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Research Report

European Market Infrastructure Regulation (EMIR)

EIKV-Schriftenreihe zum Wissens- und Wertemanagement, No. 5

Provided in Cooperation with:
European Institute for Knowledge & Value Management (EIKV), Luxemburg

Suggested Citation: Berg, Pascal (2016) : European Market Infrastructure Regulation (EMIR), EIKV-Schriftenreihe zum Wissens- und Wertemanagement, No. 5, European Institute for Knowledge & Value Management (EIKV), Rameldange

This Version is available at:
http://hdl.handle.net/10419/127569

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EIKV-Schriftenreihe zum
Wissens- und Wertemanagement

European Market Infrastructure Regulation (EMIR)

Pascal Berg

Band 5

IMPRESSUM
EIKV-Schriftenreihe zum Wissens- und Wertemanagement
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Table of Contents

I. List of abbreviations:

BIC	Business Identifier Code
Billion	Thousand million
CCPs	Central Counterparties
CRD	Capital Requirements Directives - Directive 2013/36/EU
CRR	Capital Requirements Regulation - Regulation (EU) No 575/2013
CSSF	Commission de Surveillance du Secteur Financier
CVA	Credit Value Adjustment
De Minimis	An abbreviated form of the Latin Maxim de minimis non curat lex, "the law cares not for small things". A legal doctrine by which a court refuses to consider trifling matters.
EBA	European Banking Authority
EIOPA	European Insurance and Occupational Pensions Authority
EMIR	European Market Infrastructure Regulation
ESA	European Supervisory Authorities
ESMA	European Securities and Market Authority
ETDs	Exchange Traded Derivative
EU	European Union
FCs	Financial counterparties
G20	The Group of Twenty (also known as the G-20 or G20) is a forum for the governments and central bank governors from 20 major economies
LEI	Legal Entity Identifier
MiFID	The Markets in Financial Instruments 2004/39/EC (known as "MiFID")
NFCs	Non-financial counterparties
OJ	Official Journal of the European Union
OTC	Over The Counter
REPO	Repurchase Agreements: A form of short-term borrowing for dealers in government securities and other securities. The dealer sells the government securities (or other securities) to investors, usually on an overnight basic, and buys them back the following day. The term of a repo transaction can go up to one year. For the party selling the security (and agreeing to repurchase it in the future) it is a repo; for the party on the other end of the transaction, (buying the security and agreeing to sell in the future) it is a reverse repurchase agreement. Repos are classified as a money-market instrument. They are usually used to raise short-term capital.

SIFIs	Systemically important financial institutions
Strike	The price at which a specific derivative contract can be exercised
Swaps	An interest rate swap (IRS) is a popular and highly liquid financial derivative instrument in which two parties agree to exchange interest rate cash flows, based on a specified notional amount from a fixed rate to a floating rate (or vice versa) or from one floating rate to another. Interest rate swaps are commonly used for both hedging and speculating.
Tick	The minimum upward or downward movement in the price of on an asset class
Trillion	Thousand billion
TRs	Trade Repositories
UTI	Unique Trade Identifier

II. Table of figures:

1. Introduction

Derivatives and especially OTC derivatives[1] have become subject of many critics and controversy since the subprime crisis, which fuelled the outbreak of the financial crisis and the collapse of Lehman Brothers end of 2008.[2] Vocabulary like derivatives, too big to fail, Credit Default Swaps (CDS), exotic options have come to everybody's mouth and have been widely discussed and despised.

The latter sovereign debt crisis even spurred that stance, so that a G20 meeting in Pittsburgh intended to foster the transparency of OTC derivatives markets and brought stricter and tougher regulations to that market. Sovereigns and regulator don't want to end up anymore in a situation, where they are to some extend blackmailed to rescue the financial system due to the moral hazard of the baking industry. According a research publication of the Federal Reserve Bank of Dallas with the topic "Assessing the Costs and Consequences of the 2007 – 2009 Financial Crisis and Its Aftermath", the research came up in one of its scenarios with a cost of 15 to 30 Trillion USD only for the United States.[3] This shows how severe the downtrend and how dramatic the crisis was since the Great depression in 1930. It further underlines the crucial importance to act in order to avoid any future systemic crisis.

The paper in hands aims to highlight the regulation which has been especially put in place to tame that opaque market whose interlinkage and dependencies between the banks and the real economy have been so complex and difficult to oversee during the financial crisis.

The paper therefore starts with the regulation itself, explaining how it came up and what new rules the industry will have to comply with. It will further highlight the new authorities, which have been created to supervise that industry. After that the author will

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[1] The OTC derivatives see section 3 "The OTC derivatives market" of this paper.

[2] McBride, Paul M., The Dodd-Franck Act and OTC Derivatives : The Impact of Mandatory Central Clearing on the Global OTC Derivatives Market, in The international lawyer, Vol. 44 (2010), p. 1077.

[3] See http://www.dallasfed.org/research/eclett/2013/el1307.cfm accessed 24 September 2014.

explain the aim of the regulation and will detail who's concerned by the new rules, he will segregate the different actors according the categorization, which is foreseen by the regulation.

This will be followed by a detailed explanation of the three main pillars of the European Market Infrastructure Regulation, namely Trade Repositories (TRs), Central Counterparty Clearing (CCPs) and finally Risk mitigation techniques.

Having explained the scope of the regulation and the main changes, the author will give an definition what OTC derivatives are, how they are categorized and will give a brief overview how they can be valued. After that the paper in hand will cover an quantitative analyses of the market itself in terms of different types of derivatives contracts and in terms of evolution over the last 16 years. This exercise will highlight the importance and the growth of that trading and hedging instruments.

This section will be followed by an in-depth analysis of benefits and disadvantages of the regulation, which could give birth to negative side effects. This part is mainly summarized under three topics, namely Transparency, Risk concentration and Costs.

After that the author tried to analyse if EMIR does especially affect the financial centre of Luxembourg in a positive or negative way.

The paper than analyses the results of a qualitative survey led via an internet platform in order to establish whether people from the Luxembourgish banking industry believe if the European Market Infrastructure Regulation is toothless or effective. These final results will lead the paper to conclude with the author's conclusion on the topic.

2. The European regulation No 648/2012 (EMIR)[4]

The European Market Infrastructure Regulation (EMIR) is a regulation that aims to monitor and regulate the OTC derivatives market that has become very much discussed and criticized in the aftermath of the financial crisis. It is a regulation and not a directive, so it didn't had to be trqnsposed into national legislation. As a regulation it enters into force in the whole EU as law. This regulation has put in place a number of new claims and restrictions relative to over the counter (OTC) derivatives in Europe, to some extend it's similar and comparable to the US Dodd-Frank Act, which is larger in its scope. Dodd-Frank was passed in July 2010, similarly, EMIR regulates the activities of central counterparties (CCPs) and Trade Repositories (TRs) and imposes stricter standards to the financial industry.

The regulation identified by the N° 648/2012 was issued by the European Union (EU) and published in the Official Journal of the European Union (OJ) on 27 July 2012. In the wake of the 2008 financial crisis, OTC derivatives came under close regulatory scrutiny, leading in 2009 to the decision of introducing a comprehensive global regulation of OTC derivatives at the G20-peak in Pittsburgh[5]. The European regulation is the result of an initiative of the European Commission and a report of a High-Level Group that concluded that in the aftermath of the financial crisis, the supervisory framework of the financial sector of the Union had to be strengthened, in order to reduce the risk and severity of future financial crises and make the financial system more resilient. It recommended far-reaching reforms to the structure of supervision of that sector, including the creation of a European System of Financial Supervisors.[6]

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[4] Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories (OJ L 201, 27.07.2012, p. 1).

[5] See http://www.pwc.lu/en/asset-management/docs/pwc-emir.pdf accessed 30 June 2014.

[6] See Regulation No 648/2012, p. 1.

The Commission agreed to create three European Supervisory Authorities (ESAs) to contribute to common regulatory and supervisory standards and practices. The ESAs consists of the European Banking Authority (EBA) established by Regulation (EU) No 1093/2010 of the European Parliament and of the Council[7], the European Insurance and Occupational Pensions Authority (EIOPA) established by Regulation (EU) No 1094/2010 of the European Parliament and of the Council[8], and the European Securities and Markets Authority (ESMA) established by Regulation (EU) No 1095/2010 of the European Parliament and of the Council[9].

For the commodities market the European Lawmaker introduced in addition to EMIR the Regulation on Energy Market Integrity and Transparency – REMIT. REMIT is particularly dealing issues of insider trading and market manipulation in the energy markets.[10]

[7] Regulation of 24 November 2010 establishing a European Supervisory Authority (European Banking Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/78/EC (OJ L 331, 15.12.2010, p. 12).

[8] Regulation of 24 November 2010 establishing a European Supervisory Authority (European Insurance and Occupational Pensions Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/79/EC (OJ L 331, 15.12.2010, p. 48).

[9] Regulation of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/77/EC (OJ L 331, 15.12.2010, p. 84).

[10] See Funke, S., (2012), REMIT und EMIR – Eine Umgestaltung des OTC-Marktes für Energieprodukte steht bevor !, Wertpapier-Mitteilungen – Zeitung für Wirtschafts und Bankrecht, Heft 5/2012, p.202.

2.1. The scope of the regulation

2.1.1. The aim of the regulation

The financial crisis and its dramatic consequences evidenced the need that the financial sector has to be put under tougher scrutiny and regulation in order to avoid future systemic crisis. Banks shouldn't be able anymore to pretend to be too big to fail. In case they get into trouble, they shouldn't be able to force governments to bail in, in order to safe the financial system.

In the light of setting up a macro-prudential policy, the EU introduced new directives like the CRD and the CRR relative to the stakeholders' equity of financial institutions. They furthermore introduced regulations like the European Market Infrastructure Regulation aiming to better monitor the risk on OTC derivatives market. EMIR affects all entities "established" in the EU (banks, insurance companies, pension funds, investment firms, corporates, funds, SPVs etc.) that enter into derivatives, whether they do so for trading purposes, to hedge themselves against different market risks or to gain exposure to certain assets classes as part of their investment strategy or business model.[11]

In order to tackle the problems which arised from the OTC derivatives market during the financial crisis, the European Union introduced Central Counterparties (CCP's), Trade Repositories (TR's) and risk mitigation techniques for OTC derivatives, which are not CCP eligible.

These measures represent the three main pillars of the EMIR.

[11] See Guide to the European Market Infrastructure Regulation (EMIR), November 2013, p. 2, on www.linklaters.com.

To foster the transparency of the derivatives market and enabling a better monitoring, EMIR imposes that all transactions must be declared to trade repositories which the authorities can permanently monitor. Furthermore EMIR imposes that eligible transactions should be cleared/settled via clearing houses (CCP's) with the aim to improve the risk management of those transactions and reduce counterparty risks. To master the systemic risk, precise requirements concerning the equity capital, rules of guidance and organisation for the CCP's have been pronounced and put in place.

John C. Ahern describes the scope of EMIR as follows:

"The European Market Infrastructure Regulation ("EMIR") is the European Union's implementation of the G20 commitment to reduce systemic risk and increase transparency in the OTC derivatives market. In order to achieve these aims EMIR imposes three sets of obligations upon market participants: (i) clearing; (ii) reporting; and (iii) risk mitigation.

Whilst many non-bank entities might assume they are not affected by EMIR, they should note that it has very broad application. In particular, real estate funds and managers, corporate and trading entities ought to be cognisant of the application of EMIR to their OTC derivatives[12]".

The definition of "derivatives" is not set out in full in EMIR but cross-refers to a sub-set of financial instruments listed in another EU directive (MiFID)[13]. Broadly speaking, a "derivative" stands for any option, future, swap, forward and other derivative contract relating to securities, currencies, interest rates,

[12]See Ahern, J. C.: http://www.jonesday.com/the-european-market-infrastructure-regulation-an-overview-ireal-estate-intelligencei/ accessed 31 July 2014.

[13] Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC (OJ L145, 30.04.2004, p. 1).

financial indices, commodities, financial contract for differences and credit default swap.

This definition is however limited to bilateral derivative contracts, such as exchange-traded derivatives (ETDs) and OTC contracts, but it does not include derivatives embedded in other contracts, such as securities or loans.

