, in one jurisdiction and not in the other.¹⁶⁹ The problem of being subject to conflicting laws in this regard if a participant is defaulting at this critical point of time is evident. One CCP may have assumed obligations and rights, while the other has not, which can lead to difficulties in accessing collateral and being protected from possible bankruptcy proceedings.¹⁷⁰ The possibility of a bankruptcy proceeding brings us to the next crucial legal issue: harmonisation of insolvency laws.

The posted collateral is at risk of being subject to a trustee in bankruptcy's claw-back, i.e. that the trustee may ringfence the collateral as being part of the defaulter's estate. The mere idea and benefit of CCP clearing could be endangered if it was not able to carry out its default management procedure, including porting of customers' position and collateral.¹⁷¹ To protect the collateral posted, the CCPs should not be subject to

¹⁶⁸ EuroCCP, *Recommendations for Reducing Risks Among Interoperating CCPs* p. 5.

¹⁶⁹ IOSCO *Principles for Financial Market Infrastructures* p. 110-111.

¹⁷⁰ For example, some countries have "zero hour rules", that make every transaction by a bankrupt participant void from the start of the day of the bankruptcy. This could be increasingly troublesome with respect to cross-border interoperability. IOSCO recommends that "zero hour rules" that undermines settlement finality should be eliminated across jurisdictions, refer to IOSCO *Principles for Financial Market Infrastructures* p. 23.

¹⁷¹ Please refer to para. 2.2.6 above for a description of porting of customers' position.

“normal” insolvency laws.¹⁷² For example, the Singapore laws afford insolvency override protection to CCPs, providing a prohibition for trustees to claw-back collateral posted in accordance with clearing agreements.¹⁷³ From an international trade perspective, and especially when it comes to cross-border interoperability, the statutory insolvency protection must be effective in relation to foreign bankruptcy proceedings as well.¹⁷⁴ The rules, procedures and contracts related to a CCP’s operation should be enforceable in all relevant jurisdictions.¹⁷⁵

Furthermore, differences in insolvency laws may give participants to CCPA unintended rights to claim assets from CCPB in event of CCPA’s default. This if CCPA has posted assets (collateral to cover its exposure to CCPB) in CCPB, out of which participants to CCPA may claim their right to. Likewise, collateral from CCPB, held in CCPA may be endangered if not segregated properly. Therefore, rights and obligations of the CCPs and their participants must be clearly stated in the interoperability agreement.¹⁷⁶ In addition, the terms of the link agreement should also set out, in cross-jurisdictional contexts, an unambiguous choice of law that will govern each aspect of the link.

These possible legal risks demand further investigation and laws possibly need to be harmonised to enable cross-border interoperability.

5.3.4.3 Operational Risks

CCPs are to a great extent self regulatory organisations, meaning that they set up rules for themselves and their participants to follow, albeit approved by their regulator. As underlined above, CCPs’ default management procedures are of foremost importance to ensure the intended benefits from central clearing. CCPs may use different risk management tools. In order to assure effectiveness of risk management and default procedures, harmonisation between interoperating CCPs might be necessary. By way of example, the interoperating CCPs may have different rules for declaring a member in default. The result of this could be that a CCP must replace a contract without having access to the collateral held in another CCP (similar to the legal risk of

¹⁷² IOSCO *Principles for Financial Market Infrastructures* p. 24.

¹⁷³ Section 81F of the Securities and Futures Act.

¹⁷⁴ IMF, *Making OTC Derivatives Safe – A Fresh Look* p. 7.

¹⁷⁵ IOSCO *Principles for Financial Market Infrastructures* p. 24.

¹⁷⁶ IOSCO, *Principles for Financial Market Infrastructures* p. 111.

differences in laws governing settlement finality etc. above).¹⁷⁷ Furthermore, the CCPs would have to establish cooperative arrangement for oversight and exchange of information, since insufficient information would endanger the CCP's ability to assess risks and calculate exposures.¹⁷⁸

As regards interoperability between CCPs clearing on-exchange traded products, the risks presented above are obviously already mitigated to a level accepted by supervising authorities. Nevertheless, pundits are not very positive to interoperability between CCPs clearing OTC derivatives, which will be analysed in the following.