There has been some debate about the product scope of EMIR in particular in relation to FX derivatives. Although there is no exemption for FX derivatives as an asset class, spot FX transactions fall outside the definition of "derivative" and as such are outside the EMIR product scope.[14]

However, the position is less clear in relation to FX forwards, pending further clarification by the European Commission or ESMA.[15] [16]

[14] See http://www.paperjam.lu/communique-de-presse/fr/reporting-obligation-starts-12th-february-2014 accessed 26 August 2014.

[15] See Guide to the European Market Infrastructure Regulation (EMIR), November 2013, p. 3, on www.linklaters.com

[16] See http://www.emir-ate.com/newsreader/items/esma-more-clarifications-on-the-way.html accessed 28 August 2014.

2.1.2. Counterparties affected by the regulation

EMIR distinguishes between three different types of market participants and has two broad categories of counterparties:

a) Financial counterparties ("FCs") are investment undertakings; banks; insurance, assurance and reinsurance undertakings; undertakings which operate collective investment schemes and their managers; institutions for the provision of occupational retirement benefits; and alternative investment funds managed by alternative investment fund managers, which are authorised by the relevant EU directive.

b) Non-financial counterparties ("NFCs") are any institutions incorporated or established in the European Union that are not FCs.

NFCs are further segregated relative to their OTC derivatives trading activity: NFCs with OTC derivatives transactions which exceed certain notional value thresholds ("NFC+"); and those NFCs whose OTC derivatives transactions do not exceed a threshold ("NFC-").

Classification as a FC, NFC+ or NFC- impacts upon the extent to which a market participant must comply with EMIR. All OTC derivatives market participants (except individuals) will have to comply with EMIR to some extent (there is no de minimis exception).[17]

[17] See Ahern, J. C.: http://www.jonesday.com/the-european-market-infrastructure-regulation-an-overview-ireal-estate-intelligencei/ accessed 31 July 2014.

The segregation between NFC+ and NFC- is done according the following thresholds:[18] [19]

> EUR 1 billion for credit derivatives;

> EUR 1 billion for equity derivatives;

> EUR 3 billion for interest rate derivatives;

> EUR 3 billion for FX derivatives; and

> EUR 3 billion for commodity and other derivatives.

An NFC is an NFC- when the rolling average of notional positions in OTC derivatives (other than "hedging" derivatives) over 30 working days of that NFC and any other non-financial entity in that NFC's group is at or below all of the clearing thresholds in all derivatives asset classes.

All OTC positions of non-financial entities within a group are aggregated for the purpose of the NFC+/- distinction, a group cannot consist of a combination of NFC+ and NFC-. All NFCs in the same group will either be NFC+s or NFC-s.

NFCs/groups that only, or mainly, enter into hedging derivatives are therefore NFC-s.[20]

[18] See http://www.esma.europa.eu/page/Non-Financial-Counterparties-0 accessed 28 August 2014.

[19] See Article 10(4)(b) of Regulation No 648/2012.

[20] See Ahern, J. C.: http://www.jonesday.com/the-european-market-infrastructure-regulation-an-overview-ireal-estate-intelligencei/ accessed 31 July 2014.

2.2. The main pillars of the Regulation

2.2.1. Clearing obligation of eligible OTC derivatives

All counterparties and CCPs are obliged to report details of any derivative contract (i.e. both ETD and OTC, and whether cleared or not, including intra-group transactions) to a registered TR within one working day of their conclusion, modification or termination. To ensure that CCPs are safe, sound and resilient in all market conditions, it is crucial that they put in place prudent and efficient risk management procedures, which duly monitor and measure all the risks they are or may be exposed to. In this respect, the risk management standards actually implemented by CCPs should be more stringent and far-reaching than those set forth in this Regulation if for risk management purposes it is deemed appropriate.[21]

To ensure an adequate and optimal level of investor protection, the recognition of third country CCPs, the European Securities and Markets Authority (ESMA) may require additional information to the one strictly necessary to assess that conditions established in Regulation No 648/2012 are fulfilled. The ongoing assessment of the full compliance of a third country CCP with the prudential requirements of such third country is the duty of the third country competent authority. The information to be provided to ESMA by the applicant third country CCP should not have the objective of replicating the assessment of the third country competent authority, but ensuring that the CCP is subject to effective supervision and enforcement in that third country, thus guaranteeing a high degree of investor protection.

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[21] Commission Delegated Regulation (EU) No 153/2013 of 19 December 2012 supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council with regard to regulatory technical standards on requirements for central counterparties (OJ L 52, 23.02.2013, p. 41).

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:052:0037:0040:EN:PDF accessed 20 August 2014

However cross-border rules and regulation, especially between the EU and the United States have not yet been adopted and still being negotiated.[22]

In order to ensure the sound, resilient and prudent management of a CCP and in the scope to avoid new risk concentration, it is important that its remuneration policy discourages excessive risk taking. For the remuneration policy to produce the intended effects, it should be adequately monitored and reviewed by the board.[23]

The load of governance, monitoring and risk mitigation standards that CCPs have to fulfil is very large and impressive. The capital requirement for CCP is at start only 7,5 millions of EUR, however the required capital must be in sound adequacy to the risk taken with the CCP activity und must reflect and cover credit, counterparty, market, liquidity and legal risk.[24]

The clearing obligation only applies to FCs and NFCs+ who enter into OTC derivatives contracts where the derivative is standardised and liquid. The table below shows when EMIR's clearing obligation will apply.

Figure 1: When EMIR's clearing obligation applies (Source: http://www.jonesday.com/the-european-market-infrastructure-regulation-an-overview-ireal-estate-intelligencei/) (own table based on the source)

[22] See http://uk.reuters.com/article/2014/09/16/cftc-rules-crossborder-idUKL1N0RH16R20140916 accessed 22 September 2014.

[23] See Commission Delegated Regulation No 153/2013, p. 42.

[24] See Gstädtner, T., (2013), Regulierung der Märkte für OTC-Derivate – ein Ueberblick über die Regelungen in MiFID II, EMIR und CRD IV, Recht der Finanzinstrumente, Jahresregister 2012, Hefte 1-6, p. 152.

		Counterparty 2		
		FC	NFC+	NFC-
Counterparty 1	FC	✔	✔	✖
	NFC+	✔	✔	✖
	NFC-	✖	✖	✖

EMIR applies	✔
EMIR does NOT apply	✖

The clearing obligation requires all eligible OTC derivatives contracts to be cleared through a central counterparty that has been authorised or recognised by the European Securities and Markets Authority ("ESMA"). This obligation entered into force in July 2014.[25]

Currently there exist 12 authorized Central Counterparties offering services and activities in the Union with accordance with the Regulation N° 648/2012.[26]

[25]See Ahern, J. C.: http://www.jonesday.com/the-european-market-infrastructure-regulation-an-overview-ireal-estate-intelligencei/ accessed 31 July 2014.

[26] See http://www.esma.europa.eu/system/files/ccps_authorised_under_emir.pdf accessed 5 September 2014.

No	Name of the CCP	Identification Code of CCP (LEI)	Established in the Union or in a Third Country	Country of establishment	Competent authority (if established in the Union)	Date of authorisation
1	Nasdaq OMX Clearing AB	54930002A8LR1AAUCU78	In the Union	Sweden	Finansinspektionen	18 March 2014
2	European Central Counterparty N.V.	724500937F740MHCX307	In the Union	Netherlands	De Nederlandsche Bank (DNB)	1 April 2014
3	KDPW_CCP	2594000K576D5CQXI987	In the Union	Poland	Komisja Nadzoru Finansowego (KNF)	8 April 2014
4	Eurex Clearing AG	529900LN3S50JPU47S06	In the Union	Germany	Bundesanstalt für Finanzdienstleistungsaufsicht (Bafin)	10 April 2014
5	Cassa di Compensazione e Garanzia S.p.A. (CCG)	8156006407E264D2C725	In the Union	Italy	Banca d'Italia	20 May 2014
6	LCH.Clearnet SA	R1IO4YJ0O79SMWVCHB58	In the Union	France	Autorité de Contrôle Prudentiel et de Résolution (ACPR)	22 May 2014
7	European Commodity Clearing	529900M6JY6PUZ9NTA71	In the Union	Germany	Bundesanstalt für Finanzdienstleistungsaufsicht (Bafin)	11 June 2014
8	LCH.Clearnet Ltd	F226TOH6YD6XJB17KS62	In the Union	United Kingdom	Bank of England	12 June 2014
9	Keler CCP	529900MHIW6Z8OTOAH28	In the Union	Hungary	Central Bank of Hungary (MNB)	4 July 2014
10	CME Clearing Europe Ltd	6SI7IOVECKBHVYBTB459	In the Union	United Kingdom	Bank of England	4 August 2014
11	CCP Austria Abwicklungsstelle für Börsengeschäfte GmbH (CCP.A)	529900QF6QY66QULSI15	In the Union	Austria	Austrian Financial Market Authority (FMA)	14 August 2014
12	LME Clear Ltd	213800L8AQD59D3JRW81	In the Union	United Kingdom	Bank of England	3 September 2014

The detailed services and activities can be found in annexe 2 of the paper in hand.

2.2.2. Risk mitigation techniques

These risk mitigation obligations apply to those OTC derivatives contracts that are not subject to the clearing obligation, they are precisely described in the article 11 of the Regulation No 648/2012[27]:

Financial counterparties and non-financial counterparties that enter into an OTC derivative contract not cleared by a CCP, shall ensure adequate risk management techniques, exercise stringent due diligence and apply appropriate procedures and arrangements to measure, monitor and mitigate operational risk and counterparty credit risk, including at least:

(a) Timely confirmation, where available, by electronic means, of the terms of the relevant OTC derivative contract;[28]

(b) Formalized and adequate processes, which are robust, resilient and auditable in order to reconcile portfolios, to manage the associated risk and to identify disputes between parties early and resolve them, and to monitor the value of outstanding contracts.

Important criterions are:

1. Record keeping obligation

   All market participants have to maintain records of their OTC derivatives trading activities and retain these records for a period of five years following termination of the relevant OTC derivatives contract.

2. Timely confirmation obligation

[27] See OJ L 201, 27.07.2012, p. 22.

[28] See http://www.emir-ate.com/emir-facts.html#5 accessed 28 August 2014.

This obligation requires counterparties to an OTC derivatives contract to confirm the details of that contract by electronic means and within a "timely manner".

3. Valuation obligation

FCs and NFCs+ must, on a daily basis, value their outstanding OTC derivatives contracts using either a mark-to-market or mark-to-model valuation process. Marking-to-market means valuing the current market value of an OTC derivative contract so that losses or gains on a position can be calculated. Marking-to-model is where a financial model is used to price a position instead of using market prices to calculate values (mark-to-market).

4. Portfolio reconciliation obligation

Where market participants have multiple OTC derivatives contracts with the same counterparty then a portfolio reconciliation process will have be conducted on a regularly basis. Portfolio reconciliation is the process by which counterparties check that they have a consistent record of the terms of their transactions, meaning that parameters of the transactions are verified bilaterally, in order to make sure counterparties face the same operations with the same risk.[29]

5. Portfolio compression obligation

All market participants with 500 or more uncleared OTC derivatives contracts with the same counterparty must have procedures in place to regularly (at least twice a year) determine whether to conduct a portfolio compression exercise. Portfolio compression entails terminating equal and offsetting trades with the same counterparty. By this procedure the gross notional size and number of trades in a market participant's

[29] See http://www.emir-ate.com/emir-facts.html#5 accessed 28 August 2014.

portfolio can be reduced without changing the overall risk profile or value of the portfolio.[30]

6. Dispute resolution obligation

Market participants must agree with their counterparties procedures and processes to identify, record and monitor disputes relating to the OTC derivatives contracts between them.[31] [32]

[30] See http://www.emir-ate.com/emir-facts.html#5 accessed 28 August 2014.

[31] See Ahern, J. C.: http://www.jonesday.com/the-european-market-infrastructure-regulation-an-overview-ireal-estate-intelligencei/ accessed 31 July 2014.

[32] See http://www.emir-ate.com/emir-facts.html#5 accessed 28 August 2014.

2.2.3. Trade repositories

EMIR imposes counterparties the reporting of all derivatives contracts to TRs. TRs centrally collect and maintain the records of all derivative contracts. They play a central role in enhancing the transparency of derivative markets and reducing risks to financial stability.[33] The reporting obligation is larger than the clearing obligation, it applies to all derivatives contracts (not simply those that are standardised and liquid) and all counterparty types (including NFCs-). The reporting obligation will apply to both counterparties to a transaction whenever negotiations of an OTC derivative contract are concluded or the contract is modified or terminated. The report must be made to a trade repository, which has been authorised or recognised by ESMA.[34]

A market participant can delegate its reporting obligation to its counterparty or an agent/third-party service provider. However, liability for failure to make a report will remain with the market participant even if it has delegated reporting.[35] A Counterparty is so able to delegate the reporting of a contract to the other counterparty or to a third party. Counterparties should also be able to agree to delegate reporting to a common third entity including a central counterparty (CCP), the latter submitting one report, including the relevant table of fields, to the trade repository.

To avoid inconsistencies in the common data tables, each Counterparty to a derivative contract has to make ensure that the Common Data reported is agreed between both parties to the trade. A unique trade identifier (UTI) is supposed

[33] See http://www.esma.europa.eu/page/Trade-reporting accessed 31 July 2014.

[34]See Ahern, J. C.: http://www.jonesday.com/the-european-market-infrastructure-regulation-an-overview-ireal-estate-intelligencei/ accessed 31 July 2014.

[35] See http://www.paperjam.lu/communique-de-presse/fr/agrement-des-referentiels-centraux-declaration-dinformations-conformement-au-reglement-emir accessed 26 August 2013.

help with the reconciliation of the data in the case that the counterparties are reporting to different trade repositories.[36]

An important issue of the trade repository is valuation. Valuation of derivative contracts is essential to allow regulators to fulfil their mandates, in particular when it comes to monitor the resilience and the robustness of the financial system. The mark to market or mark to model value of a contract indicates the sign and size of the exposures related to that contract, and complements the information on the original value specified in the contract, which can give some indication of an overheating sign or risk concentration indications to the supervisory authorities.[37]

The entry into force was in February 2014, but this was dependent on trade repositories being authorised or recognised by ESMA 90 days in advance of that date. Participants had to comply with the following reporting and backloading requirements:

a. Trades outstanding on 16 August 2012 and still outstanding on the reporting start date have to be reported within 90 days of the reporting start date.
b. Trades outstanding on the 16 August 2012 or entered into thereafter but not outstanding on the reporting start date have to be reported within 3 years of the reporting start date.
c. Reporting details are set in the Commission Delegated Regulation (EU) No 148/2013.
d. Format and frequency of reports are set in the Commission implementing Regulation (EU) No 1247/2012[38].

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[36] Commission Delegated Regulation (EU) No 148/2013 of 19 December 2012 supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories with regard to regulatory technical standards on the minimum details of the data to be reported to trade repositories (OJ L 52, 23.02.2013, p. 1).

[37] Idem.

[38] Commission Implementing Regulation (EU) No 1247/2012 of 19 December 2012 laying down implementing technical standards with regard to the format and frequency of trade reports to trade

A brief extract of details that must be reported to trade repositories can be viewed in annexe 1 of the present paper.

Currently, there are six TRs registered with ESMA:[39]

- Regis-TR S.A., based in Luxembourg
- CME Trade Repository Ltd. (CME TR), based in the United Kingdom
- DTCC Derivatives Repository Ltd. (DDRL), based in the United Kingdom
- ICE Trade Vault Europe Ltd. (ICE TVEL), based in the United Kingdom
- Krajowy Depozyt Papierow Wartosciowych S.A. (KDPW), based in Poland
- UnaVista Ltd, based in the United Kingdom

Counterparties are free to choose whichever TR they want to report to. They are even permitted to report different derivative contract (OTC or exchange traded) trades to different TRs.

ESMA and the European Commission may further communicate on this topic.

Regarding the code to be used to identify counterparties, (LEI, interim LEI or BIC), a pre-LEI issued by any of the endorsed pre-LOUs (Local Operating Units) of the Global Legal Entity Identifier System should be used.

The Legal Entity Identifier (LEI) is a 20 digit alpha-numeric reference code to uniquely identify parties to financial transactions worldwide throughout all markets and legal systems. The global LEI system would contribute to and facilitate many financial stability objectives by quickly and clearly identifying entities, corporate networks, and connections between issues and the issuer.

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repositories according to Regulation (EU) No 648/2012 of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories (OJ L 352, 21.12.2012, p. 20).

[39] See http://www.esma.europa.eu/page/Registered-Trade-Repositories accessed 5 September 2014.

The CSSF draws the attention of financial and non-financial counterparties to the fact that reporting without a LEI is not in compliance with EMIR. However, the CSSF is aware of the difficulties many firms are facing in getting a LEI on time. Counterparties subject to the reporting obligation should rather report without a LEI than not report at all (for instance using the BIC in the meantime). The CSSF expects most trade repositories to be able to accept reports without LEIs.[40]

[40] See http://www.paperjam.lu/communique-de-presse/fr/reporting-obligation-starts-12th-february-2014 accessed 26 August 2014.

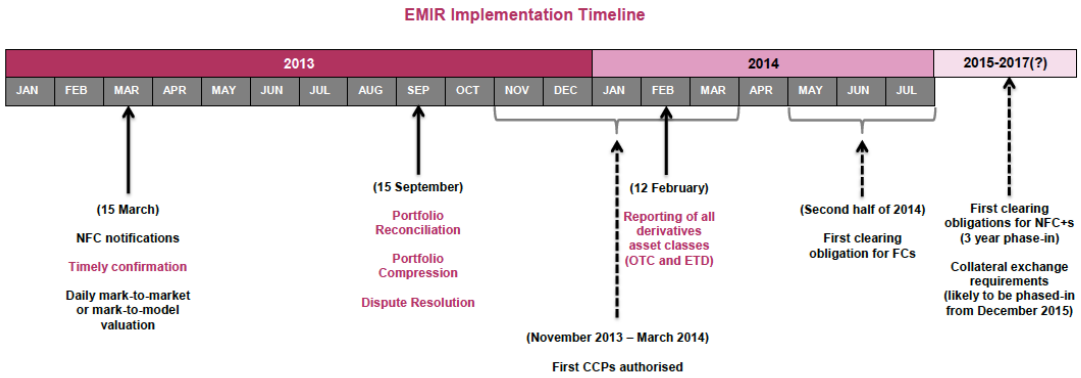
2.3. Implementation schedule

Figure 2: Summary of EMIR obligations and timings (Source: Linklaters / Guide to European Market Infrastructure Regulation (EMIR) , p. 18)[41]

Timing	EMIR Obligation	Counterparties
15 March 2013	Notification to national competent authority(ies) + ESMA	NFCs (on first day they exceed clearing threshold) and NFC+s (when 30 working day rolling average no longer exceeds clearing threshold)
15 March 2013	Timely confirmation of non-cleared OTC derivatives	All EU derivatives market participants (more lenient requirements for NFC-s)
15 March 2013	Daily mark-to-market/model valuation of non-cleared OTC derivatives	FCs and NFC+s
15 September 2013	Dispute resolution, portfolio reconciliation and portfolio compression of non-cleared OTC derivatives	All EU derivatives market participants (more lenient requirements for NFC-s)
12 February 2014	Reporting of OTC derivatives (including retrospectively) to registered trade repository	All EU derivatives market participants
11 August 2014	Reporting of collateral and daily mark-to-market valuations to registered trade repository	FCs and NFC+s
Second half of 2014 (likely)	Clearing of certain OTC derivatives	FCs (only if derivative is with another FC) – except pension funds
Phased-in from 1 December 2015 (likely)	Collateral exchange for non-cleared OTC derivatives	FCs and NFC+s
2015 (or 2017/2018?)	Clearing of certain OTC derivatives	Pension funds
Summer 2015- 2017(?)	Clearing of certain OTC derivatives by systemically important non-financial counterparties	NFC+s (if derivative is with FCs or other NFC+s)

41 See http://www.google.sk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=14&ved=0CDsQFjADOAo&url=http%3A%2F%2Fwww.linklaters.com%2Fpdfs%2Fmkt%2Flondon%2FEMIR_Guide_November_2013.pdf&ei=KWPaU53cJ6i47Aa42oDoCg&usg=AFQjCNF9C0VjMMtYbdVzAVRyBoOs9PA7Zw&bvm=bv.72185853,d.ZGU accessed 31 July 2014.

Figure 3: EMIR Implementation Timeline by Linklaters[42]



[42] See Guide to the European Market Infrastructure Regulation (EMIR), November 2013, p.19, on www.linklaters.com.

3. The OTC derivatives market

OTC derivatives stand for derivatives that are not traded on a regulated exchange, but which are traded by mutual agreement between two counterparties, this mutual agreement transactions are known to be over the counter transactions.

Investopedia.com defines OTC Market as follows:

> Definition of "Over-The-Counter Market"
>
> A decentralized market, without a central physical location, where market participants trade with one another through various communication modes such as the telephone, email and proprietary electronic trading systems. An over-the-counter (OTC) market and an exchange market are the two basic ways of organizing financial markets. In an OTC market, dealers act as market makers by quoting prices at which they will buy and sell a security or currency. A trade can be executed between two participants in an OTC market without others being aware of the price at which the transaction was effected. In general, OTC markets are therefore less transparent than exchanges and are also subject to fewer regulations.[43]"

[43] See http://www.investopedia.com/terms/o/over-the-countermarket.asp accessed 1 August 2014.

3.1. The different derivatives instruments

As already highlighted in section 2.1.1., a definition of "derivatives" is defined in full in EMIR but cross-refers to a sub-set of financial instruments listed in another EU directive, MiFID.

By "derivative" we generally understand any option, future, swap, forward or other derivative, which price is derived from an other financial asset, liability, index or reference.

John C. Hull defines derivatives as:

"A *derivative* can be defined as a financial instrument whose value depends on (or derives from) the values of other, more basic underlying variables. Very often the variables underlying derivatives are the prices of traded assets. A stock option, for example, is a derivative whose value is dependent on the price of a stock. However, derivatives can be dependent on almost any variable, from the price of hogs to the amount of snow falling at a certain ski resort[44]."

Derivatives have been criticized over the past two decades in the aftermath of several near collapses or bankruptcies like Barings Bank in 1995, Long-term Capital Management in 1998, Enron in 2001, Lehman Brothers and American International Group (AIG) in 2008.[45]

The popular investor Warren Buffet even declared derivatives of being weapons of mass destruction, ticking like a time bomb over the economic system.[46]

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[44] See Hull, J. C., Options, Futures and Other Derivatives, 5th edition, Prentice Hall, Upper Saddle River, New Jersey, p. 1.

[45] See http://www.bis.org/ifc/publ/ifcb35a.pdf accessed 18 August 2014.

[46] See http://www.berkshirehathaway.com/letters/2002pdf.pdf accessed 13 August 2014.

"However if derivatives are used for hedging purposes or properly handled, they can bring substantial economic benefits, helping to manage market and credit risks. They even foster financial innovation and market developments. The main challenge to policymakers is to ensure that derivatives transactions are being properly traded and prudently supervised. This entails designing regulations and rules that aim to prevent the excessive risk-taking of market participants while not slowing the financial innovation aspect. It also calls for improved data quantity and quality to enhance the understanding of derivatives markets[47]."

"There is a wide range of financial assets that have been used as underlying asset, including equities or equity index, fixed-income instruments, foreign currencies, commodities, credit events, and even other derivative securities. Depending on the types of underlying, the values of derivative contracts can be derived from the corresponding equity prices, interest rates, exchange rates, commodity prices and the probabilities of certain credit events[48]."

We can generally distinguish three types of derivatives, for instance, Forwards and Future contracts, Option contracts, Swaps.

There exist linear derivatives and non-linear derivatives, linear derivatives vary in line with the underlying, a tick change of the underlying will change the valuation of the derivatives by the same tick change. Futures contracts and Forwards are linear derivatives.

Non-linear derivatives vary with the change of the underlying, time to maturity, level of interest rates and volatility. Options are non-linear derivatives.

Another segmentation could be done as well in accordance with the type of underlying, we can so distinguish, Equity derivatives, Interest derivatives, Commodity derivatives, Foreign exchange derivatives and Credit derivatives.