5.3.5 Interoperability in the OTC Derivatives Space

*“Just the posting of additional collateral would be a nightmare (...) and I'm not even going to talk about default management and all the complications you would have to consider to get rid of positions in a world where you are connected to other CCPs. I think it is very challenging.”*¹⁷⁹

By face of evidence, the true problem lies within the nature of the OTC products. In order for an OTC derivatives contract to be eligible for clearing it has to be sufficiently standardised and liquid. Why the standardisation and liquidity of such products are essential is because of the need to calculate the risk such transactions imposes on the CCPs, which in turn determines the margin required.¹⁸⁰ Depending on how easy orphaned contracts can be replaced and how long the settlement period is etc., the CCP will require correlating security in terms of margin from the participant.¹⁸¹

Different margin standards and default fund requirements among various CCPs means difficulties in calculating the exposure between CCPs. When clearing OTC derivatives, the sometimes complex and bespoke nature and the long maturity of these

¹⁷⁷ BIS, *The macrofinancial implications of alternative configurations for access to central counterparties in OTC derivatives markets* p. 18.

¹⁷⁸ BIS, *The macrofinancial implications of alternative configurations for access to central counterparties in OTC derivatives markets* p. 19.

¹⁷⁹ This put forward by Alberto Pravettoni, managing director at LCH.Clearnet, as a comment to the possibilities of interoperability between CCPs clearing OTC derivatives. See Whittall, *No CCP interoperability in our lifetime*.

¹⁸⁰ Please refer to paras. 2.2.4 and 2.2.5 above for an account of calculation of margins and the nature of the OTC derivatives contract.

¹⁸¹ Please refer to para. 2.2.4 above for a description of the margin calculation.

products increase the difficulty in calculating margins required. On-exchange traded cash securities on the other hand are typically standardised and have a relatively short settlement period, normally two to three days, which makes it easier to predict the risks incurred by interoperability.¹⁸² Furthermore, the legal risks, in particular the ones relating to insolvency laws, may be greater as regards OTC derivatives. This due to the longevity of these contracts, which tend to live for years in contrast to on-exchange traded products.

The OTC reform is still in a very immature state, and to date it is not even determined which products that will be subject to the clearing mandate.¹⁸³ Thus a thorough assessment of whether interoperability would be feasible is difficult to carry out. In due course however, interoperable links between CCPs clearing OTC derivatives may not be as risky as seems to be the case today. The most heavily traded products will become more standardised over time, and the use of central clearing would further increase liquidity in these markets and provide for well-established price discovery mechanisms. Looking forward, the realisation of the other G20 objectives as well, in particular the on-exchange trading mandate, will doubtlessly accelerate the crucial standardisation and liquidity enhancement. Once reaching this stage, interoperability should be possible and serve the market well.¹⁸⁴

5.3.6 Key Takeaways

The benefits from interoperability are unquestionable, both from a market perspective and from a participant perspective. The participants would not need to hold multiple clearing memberships and would enjoy the full benefits from netting and clearing with larger pools of counterparties. They would neither have to re-structure their trades in order to avoid compliance with the different regimes. The market would be served by increased liquidity and greater efficiency due to higher competition between CCPs. CCPs would still probably be subject to vast regulatory requirements, but benefit from new market opportunities and possibly lower costs in the long run.

¹⁸² Whittall, *No CCP interoperability in our lifetime*.

¹⁸³ Please refer to para. 3.2 above for regulatory development as regards products to be subject to the clearing mandate.