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[47] See Chui, M., Derivatives markets, products and participants: an overview, IFC Bulletin No 35, http://www.bis.org/ifc/publ/ifcb35a.pdf accessed 18 August 2014.

[48] Idem.

3.2. Valuation of derivatives instruments

As previously highlighted there exist different types of derivatives, linear and non-linear. Therefore the valuation of derivatives differs as well, linear derivatives being relatively straightforward derivatives, their valuation is rather simple and easy to compute if the underlying is easy to monitor in the market.

Non-linear derivatives, options for instance are rights that the holder might exercise, but he's not obliged to do so, therefore their valuation is much more complex. Their valuation is generally done via complicated mathematical options pricing models like the Black and Scholes model (by Fischer Black and Myron Samuel Scholes in 1973), the Hull–White model (by John C. Hull and Alan White in 1990) or the Black Karasinski Model (by Fischer Black and Piotr Karasinski in 1991), just to name a few.

These models rely on various credentials like the time to maturity (generally computing the time value of the option), the price of the underlying, the Strike price of the underlying, the intrinsic value, the prevailing interest rates and the volatility, the type of option, whether it's a call- or put-option. The volatility of the underlying is a very sensitive parameter of the option pricing which can have a huge impact on the valuation of an option's price.[49]

A call option gives the holder the right to buy an asset (underlying) at certain price (Strike price) on a certain date (maturity), the put option gives the holder the right to sell an asset (underlying) at a certain price (Strike Price) on a certain date (maturity). The holder of an option sees his risk limited to the premium of

[49] See http://www.investopedia.com/walkthrough/corporate-finance/5/risk-management/option-valuation.aspx accessed 18 August 2014.

the option he paid for, where as a seller of an option sees his risk as being unlimited.[50]

As cited before the first option pricing model was published by Fischer Black and Myron Scholes in 1973 in the Journal of Political Economy with the title: "The Pricing of Options and Corporate Liabilities" The formula, developed by three economists – Fischer Black, Myron Scholes and Robert Merton[51] – is probably the world's most well-known options pricing model.

The model makes certain assumptions, including:[52]

- The options are European and can only be exercised at expiration
- No dividends are paid out during the life of the option
- Security trading is continuous
- Efficient markets and no riskless arbitrage opportunities. (i.e., market movements cannot be predicted)
- No commissions
- The risk-free rate and volatility of the underlying are known and constant
- Follows a lognormal distribution; that is, returns on the underlying are normally distributed.

The formula, shown in figure underneath, takes the following variables into consideration:

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[50] See http://www.investorwords.com/3482/option_contract.html accessed 18 August 2014.

[51] Scholes and Merton were awarded the 1997 Nobel Prize in Economics for their work in finding a new method for valuation derivatives (Unfortunately Black passed away two years before the Nobel Prize was awarded, as the Nobel Prize is not given posthumously; the Nobel committee acknowledged Black's role in the Black-Scholes model).

[52] See Hull, J. C., (2002), Options, Futures and Other Derivatives, 5th edition, Prentice Hall, Upper Saddle River, New Jersey, p. 242.

- Current underlying price
- Options strike price
- Time until expiration, expressed as a percent of a year
- Implied volatility
- Risk-free interest rates
- Black-Scholes pricing formula.

Figure 4: The Black-Scholes pricing formula for call options.[53] [54]

$$C = S\,N(d_1) - X\,e^{-rT}\,N(d_2)$$

where

C = price of the call option
S = price of the underlying stock
X = option exercise price
r = risk-free interest rate
T = current time until expiration
N() = area under the normal curve
$d_1 = [\ln(S/X) + (r + \sigma^2/2)\,T] / \sigma\,T^{1/2}$
$d_2 = d_1 - \sigma\,T^{1/2}$

Put-call parity requires that:

$$P = C - S + Xe^{-rT}$$

Then the price of a put option is:

$$P = Xe^{-rT}\,N(-d_2) - S\,N(-d_1)$$

The model is essentially divided into two parts: the first part, SN(d1), multiplies the price by the change in the call premium in relation to a change in the underlying price. This part of the formula shows the expected benefit of purchasing the underlying outright. The second part, N(d2)Xe^(-rt), provides the current value of paying the exercise price upon expiration (remember, the Black-Scholes model applies to European options that are exercisable only on

[53] See http://www.investopedia.com/university/options-pricing/black-scholes-model.asp accessed 18 August 2014.

[54] See Hull, J. C., (2002), Options, Futures and Other Derivatives, 5th edition, Prentice Hall, Upper Saddle River, New Jersey, pp. 246-247.

expiration day). The value of the option is calculated by taking the difference between the two parts, as shown in the equation.

3.3. The OTC derivatives market in figures.

The following presentation of the OTC derivatives market is the result of two combined surveys of the Bank for International Settlements (BIS). The first survey of dealers in 13 jurisdictions is done on a semi-annual basis, where as the second survey adding dealers of additional 34 jurisdictions is done on a triennial basis.

The thirteen main participating authorities are taking part in both surveys. They are the central banks and other authorities of the following countries:

Australia, Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Spain, Sweden, Switzerland, United Kingdom and the United States.

The latest BIS semi-annual survey of over-the-counter derivatives markets was performed end-December 2013 and published on the 8th May 2014.

According to that latest survey, OTC derivatives markets continued to expand in the second half of 2013. The notional amount of outstanding contracts totalled $710 trillion at end-2013, up from $693 trillion at end-June 2013 and $633 trillion at end-2012.[55]

Even as notional amounts rose, the gross market value of outstanding OTC derivatives declined to $19 trillion at end-2013, from $20 trillion at end-June 2013 and $25 trillion at end-2012. The decline was driven by interest rate derivatives and, in particular, by a narrowing between market interest rates on the reporting date and the rates prevailing at the inception of the contracts.

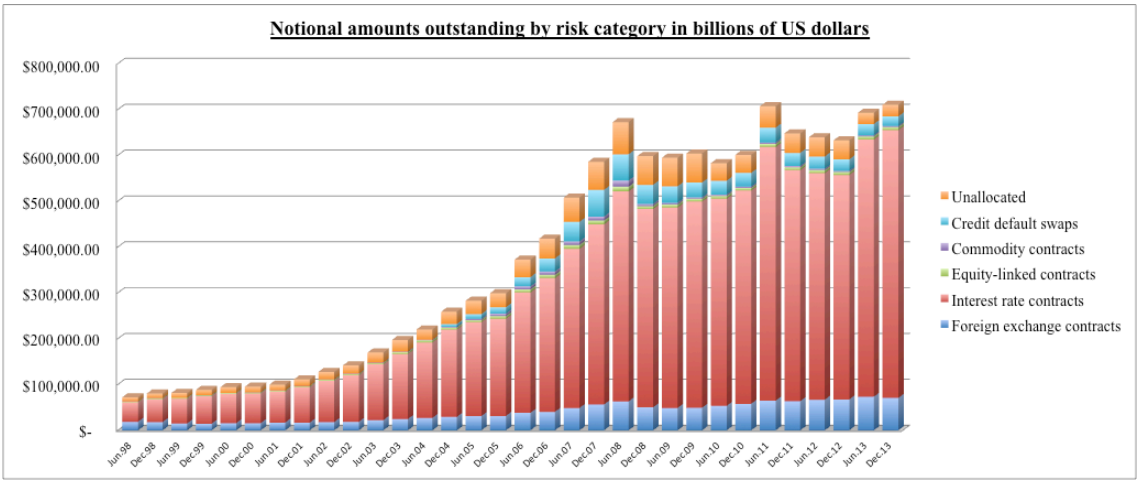
In credit default swap (CDS) markets, central clearing and netting made further advance in that type of derivatives. Contracts with central counterparties accounted for 26% of notional CDS outstanding at end-2013. Bilateral netting

[55] See http://www.bis.org/publ/otc_hy1405.htm accessed 21 August 2014, p. 1.

agreements reduced the net market value of outstanding CDS contracts, which provide a measure of exposure to counterparty credit risk, to 21% of their gross market value.[56]

Figure 5: Evolution of the notional outstanding amount of derivatives by risk category

(Source: BIS – self-made graph base on the source)



The graph (Figure 5) above evidences the strong growth of OTC derivatives market over the last 16 years. It shows that the growth took an exponential growth with the beginning of the new millennium and exceeding the first time a total notional amount outstanding of $ 700 trillion in June 2011. The most recent BIS semi-annual survey of over-the-counter derivatives markets highlights that the second half of 2013 the notional amount of outstanding contracts totalled $710 trillion at end-2013, up from $693 trillion at end-June 2013 and $633 trillion at end-2012.[57]

It's clear that today's OTC derivatives outstanding notional have a completely different impact and inherent risk on financial stability and the financial system than the roughly 73 trillion USD outstanding mid of June 1998. The growth of the OTC derivatives market is mainly driven by interest rate contracts, which count a notional value of $ 585 trillion End-December 2013, compared to $ 43

[56] See http://www.bis.org/publ/otc_hy1405.htm accessed 21 August 2014, p. 1.

[57] See http://www.bis.org/publ/otc_hy1405.pdf accessed 21 August 2014, p. 1.

trillion in mid June 1998. The recent outstanding interest rate contract represent so a 13 fold outstanding exposure to what the market had outstanding in June 1998.

According End-December 2013 figures and visualized in figure 6, Interest rate contracts count for roughly 82% of the outstanding notional and represent so the lions share in OTC derivatives contracts. They are followed by Foreign exchange contracts with a share of 10%, summing 71 trillion USD. The latest data show little change in the instrument composition of foreign exchange derivatives. Another risk category, which has much been criticized during the breakout of the financial crisis in 2007/2008 are Credit default swaps. They come closely of the Foreign exchange contracts, in that risk activity clearing made further inroads in 2013, as central clearing is a key element in global regulators' agenda for reforming OTC derivatives markets with the key objective to reduce systemic risk and crisis. Actually, end of December 2013 contracts cleared with CCPs rose to account for 26% of all CDS contracts.[58]

The notional amount of OTC derivatives linked to equities or commodities totalled $9 trillion at end- December 2013, and the gross market value $1 trillion. The activity in equity-linked contracts declined precipitously in 2008–09 but has since fluctuated around levels similar to the notional amount reported at end-December 2013, $6.6 trillion.

The activity in commodity contracts continues to decline. Dealers expanded their commodity derivatives business rapidly between 2004 and 2008 but subsequently scaled back their outstanding positions. The notional amount of outstanding OTC commodity derivatives contracts declined to $2.2 trillion at end-2013 from $2.9 trillion at end-2009 and a peak of $8.5 trillion at end-2007.[59]

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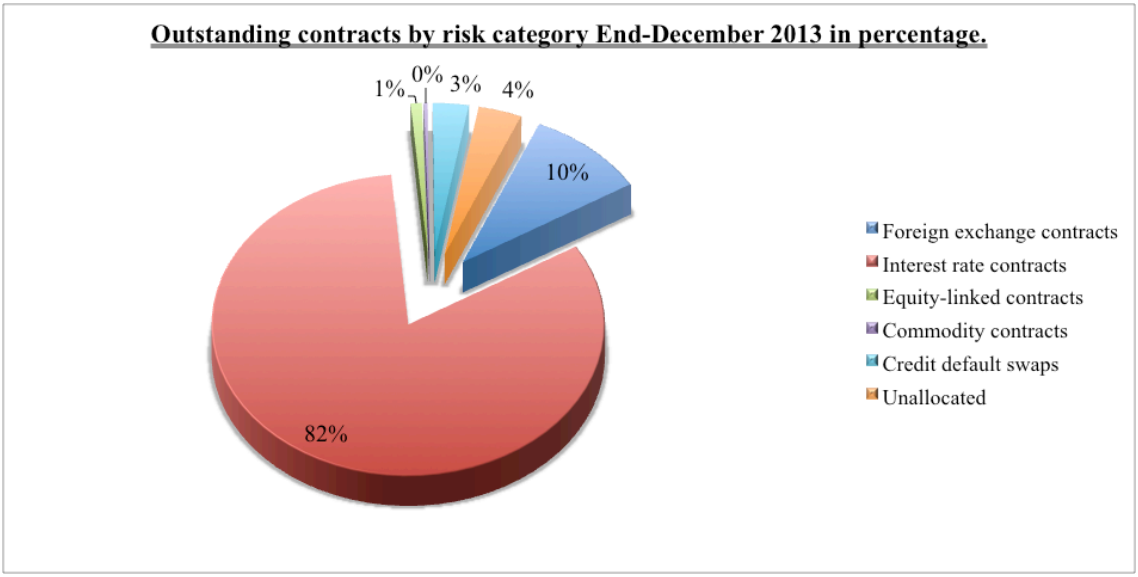
[58] See http://www.bis.org/publ/otc_hy1405.pdf accessed 21 August 2014, p. 5.

[59] See http://www.bis.org/publ/otc_hy1405.pdf accessed 21 August 2014, pp. 6-7.

Figure 6: Outstanding notional by risk category End-December 2013 in percentage.

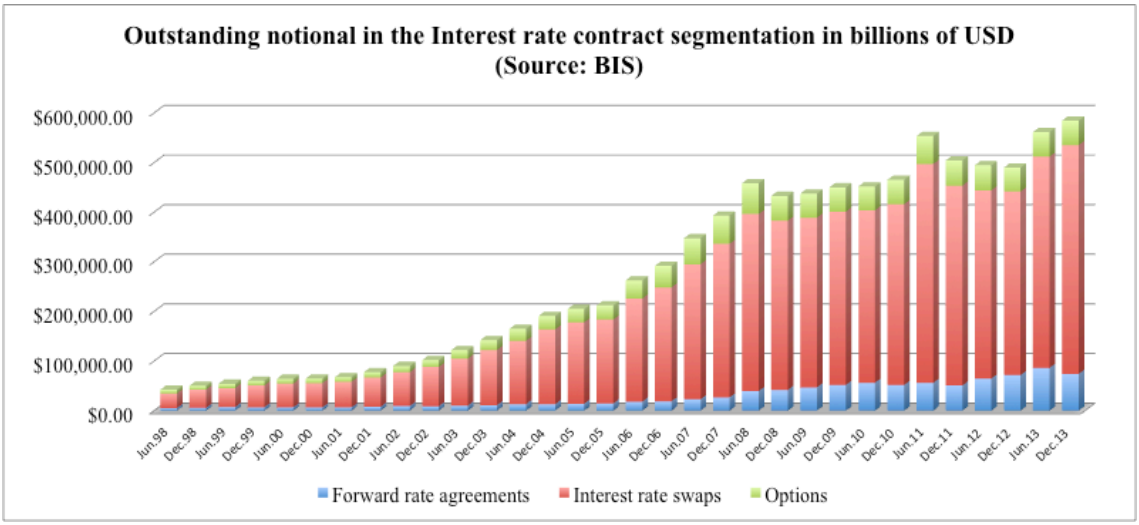
(Source: BIS – self-made graph based on the source)



As Interest rate contract have a market share of 82% with roughly 585 trillion USD, it makes sense to have a closer look on the segmentation of that risk category.

Figure 7: Outstanding notional in the Interest rate contract segmentation in billions of USD.

(Source: BIS – self-made graph based on the source)



The figure 7 above evidences that in the interest rate segmentation, interest rate swaps have a prevailing dominance of roughly 79%, where as Forward rate agreements and Options only count for 13, respectively 8%. This shows that interest rate swaps, with their 461 trillion USD market share, have the predominant outstanding share in OTC derivatives markets (65%)[60].

Swaps are mainly used for new issue arbitrage, asset and liability, positioning/proprietary trading and obviously for hedging purposes. It's useful to categorise swap transactions into two general categories[61]:

- Gerneric or "core" swap structures (which covers parallel or back-to-back loans, interest rate swaps, currency swaps and long dated swaps)
- Non-generic and hybrid swap structures, which entail variations on core swap structures and a variety of option/swap combinations.

Another and deeper analyses, is the question "What if?" meaning what would be the maximum cost or loss that market participants would incur if all counterparties failed to meet their contractual payments and the contracts would have to be replace at prevailing market prices. That replacement cost is called

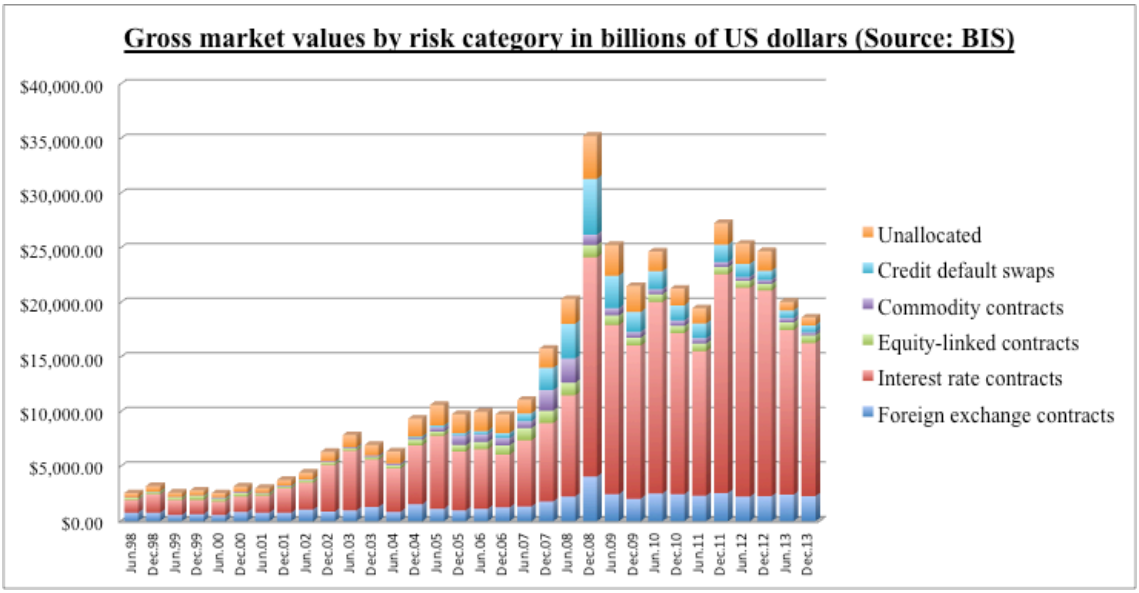
[60] Own Excel sheet, BIS_data.xlsb, worksheet: interest rate segmentation.

[61] Das, S., (1994), Swaps and Financial Derivatives – The Global Reference to Products, Pricing, Applications and Markets, IFR Publishing, p. 39.

gross market value in the BIS survey and its evolution is illustrated in the figure 8 underneath.

Figure 8: Gross market values by risk category in billions of US dollars.

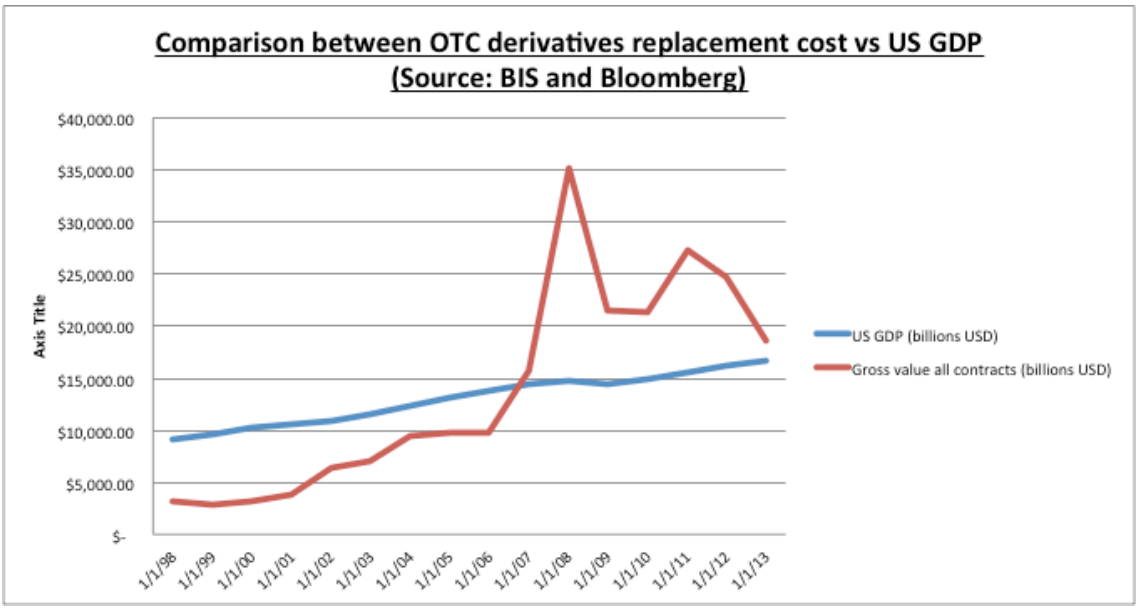
(Source: BIS – self-made graph based on the source)



That gross market values have also known an impressive growth over last 16 years, the amount skyrocketed from roughly 2,6 trillion USD in June 1998 to 35 trillion in December 2008, before falling to 18,6 trillion USD End-December 2013. In order to compare that figures, we can compare them to the gross domestic product (GDP) of the United States. Gross domestic product measures the final market value of all goods and services produced within a country. It is the most frequently used indicator of an economic activity.

Figure 9: Comparison between Gross value and US GDP (annual)

(Source: BIS and Bloomberg / own graph)



The comparison above gives a little hint about the size of replacement cost if a systemic crises would erupt. The graph highlights in a sweeping manner what it would mean, if at certain point all contracts would need to be replaced. This would not only mean a total collapse of the financial system, but as the graph shows impressively, that the cost would exceed since end of 2007 the amount of the annual US GDP.[62]

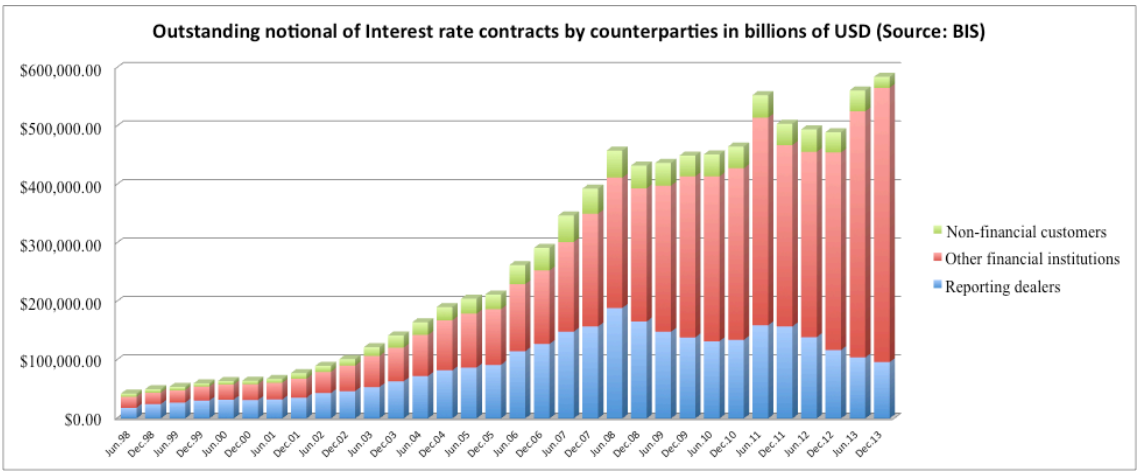
The recent trend in the global market of increasing notional amounts but declining market values was driven by developments in the interest rate segment. Even as notional amounts rose, the gross market value of interest rate derivatives declined to $14 trillion at end-2013, from $15 trillion at end-June 2013 and its most recent peak of $20 trillion at end-2011. Such declines were reported for interest rate derivatives denominated in most of the major currencies. Long-term bond yields and swap rates in these currencies rose in mid-2013 after announcements in May that the US Federal Reserve envisaged phasing out quantitative easing. The decline in the gross market value of interest rate derivatives over this period suggests that the bond market sell-off narrowed

[62] See US GDP, timeseries downloaded from a Bloomberg terminal.

the gap between market interest rates on the reporting date and the rates prevailing at contract inception.[63]

Figure 10: Outstanding notional of Interest rate contracts by counterparties in billions of USD.