¹⁸⁴ It should hereby be noted that the increased standardisation of derivatives is not uncontroversial. Standardisation naturally limits the parties' ability to contract at their discretion, which may affect the possibility of achieving the purpose of the derivatives contract. However, the end-user exemptions provided for in the frameworks are meant to mitigate the drawback of increased standardisation.

Although, facts remain – interoperability in the OTC derivatives space is associated with risks that, at the moment, are not fully foreseeable. Most of the risks identified with interoperability in the OTC market are relevant in relation to interoperability in the securities market as well. However, the immaturity of the OTC reform and the nature of the products to be cleared incur too much insecurity at the time being. Simply, to introduce interoperability between CCPs clearing OTC derivatives at this stage would not only be operationally challenging, but also irresponsible. If risks cannot be managed correctly, which is impossible without thorough and reliable assessment of the same, interconnectivity between CCPs could endanger the stability in the financial system. The major obstacle to overcome is to sufficiently standardise OTC products, so that CCPs can evaluate risks imposed by clearing through an interoperable CCP. To sum up, interoperability is unlikely to be the saving hand in the year of 2012.¹⁸⁵

6 Final Remarks

6.1 Introduction

Simply put, the extraterritorial and protectionist provisions and the problems they cause for participants and CCPs, create a risk for decreased trading activity and segregation of the OTC derivatives market. Doubtlessly regulators have tried to come up with regulations fit for the industry, and vast resources have been put into public consultations as well as discussions with stakeholders throughout the legislative process. It is easy to be blinded by the problems caused by these new regulations, but let us not forget the benefits that derive from the same. Once in place, and if the big remaining issues are dealt with properly, the OTC derivatives market and its surrounding infrastructure will be sufficiently regulated thus contribute to a stable and sound financial market on the whole. One part of the big remaining issues to resolve has been the focus in this thesis, namely; the problems caused by extraterritorial and protectionist provisions imposed by various regulators.

The extraterritorial reach of EMIR is still unclear, while the scope of the Dodd-Frank Act recently was “clarified” by CFTC. Even though the extraterritorial reach of the Dodd-Frank Act is quite complex and has not been examined in depth in this paper, it

¹⁸⁵ IOSCO, *Requirements for Mandatory Clearing* p. 39.

is clear that it reaches far outside the US boundaries. Naturally, this has been subject to backlash from foreign regulators and international bodies, concerns have also been raised from CFTC commissioners opposing to the extraterritorial reach of the Dodd-Frank Act.

The CEO of the Swiss Financial Market Supervisory Authority (“FINMA”), Patrick Raaflaub, recently said that due to concerns of duplicate requirements “...we cannot exclude that FINMA may have to deny financial institutions permission to supply certain information or grant direct access to U.S. supervisors”.¹⁸⁶ This statement could further imply the beginning of a power struggle between the US regulator and other regulators. Facts are, even if CFTC mandates foreign entities to comply with Dodd-Frank requirements, foreign entities’ home regulators can deny them ability to do so.

Furthermore, the European Commissioner Michael Barnier of the Internal Market and Services division has called on CFTC to rethink the extraterritorial reach: “*The US has shown initiative in developing rules for the derivatives market. I now call on US authorities to show leadership in applying them fairly. They must be prepared to rely on equivalent rules in host countries*”.¹⁸⁷

It does not require a vastly perspicacious person to realise that the US and, probably, the EU proposals, “*step on the toes of other sovereign nations*”, as stated by the opposing CFTC Commissioner Scott O’Malia.¹⁸⁸ It remains to be seen whether ESMA will prescribe an equally extraterritorial reach of EMIR, or if it will take a step back affording greater reliance on foreign regulators. The US and the EU, currently holding the largest OTC derivatives markets, naturally have great responsibilities in adopting well-balanced and efficient frameworks. Not only because EMIR and Dodd-Frank affect the highest number of participants and CCPs, but also since other regulators around the globe tend to copy these frameworks when regulating their own markets.

¹⁸⁶ Kentz, *Rest of world poised to fire back at Gensler*.