(Source: BIS – self-made graph based on the source)



The distribution of interest rate derivatives by counterparties, which is illustrated in figure 9 above this paragraph, shows a continued shift in activity towards financial institutions other than dealers, including central counterparties (CCPs).

The notional amount of interest rate contracts between derivatives dealers has been falling continuously since 2011, to $96 trillion at end-2013 compared with the (post-2008) peak of $159 trillion at end-June. Contracts between dealers and other financial institutions stood at $470 trillion at end-2013, or 80% of all contracts, up from $355 trillion, or 64%, at end-June 2011. The shift towards central clearing exaggerates the growth in notional amounts for other financial institutions because, when contracts are cleared through CCPs, one trade becomes two outstanding contracts.

The latest data show a sharp drop in the notional amount reported for interest rate contracts with non-financial customers. This drop is explained by a dealer's

[63] See http://www.bis.org/publ/otc_hy1405.htm accessed 21 August 2014, p. 3.

reclassification of contracts with central counterparties, which it had previously incorrectly reported against non-financial customers but, starting in December 2013, reported against other financial institutions.[64]

[64] See http://www.bis.org/publ/otc_hy1405.htm accessed 21 August 2014, p. 4.

4. Benefits and disadvantages of the regulation

(Will the regulation lead to more transparency and avoid more risk concentration, or will it be a lagging indicator?)

4.1. Transparency and lower counterparty exposures.

The former absence of strict regulation and the opacity of OTC derivatives may have increased the risk of market illiquidity in the past, when counterparty risk uncertainty has increased. This made it difficult to efficiently resolve defaulting derivatives dealers in the event of failure. The fact that all counterparties now have to report to a trade repository makes the former opaque OTC market much more transparent. A further benefit is that the central clearing is helping reduce to some extend the concentration of bilateral counterparty risk by mandatory clearing of standardized and eligible derivatives through authorized CCPs, this may help lessen the too-big-to-fail problem related to systemically important banks.[65]

Central clearing aims to reduce the likelihood and severity of contagion effects in the OTC derivatives market, as they step into bilateral trades between two counterparties by means of novation, becoming so the buyer to every seller and vice versa. CCPs lower counterparty exposures in part through netting and collateral margin requirements.[66] [67] It is however for the time being difficult to assess the risks for financial stability of new interconnections that arise from the obligation of indirect clearing and collateral transformation services.

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[65] See Gregory, J., (2014), Central Counterparties – Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives, Wiley Finance Series, p. 241.

[66] See https://www.imf.org/external/pubs/ft/gfsr/2010/01/pdf/chap3.pdf, p. 3-4, accessed 4 September 2014.

[67] See Gregory, J., (2014), Central Counterparties – Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives, Wiley Finance Series, p. 240.

One likely benefit of the reforms is that greater standardisation of products and lower counterparty risk will facilitate the comparison of pre-trade prices, which should improve competition and lead to more accurate price differentiation and information. Not only that OTC trades must be reported trough TRs but as well the fact that eligible OTC derivatives must be cleared through CCPs enhance market transparency.[68]

The increased posting of collateral and use of central clearing also means that detailed information about individual counterparties becomes less important. In contrast, as more trades are channelled onto CCPs it will become increasingly important to ensure that market participants have on-going access to reliable information about the positions, risk management practices and financial health of the CCP.[69] [70]

A recent quantitative impact study of the Working Group on Margining Requirements of the Basel Committee on Banking Supervision (BCDS) and the International Organization of Securities Commissions (IOSCO) estimated that the global volume of centrally cleared OTC derivatives have risen from 142,7 trillion USD (28%) to 268 trillion USD (53%) of OTC derivatives traded. This underlines the increasing systemic importance of CCPs.

With the new EMIR regulation several benefits can already be highlighted today, CCP present a major benefit in overcoming information asymmetries predominant in bilateral OTC markets. This benefit also incorporates better due diligence efforts. CCP do generally also better cope with risk management burdens, which means that they offer state of the art margining and risk management methods that don't have the same standards in bilateral OTC business.[71]

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[68] See https://www.imf.org/external/pubs/ft/gfsr/2010/01/pdf/chap3.pdf, p.7, accessed 4 September 2014.

[69] See http://www.bis.org/publ/othp20.pdf accessed 29 August 2014, pp. 17/18.

[70] See Gregory, J., (2014), Central Counterparties – Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives, Wiley Finance Series, p. 240.

[71] See Speech by Benoît Cœuré, Member of the Executive Board of the ECB, 23 January 2014 http://www.ecb.europa.eu/press/key/date/2014/html/sp140123_1.en.html accessed 1 September 2014.

Another important benefit is the introduction of default and clearing funds, able to mutualise losses in a transparent and predictable way. This fact should enable financial markets to better handle tremendous losses and liquidity squeezes that may occur in catastrophic events.[72]

Some more benefits can be found in the fact that central clearing will enhance legal and operational efficiency by reducing legal risks in providing a centralisation of rules and mechanisms. Furthermore we highlight the fact that central clearing will improve market liquidity by an enhanced market entry and the fact that counterparties can trade anonymously and take advantage of counterparty risk mitigation.[73]

Finally it is important to note that central clearing allows netting exposures so that a given level of risk protection can be secured with a smaller amount of collateral, meaning that a given amount of collateral can achieve a higher level of risk protection.[74]

As a summary, we can say that EMIR will bring more standardisation and transparency to derivative markets, this goes along with other regulations and derivative exchange trading requirements introduced under the Dodd-Frank Act or the Markets in Financial Instruments Directive 2004/39/EC (MiFID).

As a general rule, we can restate that more standardisation and more transparency will lead to tighter spreads, shifting commercial opportunities for bank and brokers

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[72] Idem.

[73] See Gregory, J., (2014), Central Counterparties – Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives, Wiley Finance Series, p. 241.

[74] See Speech by Benoît Cœuré, Member of the Executive Board of the ECB, 23 January 2014 http://www.ecb.europa.eu/press/key/date/2014/html/sp140123_1.en.html accessed 1 September 2014.

from spread based trading revenue to post-trade services, such as reporting and collateral optimisation.[75]

[75]See Crispian, L., (2013), EMIR: 24 September webcast Q&A, PWC, https://register.pwc.co.uk/premium/forward.htm accessed 4 September 2014.

4.2. Risk concentration

„The growing importance of CCPs certainly brings a number of important benefits that alternative bilateral arrangements could not do to the same extent. However, the rise of central clearing may also be accompanied by some unintended side effects that need to be addressed.[76]“

This growing importance of CCPs goes along with a risk concentration within CCPs, nationally and internationally. This is one of the side effects of EMIR, by reducing bilateral OTC markets risks EMIR is turning CCPs into institutions of unprecedented systemic importance, which failure could lead again to serious systematic disruptions.[77]

Participating banks in CCPs need to conduct effective due diligence and understand the risks they face in order to manage an appropriate risk management. The enhanced complexity of the financial system may as well lead to larger and quicker crisis propagation due to new interdependencies.[78]

Another risk consideration may be that fact that regulatory arbitrage may arise due to existing differences in regulation.

Different studies and papers show that separate central clearing of one class of derivatives seem to reduce netting efficiencies and increase collateral demands. This implicates higher average exposure to counterparty default.[79]

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[76] See Speech by Benoît Cœuré, Member of the Executive Board of the ECB, 23 January 2014 http://www.ecb.europa.eu/press/key/date/2014/html/sp140123_1.en.html accessed 01 September 2014.

[77] See Speech by Benoît Cœuré, Member of the Executive Board of the ECB, 23 January 2014 http://www.ecb.europa.eu/press/key/date/2014/html/sp140123_1.en.html accessed 01 September 2014.

[78] Idem.

[79] See Duffie, D., Zhu, H., (2011), Does a Dentral Clearing Counterparty reduce Counterparty Risk ?, Oxford University Press, 2011, pp.2-3. (http://web.stanford.edu/~duffie/DuffieZhu.pdf)

While central clearing of derivatives can offer substantial reduction in counterparty risk, benefits can be lost through the fragmentation of the offered services and activities.[80]

Example:

Suppose that Dealer A is exposed to Dealer B by $100 million on CDS, while at the same time Dealer B is exposed to Dealer A by $150 million on interest rate swaps or any other derivative netted by the CCP. The net bilateral exposure is then, $50 million. Adding a central clearing dedicated to CDS eliminates the bilateral netting benefits and increases the exposure between these two dealers, furthermore the collateral is increased from $50 million to $150 million. In addition to any collateral posted by Dealer A to the CCP for CDS, Dealer A would need to post a significant amount of additional collateral to Dealer B.

Collateral is a scarce resource, especially in a credit crisis. The introduction of a CCP for CDS can nevertheless be effective when there are extensive opportunities for multilateral netting. For example, if Dealer A is exposed by $100 million to Dealer B through a CDS, while Dealer B is exposed to Dealer C for $100 million on the same CDS, and Dealer C is simultaneously exposed to Dealer A for the same amount on the same CDS, then a CCP eliminates this unnecessary circle of exposures. The introduction of a CCP therefore involves an important tradeoff between bilateral netting without the CCP and multilateral netting through the CCP.

Other critics arise on other aspects of central clearing, for example:

"It is often argued that a CCP is in a good position to manage the risks of a member that becomes financially distressed. However, the idea that a CCP will perhaps ignore scurrilous rumours and thus create stability is a dangerous one, as it seems to go against the idea of the efficient markets hypothesis and stability.

[80] See Duffie, D., Zhu, H., (2011), Does a Dentral Clearing Counterparty reduce Counterparty Risk ?, Oxford University Press, 2011, p.2. (http://web.stanford.edu/~duffie/DuffieZhu.pdf)

Market observables, such as widening CDS spreads may be symptoms rather than causes. A CCP ignoring rumours may create worse problems later when the rumours are proven. In the event that a CCP has effectively to ask members to cover losses that exceed initial margin and other resources, the members will presumably be surprised since they originally viewed the CCP as a risk-free counterparty and now have to subsidise other member's losses.[81]"

"On the one hand, the market is best supported by a single CCP, since this maximises cross-product netting and margining efficiencies. The ideal of a single CCP must be balanced against monopoly concerns and cross-border issues due to regulatory and operational differences.

The financial markets would be probably best served via a reasonable number of CCPs, large enough to offer good product coverage but not so large that their failure could trigger a global financial crisis. However, CCPs will naturally compete and regulation may favour a certain CCP, which may lead to suboptimal outcomes and market instability.[82]"

This statement by Jon Gregory implicates that in his view one cannot exclude another too big to fail situation, in that case then with a CCP.

Other critics fear that in a severe competition mode CCPs might reduce or neglect standards or collateral requirements in order to compete and to enhance market share. There again critics fear that CCPs bear more and more risk and even more and more systematically risk, therefore CCPs have to prove their resilience in case their two worst competitors get wiped out. Here one question might be allowed: "What happens if the shock is worse?".[83]

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[81] See Gregory, J., (2010), http://ftalphaville.ft.com/2010/06/25/270896/on-clearing-house-concentration-risk/ accessed 5 September 2014.

[82] See Gregory, J., (2010), http://ftalphaville.ft.com/2010/06/25/270896/on-clearing-house-concentration-risk/ accessed 5 September 2014.

[83] See Atzler, E., Riskante neue Bankenwelt, Handelsblatt Nr.155 of the 14th August, p. 28.

Another important thought that always comes on the table when speaking about crisis and their effect, is if a pro-cyclical processes should be favoured, i.e. putting up reserves during good times that can be released when stress is coming up.

Jon Gregory highlights here margin procyclicality, which could be reduced by conservative assumptions, such as the use of stress periods, but this would increase the general cost structures, which will lead us to the next topic.[84]

[84] See Gregory, J., (2014), Central Counterparties – Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives, Wiley Finance Series, p. 242.

4.3. Costs

The implemented and future reforms will raise costs incurred by financial institutions in several ways. These costs take account of cost for complying with new capital and collateral requirements and increases in operational expenses inherent in central clearing. The cost will most probably be passed on to the broader economy in the form of higher bank lending rates relative to deposit rates.

Additional bank capital requirements arise from the combination of the new CVA charge that will be charged against uncollateralised bilateral OTC derivatives exposures and the new charges against trade and default fund exposures to CCPs.

Additional margin for OTC derivatives, whether because of new requirements for non-centrally cleared trades or reallocation of exposures to CCPs, is a second source of additional expense for financial institutions.

The direct cost of central clearing infrastructure is another source of additional expense for financial institutions. This includes clearing and collateral management fees paid to CCPs, these costs can be computed from the published or communicated clearing fees and spreads on collateral already levied by major CCPs currently operating.[85]

Another important cost, which should not be neglected, is the implementation cost of the new regulations and standards. This cost comprises IT resources, PCs and servers to handle the new sets of data that must be managed on the one hand and the staff that is required on the other hand. The required staff is generally an expensive resource, as they are either people with a legal back-ground or economics which have to have already a decent degree of competence to manage the new requirements and setup the new reports. Another important costs are the consultancy fees, which go along with implementing the new rules and standards.

[85] See http://www.bis.org/publ/othp20.pdf accessed 29 August 2014, p. 9.

One important aspect authorities shouldn't neglect is the importance of the impact of the increase in collateral margin as a balance between reducing counterparty risk, which is going along with increasing funding liquidity risk. This question is a function of aspects like the collateral quality and the well functioning of the repo markets.[86]

It's clear if the collateral margins are increased, this should reduce counterparty risk on one side, however as more collateral is required for margin purposes, the scare resource collateral becomes even more expensive, this can have unwanted impacts to the repo markets.

The collateral management activity is currently completely redesigned to offer and to cope with the new collateral standards. Different kinds of collateral are exchanged with different credit margin to allow the financial institution to respect the different benchmark ratios and respect the new rules. All the new adaptations have an inherent cost.

Under cost it is as well important to highlight the eventual cost of an eventual default of a participant to a CCP, this cost will take place in accordance with the waterfall principle. This waterfall loss foresees the so-called first loss representing the defaulters initial margin payments and if not sufficient to cover the loss, the defaulters contribution to the Default fund. If the loss is still not covered funds from the Default fund of non-defaulting members will have to be liquidated to cover the loss.

If this is still not enough others funds like rights of assessment and/or other loss allocation methods must be considered.[87] [88]

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[86] See Gregory, J., (2014), Central Counterparties – Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives, Wiley Finance Series, p. 251.

[87] Idem, p. 182.

[88] See Gstädtner, T., (2013), Regulierung der Märkte für OTC-Derivate – ein Ueberblick über die Regelungen in MiFID II, EMIR und CRD IV, Recht der Finanzinstrumente, Jahresregister 2012, Hefte 1-6, p. 153.

5. The impact of EMIR on the financial centre of Luxembourg

The financial centre of Luxembourg is not only a large financial centre with an important number of international banks from all over the world, it's as well is the second largest investment fund centre in the world after the United States, the premier captive reinsurance market in the European Union and the premier private banking centre in the Eurozone. The financial sector is the largest contributor to the Luxembourg economy. Over the years, specific regulatory frameworks have been created for alternative investment funds, venture capital investment funds, international pension funds, specialised investment funds, captive reinsurance companies, covered bond issuing banks, securitisation vehicles and family wealth management companies.

These attributes make it evident that the financial centre is affected by the new regulation, especially as we know that mutual and pension funds are considered as FCs and so fully fall under the scope of EMIR. It's difficult to establish whether the new regulation is an advantage or disadvantage for the Luxemburgish financial centre.

However it is clear that due to the fact that the mutual fund industry has to comply with it, it seems difficult for certain funds to find the an adequate service provider or dealer broker, who's assuming the new duties on his behalf. This problem however only seems to be a matter of price and finally again of cost inherent to the regulation. For Luxembourg, this cost surplus maybe a little bit more important as the Luxembourg based investment funds are generally orientated very internationally leading to the assumption that finding the adequate service provider or providers goes along with more costs.

The introduction of EMIR and other regulations and rules went along with a lot of adaptions and work in the different companies, but had for sure a positive impact on the results of the Luxemburgish consultancy business and the lawyer firms.

Having illustrated all the important aspects of the European Market Infrastructure Regulation, one question seems not to be answered yet!

Is the new Regulation effective or toothless?

6. Toothless or effective? A qualitative analysis upported by actors of the Luxemburgish banking industry.

To analyse whether the regulation is seen as effective or toothless the author conducted a qualitative analysis via an internet-platform called „survey money“ (https://www.surveymonkey.com/home/).

By toothless or effective the question wants to tackle the point, if the new regulation would prevent a new systemic crisis and if the costs of the new regulation would in any case be lower than a new severe crisis, respectively systemic crisis.

Although the survey is not representative, as only eight participants responded to the survey, the results however tend to lead to some consensus. In total 48 people were invited to respond to that survey. The people, who are held anonymous, are strongly linked to the Luxemburgish financial centre, they are either based in Luxembourg or do cover Luxembourg as business model.

The first question being asked to the participants was:

“I your (financial) institution active in the OTC derivatives business?”

Alternatives answers being proposed were:

a) Active mainly for hedging purposes.
b) Active mainly because it’s part of our business model.
c) Not active at all in the OTC derivatives business.
d) Other (please specify)?

62 % of the respondents answered alternative a) and 38% alternative b).

The second question of the survey was:

“Which of the following OTC derivatives is mostly traded by your institution?”

Alternatives proposed were:

a) Interest Rate Swaps (IRS)

b) Equity Swaps
c) Credit Default Swaps
d) Simple Options
e) Complex Options
f) Other (please specify)?

The participants tended clearly to IRS with a 88%, this in accordance with the quantitative analyses of the paper in hand, which stated that Interest Rate Swaps have the most important market share (65% on End December 2013) in the OTC derivatives market.[89]

12 of the participants (1 participant) acknowledged trading Equity Swaps. Other alternatives were not chosen.

The third question was:

"Due to the new regulation your institution will seek alternatives to the OTC derivatives business?"

Alternatives proposed where:

a) Our institution will abandon OTC derivatives business.
b) Our institution will reduce OTC derivatives business.
c) Our institution will do business as usual.
d) Our institution will increase OTC business.

The participants could strongly disagree, disagree, neither disagree/nor agree, agree or strongly agree to each of the alternative giving the possibility reach to a weighted result.

The weighted average result with a 3.5 average stated that they will do business as usual followed by a 2.5 average stating that their institution will increase the OTC derivatives business.

A 2.2 average result tended to reduce and 1.4 average result even intended to abandon OTC derivatives business.

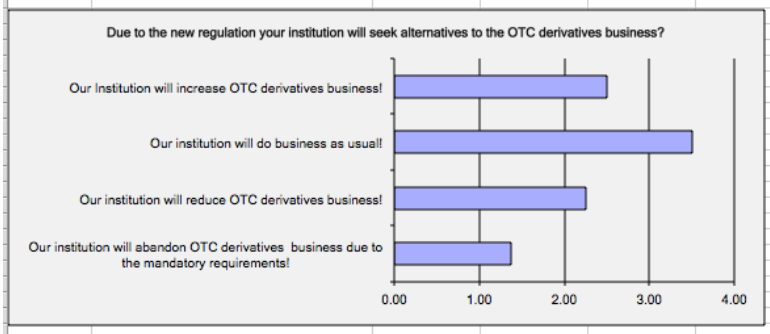
Figure 11: Survey result on the question: "Due to the new regulation your institution will seek alternatives to the OTC derivatives business?" (Graph: Monkey survey)

[89] See Section 3.3 of this paper.

European Market Infrastructure Survey for the purpose of a qualitative analyses.

Due to the new regulation your institution will seek alternatives to the OTC derivatives business?

Answer Options	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Rating Average	Response Count
Our institution will abandon OTC derivatives business due to	6	1	1	0	0	1.38	8
Our institution will reduce OTC derivatives business!	2	3	2	1	0	2.25	8
Our institution will do business as usual!	0	2	2	2	2	3.50	8
Our Institution will increase OTC derivatives business!	1	3	3	1	0	2.50	8
						answered question	8
						skipped question	0



The fourth question asked to the participants was the following:

What are according to your opinion the three main benefits of Trade repositories?

People were asked to rank their three benefits from most important to 3rd most important.

People responding to the most highly important importance responded four times "transparency" out of six answers.

On the second rank the answers were more disparate, the answers went from transparency, to updated legal documents, publicity to "follow up tool for regulatory purposes".

The third rank incorporated answers like: more accurate records, harmonization and Central data centre.

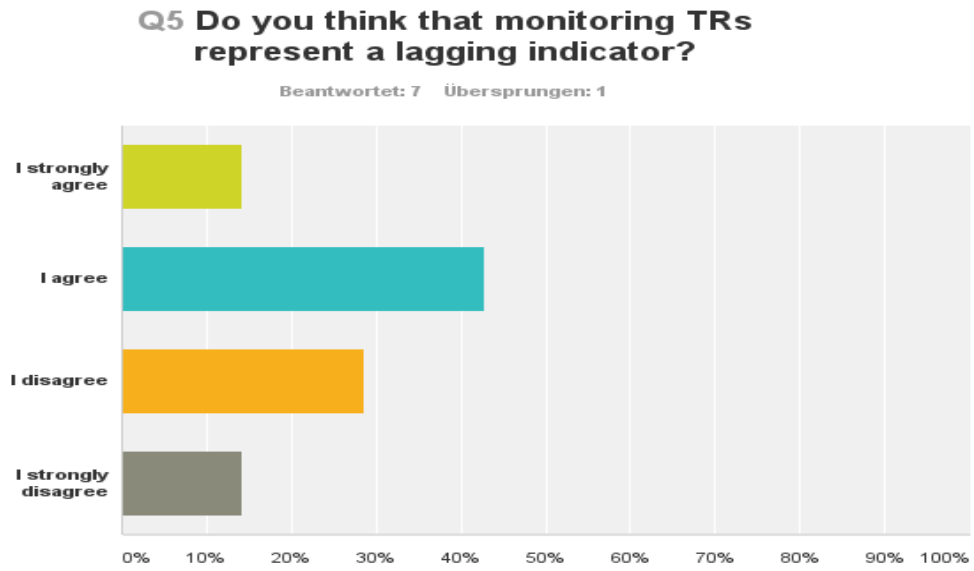
The fifth and very interesting question was:

Do you think that monitoring TRs represent a lagging indicator?

By that question the author intends to know whether people believe if TR's a proactive tool, which alerts authorities on time before a new overheating arises or whether they think it's lagging and will only reveal any overheating sign when the bubble is close to bursting.

According to the survey it seems that people's opinion on that question seems to be very mitigated as 14% strongly disagree and 14% strongly agree. Furthermore 43% of the questioned participants tend to say that it's a lagging indicator where as only 29% disagree.

Figure 12: Diagram to the survey question: Do you think that monitoring TRs represent a lagging indicator? (graph: Survey Monkey)



To the question:

Do you agree that TRs reduce asymmetric information and will enhance market transparency?

62% agreed, 25% disagreed and 12% didn't know.

Although there is a lot of scepticism, people tend to believe in enhanced market transparency.

Some opinions stated in relation to that question were:

"permanent monitoring is better than nothing";

"TR's data centres can definitely be used as a transparency tool for regulators and can enhance the impact of future regulations on the OTC market. However, the issue might be in the analyses of the big amount of information, especially if mismatches persist."

“I think that more transparency may be possible, yet this has to be proven as there will be a need for data analysis on large scale of data which is not centralised in one single point.”

The eighth question was related to the mitigation techniques:

“Do you think risk mitigation techniques will due to EMIR generally improve, be more consistent and finally make the financial system more resilient and robust?”

This question was clearly answered by 88% agreement of the participants.

Coming to the CCP focused questions, the ninth question was:

What are according your opinion the main benefits of CCPs?

The most important benefit named was: Risk reduction or reducing systemic risk.

As second most important benefit people cited: transparency, unified collateral requirements, reduced capital charge and state of the art risk mitigation.

As third benefit people also noted better use of scarce resources (collateral), pricing transparency and strongly regulated and supervised entities.

Further benefits were seen in the fact the Collateral Support Annexes (CSA) were the same for all the CCP members and so less noise in the collateral management.

Furthermore participants reckoned the fact that netting allows the setoff of mapping inverse exposures.

A further interesting question related to CCPs was:

Do you think side effects of CCP could be harmful to the resilience of the financial systems?

57% of the participants clearly tended to say that there are dangerous side effects while 14% said no and 29% didn’t have any opinion.