¹⁸⁷ Kentz, *Rest of world poised to fire back at Gensler*.

¹⁸⁸ Kentz, *Rest of world poised to fire back at Gensler*.

Recalling that this thesis is neither about political issues nor about upset regulators and stakeholders around the globe, the last section consists of concluding discussions on problems identified with the extraterritorial and protectionist approaches, and ways to mitigate those.

6.2 Concluding Discussions

Analysing these new frameworks from the three perspectives in an international context, it is clear that the proposed extraterritorial and protectionist approaches create problems to both participants and CCPs, that in turn have negative consequences for the market on the whole. At the end of the day, the mere idea of the OTC reform is to create transparency, reduce interconnectedness between participants and to enhance liquidity and standardisation for the purpose of building a sound and resilient financial market. When regulators build in structures that endanger the achievement of the purposes, it ought to be addressed properly.

Of course, this thesis could propose that regulators should remove the extraterritorial provisions and solely regulate strictly domestic participants and by way of evasion provisions try to catch those evading the clearing mandate. This approach is more or less taken in Singapore, and if all jurisdictions did the same the process of implementing the clearing mandate across the globe would probably not run into all the problems of today. However, to simply propose such solution could not be justified for the following reasons:

- (i) To regulate extraterritorially could be regarded as legitimate taking into account foreign participants and CCPs' impact on the local market. If the US and the EU only were concerned with strictly domestic institutions, they would perhaps be criticised as irresponsible. However, what is problematic and lack justification is the protectionist approach, where no reliance is put in foreign regulators. That said, it would of course be meritorious if the US and possibly the EU could narrow down the extraterritorial reach of their provisions, to reduce the problems caused, i.e. so that fewer participants and CCPs would be affected.
- (ii) The problems identified would possibly not be completely eliminated even if extraterritorial provisions were abolished. Participants trading with counterparties from different jurisdictions would still be subject to the

clearing mandate in these jurisdiction, due to its counterparties' obligation stipulated in their domestic laws, i.e. analysis of the recognition regimes would be inevitable anyway.

- (iii) It is highly unlikely that the US and the EU (if they proceed on the extraterritorial path) will step back to the great extent needed, why such proposal would be rather uninteresting from a practical perspective.

For the time being, the frameworks force participants to re-structure their trades and hold multiple clearing memberships or client clearing arrangements in order to ensure compliance. CCPs would have vast problems in trying to get recognised in foreign jurisdictions in their struggle to keep clearing for their international participants. In trying to resolve these problems, the research has been focused to three different levels: (i) the overall level; (ii) the legislative level; and (iii) the constructive level.

6.2.1 The Overall Level

Recognising differences in local markets and to some extent unwillingness to fully harmonise, it would not be adequate to post international harmonisation alone as the solution to the problems caused. Moreover, efficient and sufficient harmonisation would rather come as a side effect of introducing new legal devices or solutions (such as recognition regimes or interoperability). Recognising this, proposing to enforce harmonisation the other way around would come across as a pretty blunt tool for the purpose of mitigating the problems identified. Nevertheless, international harmonisation is continuously of paramount importance.

6.2.2 The Legislative Level

Identifying well-balanced recognition regimes as the best way of mitigating the problems faced by participants and CCPs, it was worthwhile investigating in more detail how these proposed frameworks could be altered in order to create the desired effects. From both a participant and CCP perspective, it would be beneficial if the recognitions regimes allowed for recognition of overseas CCPs if the requirements imposed on them were on par with international standards. Even though the IOSCO principles are not binding, they have a high authoritative standing. CCPs as self-regulatory organisations and regulators around the globe do refer to the need for meeting IOSCO principles when amending members' admission criteria, clearing rules or when legislating this area of law. To facilitate this model of referring to

international standards for recognition, IOSCO as a supranational organisation would need to step in and assess whether CCPs fulfil the set standards. This may not be feasible, but would nevertheless benefit the international OTC derivatives market and further speed up the harmonisation process.