Figuring with the most important side effects cited, the survey came up with:

a) Severe operational problems
b) Centralizing risk to a certain extend
c) High costs
d) Systemic risk concentration

Further consideration from the participants were:

That different business models used by different CCP's to reduce cost for the users can threaten the integrity of the system (risk of loosening standards in severe competition), a consideration the paper in hand also highlighted in section 4.2. Risk concentration.

On a broader question if people agree that CCPs reduce asymmetric information with some sub-question, the result comes up with the following analyses.

"Do you agree that CCPs reduce asymmetric information?"

Figure 13: Survey result to the question: Do you agree that CCPs reduce asymmetric information?

Do you agree that CCPs reduce asymetric information?

Answer Options	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Rating Average	Response Co
Central Counterparty Clearing reduces asymetric information!	1	0	3	4	0	3.25	8
Do you agree that CCPs offer/will offer state of the art risk management services?	0	3	2	3	0	3.00	8
CCPs are able to mutualise losses and making so short falls easier to handle?	0	2	1	5	0	3.38	8
Do you agree that the cost of CCPs (Margening and cost of collateral) goes along with a safer more efficient OTC derivatives market?	1	1	2	4	0	3.13	8
						answered question	
						skipped question	

According the survey people tend to agree with 3.25 rating average the statement that CCPs reduce asymmetric information, this become less clearer and more mitigated with a three rating average to the question whether CCPs deliver state of the art risk management.

However concerning the mutualisation of losses making short falls easier seems to convince most of the people, namely five out of eight respondents agree that question. So do nearly the same to the question if CCPs make the OTC derivatives market more efficient and safer.

Finally the participants could indicate the size of the their institution in terms of balance sheet size and give the professional position.

The 86% of the respondents work for institutions with a balance sheet smaller than 50 billion EUR and were often participants highlighting cost issues, where as only 14% people are (is) working for an institution with a balance sheet bigger than 150 billion EUR.

The 43% of the participants were traders, 14% people out of a legal department, 14% asset managers and 29% from the different risk departments.

In general the participants to the survey seem to welcome the new regulation while being still very critic and pointing to problems that should be improved in future.

7. Conclusions

EMIR imposes substantial obligations on all market participants, including those not ordinarily subject to financial services regulation. So market participants are putting systems and controls in place in order to comply with EMIR, furthermore market participants also needed to completely review their existing legal derivatives documentation. Amending the existing legal documentation can be accomplished either through adhering to the relevant ISDA Protocols or through the drafting of bespoke bilateral agreements. A lot of work and adaptation has already been done, but as central counterparty clearing has only started roughly six month ago, a lot of work still needs to be done.

The paper in hand has highlighted the main pillars of EMIR, which aim to tackle that formerly opaque market. It has as well shown and illustrated the tremendous amounts of the OTC derivatives market, which are outstanding; respectively which amounts are at risk if a new systemic crisis would erupt. This illustration evidences the need that this market needed to come under tougher scrutiny and had to be regulated more strictly.

The paper however did not only winkle out the benefits of the new rules, but did as well highlight disadvantages like costs. It did as well highlight the fact of possible side-effect that may erupt with central clearing.

"Clearinghouses are one of many solutions to the problem of counterparty risk management if they are run well. If not then they can become the centrepiece of the next crisis. A CCP would, of course, have its own highly advanced risk management capabilities and be subject to prudent supervision and capital requirements in order to make its failure highly unlikely. That's right, just like banking institutions before 2007."[90]

[90] See Gregory, J., (2010), http://ftalphaville.ft.com/2010/06/25/270896/on-clearing-house-concentration-risk/ accessed 5 September 2014.

Therefore the author concludes that the new regulation is a first step to tackle the information asymmetry and the moral hazard problematic of that industry. He sees the regulations efficiency only in the interplay with other regulations and directives, like the CRD IV or the CRR, in order to have an efficient bundle of rules to tame the financial markets.

He furthermore believes that having TRs is better than no transparency at all, but here as well, he believes, like other participants to the survey too, that authorities need to invest in an appropriate way to filter and analyse all that data which is being communicated. Furthermore he thinks that the noise coming from miscommunication needs to be filtered out in order to have a sound and reliable information database.

Concerning Central Counterparty Clearing, he fully agrees that there is counterparty risk reduction under certain circumstances and that scarce resources (collateral) are used more rationally. However due to the fact that rules for CCPs still can be misused or are not yet harmonized internationally (with the US for example), we can imagine that the industry might find business opportunities to arbitrage the collateral rules, which might harm the well functioning of CCPs in stress scenarios. This could for instance dramatically affect the REPO and Collateral Management markets and their liquidity.

Furthermore, as the paper highlighted the fact that CCPs will become more and more SIFIs, it's very crucial that CCPs will be monitored extremely well by the authorities in order to avoid moral hazard problems, where CCPs might seek better market share via reducing standards and costs. Fines and Penalties are in place via the regulation and should have a repulsing effect, however if the monitoring is lagging, important market distortions could arise before the malfunctioning is detected. For the time being it is a bit early stage to have a clear view on the CCP functioning, as it's only in place for roughly six months.

For the last pillar, Risk Mitigation Techniques, the author is almost sure that risk mitigation will become more and more state of the art, even for smaller entities, even

though this will increase costs for the financial player, it will however have a beneficial aspect in risk consideration. For instance, if a bank can prove that it is well led and it shows state of the art risk management, this will for instance have lower CVA costs for non-cleared OTC derivatives, which will be settled bilaterally.

On the other hand Risk Mitigation Techniques are always very important, even for CCP cleared deals, as for a short period before they are accepted and settled in a CCP, they are considered as bilateral deal. This is absolutely obvious as the deal can still be negotiated on a bilateral basis and will be afterwards only centrally cleared.

All in all, the author approves the new Regulation and welcomes it as a first corner step in taming unregulated financial markets, however he's persuaded that adaptations and even stricter rules will follow in the future.

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IV. Annexes:

Annexe 1: Extract of details to be reported to trade repositories

Details to be reported to trade repositories

Table 1

Counterparty Data

	Field	Details to be reported
	Parties to the contract	
1	Reporting timestamp	Date and time of reporting to the trade repository.
2	Counterparty ID	Unique code identifying the reporting counterparty. In case of an individual, a client code shall be used.
3	ID of the other counterparty	Unique code identifying the other counterparty of the contract. This field shall be filled from the perspective of the reporting counterparty. In case of an individual, a client code shall be used.
4	Name of the counterparty	Corporate name of the reporting counterparty. This field can be left blank in case the counterparty ID already contains this information.
5	Domicile of the counterparty	Information on the registered office, consisting of full address, city and country of the reporting counterparty. This field can be left blank in case the counterparty ID already contains this information.
6	Corporate sector of the counterparty	Nature of the reporting counterparty's company activities (bank, insurance company, etc.). This field can be left blank in case the counterparty ID already contains this information.
7	Financial or non-financial nature of the counterparty	Indicate if the reporting counterparty is a financial or non-financial counterparty in accordance with points 8 and 9 of Article 2 of Regulation (EU) No 648/2012.
8	Broker ID	In case a broker acts as intermediary for the reporting counterparty without becoming a counterparty, the reporting counterparty shall identify this broker by a unique code. In case of an individual, a client code shall be used.
9	Reporting entity ID	In case the reporting counterparty has delegated the submission of the report to a third party or to the other counterparty, this entity has to be identified in this field by a unique code. Otherwise this field shall be left blank. In case of an individual, a client code shall be used, as assigned by the legal entity used by the individual counterparty to execute the trade.

10	Clearing member ID	In case the reporting counterparty is not a clearing member, its clearing member shall be identified in this field by a unique code. In case of an individual, a client code, as assigned by the CCP, shall be used.
11	Beneficiary ID	The party subject to the rights and obligations arising from the contract. Where the transaction is executed via a structure, such as a trust or fund, representing a number of beneficiaries, the beneficiary should be identified as that structure. If the beneficiary of the contract is not a counterparty to this contract, the reporting counterparty has to identify this beneficiary by a unique code or, in case of individuals, by a client code as assigned by the legal entity used by the individual.

Annexe 2: Classes of financial instruments coverd by CCP's authorisation.

Please refer to Table 3 below for more information on the definition of the classes				Nasdaq OMX Clearing AB	European Central Counterparty N.V.	KDPW_CCP	Eurex Clearing AG	CCG	LCH.Clearnet SA	European Commodity Clearing	LCH.Clearnet Ltd	Keler CCP	CME Clearing Europe Ltd
MiFID financial instruments	**Securities** (financial instruments referred to in points 1, 2 and 3 of Section C of Annex I of MiFID)	Equity	OTC[ii]		1 April 2014	8 April 2014	10 April 2014	20 May 2014	22 May 2014		12 June 2014		
			RM[iii]		1 April 2014	8 April 2014	10 April 2014	20 May 2014	22 May 2014		12 June 2014	4 July 2014	
		Debt	OTC			8 April 2014	10 April 2014	20 May 2014	22 May 2014		12 June 2014		
			RM			8 April 2014	10 April 2014	20 May 2014	22 May 2014			4 July 2014	
	Derivatives (financial instruments referred to in points 4 to 10 of Section C of Annex I of MiFID)	Equity	OTC	18 March 2014							12 June 2014		
			RM	18 March 2014		8 April 2014	10 April 2014	20 May 2014	22 May 2014		12 June 2014	4 July 2014	
		Debt	OTC	18 March 2014			10 April 2014				12 June 2014		
			RM	18 March 2014		8 April 2014	10 April 2014					4 July 2014	
		Interest Rate	OTC	18 March 2014		8 April 2014	10 April 2014				12 June 2014		4 August 2014
			RM	18 March 2014		8 April 2014	10 April 2014					4 July 2014	
		Inflation Rate	OTC										
			RM										
		Credit	OTC						22 May 2014				
			RM										
		Currencies	OTC								12 June 2014		
			RM			8 April 2014	10 April 2014		22 May 2014			4 July 2014	4 August 2014
		Commodities	OTC	18 March 2014						11 June 2014	12 June 2014		4 August 2014
			RM	18 March 2014			10 April 2014	20 May 2014	22 May 2014	11 June 2014	12 June 2014	4 July 2014	4 August 2014
		Emission/Climatic	OTC	18 March 2014						11 June 2014	12 June 2014		
			RM	18 March 2014			10 April 2014[iv]			11 June 2014			4 August 2014
		Freight	OTC							11 June 2014	12 June 2014		
			RM	7 April 2014[v]						11 June 2014	12 June 2014		

Please refer to Table 3 below for more information on the definition of the classes				Nasdaq OMX Clearing AB	European Central Counterparty N.V.	KDPW_CCP	Eurex Clearing AG	CCG	LCH.Clearnet SA	European Commodity Clearing	LCH.Clearnet Ltd	Keler CCP	CME Clearing Europe Ltd
Other	**Repo**	Equity Debt	OTC			8 April 2014	10 April 2014	20 May 2014	22 May 2014		12 June 2014		
			RM					20 May 2014					
Other	**Securities Lending**	Equity Debt	OTC				10 April 2014						
Other	**Collaterised C Deposits**	**N.A.**	OTC					20 May 2014					
Other	**Derivatives that are not MiFID financial instruments**	Commodities, Emission/Climatic, Freight								11 June 2014		4 July 2014	
Other	**Assets that are not MiFID financial instruments**	Commodities, Emission/Climatic, Freight								11 June 2014		4 July 2014	

Please refer to Table 3 below for more information on the definition of the classes				CCP.A	LME Clear Ltd
MiFID financial instruments	**Securities** (financial instruments referred to in points 1, 2 and 3 of Section C of Annex I of MiFID)	Equity	OTC[vii]		
			RM[viii]	14 August 2014	
		Debt	OTC		
			RM	14 August 2014	
	Derivatives (financial instruments referred to in points 4 to 10 of Section C of Annex I of MiFID)	Equity	OTC		
			RM		
		Debt	OTC		
			RM		
		Interest Rate	OTC		
			RM		
		Inflation Rate	OTC		
			RM		
		Credit	OTC		
			RM		
		Currencies	OTC		
			RM		
		Commodities	OTC		3 September 2014
			RM		3 September 2014
		Emission/Climatic	OTC		
			RM		
		Freight	OTC		
			RM		

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