The effect-based approach, where the overseas CCP would be eligible for recognition if the requirements imposed on them would give the same effect as the domestic laws, might gain greater recognition among regulators. This assumption is based upon the following facts: (i) the Singapore proposal is leaning towards such solution, which in turn may have a spin off effect; and (ii) the domestic authorities would still be allowed to somewhat assess the overseas CCPs in relation to domestic laws, which they seem very keen on doing.

The case may be that a combination of the two recognition models presented above would be the best solution. Starting off with an assessment in relation to international standards, and in order to ensure that the CCP is fit for the particular market in which it is applying for recognition, the domestic recognising authority may impose some additional effect-based requirements for the CCP to meet.

To regulate a global market on a national basis and thereby prescribing a broad extraterritorial scope in combination with protectionist provisions that show no reliance on foreign regulators, is not a good solution. It is not claimed that the proposals on how to alter these recognition frameworks are perfect solutions taking into account every aspect that national regulators must when regulating this area of law. However, from the participant, CCP and market perspectives, which have been the focus of this thesis, regulators should be recommended to reconsider and adopt either, or both, of the proposed approaches for recognition of overseas CCPs.

6.2.3 The Constructive Level

When examining this brand new area of law, which still is in the developing phase, it may be beneficial to search for solutions outside the legislative frameworks. Interoperability in the securities market was primarily established to increase competition and customer choice. When examining this legal construction however, it was evident that interoperability between CCPs clearing OTC derivatives could, apart

from enhancing competition and customer choice, mitigate the problems identified in this thesis in particular from the participant perspective.

Today, interoperability between CCPs clearing OTC derivative would be a risky business, but nevertheless a great way of mitigating the problems caused. Striving to find solutions, it might be tempting to ignore the fright and negativity surrounding interoperability, and simply present interoperability as the way to go. Unfortunately, that would be irresponsible. To introduce a new sort of interconnectedness between systemically important institutions deserves some thought and thorough assessments of risks imposed. To date, neither CCPs nor regulators are fit for that task.

Nevertheless, the future is likely to hold great opportunities for interoperability between CCPs clearing OTC derivatives. Given that interoperability is newly introduced for on-exchange traded products, some experience from this exercise would be necessary in order to assess possibilities for interoperability in the OTC derivatives space. In due course, once some OTC products reach a sufficient level of standardisation and liquidity, provided that the CCPs at this stage are familiar with calculating the risk imposed by clearing these products, it is likely that the industry will push for interoperability given its clear advantages. Reaching this point of time the, hopefully well-balanced, recognition regimes ought to have pushed for enhanced harmonisation, which would further mitigate the risks of interoperability.

At this immature stage however, it is wise not to encourage interoperability between CCPs clearing OTC derivatives by regulatory means. Conclusively, it is neither likely nor desirable to introduce interoperability as a solution to the problems seen in the year of 2012, but rather as a complement to increase the freedom of trade and clearing further down the line.

6.3 So, What Happens Now?

Finally, the reader's attention should be drawn to the greatest mystery of all. The problems set forward in this paper are real, laws and regulations in its current form will doubtlessly hit hard on participants trading OTC derivatives and on CCPs clearing these products. This is crystal clear. What is not clear but rather a great mystery, is how authorities around the globe intend to solve these delicate problems.

The clock is ticking and the deadline for implementation, which some regulators still claim will be met, is rapidly approaching. My guess, which do not require deep level of understanding nor intelligence whatsoever, is that regulators either; (a) will postpone implementation; (b) grant wide interim exemptions; or (c) provide an interim allowance to clear at the CCP of choice. Looking forward however, once the regulators have wrapped their heads around how to escape the deadline for implementation, I strongly believe international harmonisation, well-balanced recognition regimes and, in the future, interoperability would resolve or at a minimum mitigate the problems caused by the regulations of today.

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