Centralized Derivatives Clearing

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Conte	ent	
A.	Introduction	5
в. С	The financial crisis of 2008	8 15
I.	The AIG bailout	22
II.	The failure of leading banks	24
D.	G 20 summit and general terminology	26
I.	Clearing	27
II.	Central Counterparties	28
III.	Centralized vs. bilateral clearing	31
E. I.	The Dodd-Frank Act and the European Markets and Infrastructure Regulation Scope of regulation	33 35
1	1. Clearing Obligation	35
	a. The Dodd-Frank Act	35
	b. The EMIR	38
	c. Comparison	41
2	2. Authorization of CCPs	43
	a. The Dodd-Frank Act	43
	b. The EMIR	45
	c. Comparison	46
2	3. Third country CCPs	48
	a. The Dodd-Frank Act	48
	b. The EMIR	49
	c. Comparison	49
II.	Classes of Derivatives	50
1	I. Bottom-up Approach	50
2	2. Top-down Approach	51
3	3. The Dodd-Frank Act	52
	a. Credit default swaps	53
	b. Interest Rate swaps	54
Z	4. The EMIR	55
	a. Interest Rate Derivatives	56
	b. Equity	57
	c. Credit derivatives	58
	d. Foreign Exchange	59
5	5. Comparison	60
III.	Risk management procedures	63
1	I. The Dodd-Frank	64
2	2. The EMIR	68

Comparison	
Margin requirements for non-centrally cleared derivatives	75
The Dodd-Frank Act	
The EMIR	
Comparison	
Reporting requirements	
The Dodd-Frank Act	
The EMIR	
Comparison	
Drafting style and implementation timetable	
onclusion	
C	Comparison Margin requirements for non-centrally cleared derivatives The Dodd-Frank Act The EMIR. Comparison Reporting requirements The Dodd-Frank Act The EMIR. Comparison Drafting style and implementation timetable

Abstract

The financial crisis in 2008 had far-reaching consequences for the global economy. Following the breakdown of the global financial system, the members of the G20 Summit on Financial Markets and the World Economy decided to take steps to strengthen the international financial regulatory regime. In regard to "over-the-counter" (OTC) derivatives – that is, derivatives traded outside a formal exchange - the objective, among others, is to clear the contracts through central counterparties and, where a clearing is not feasible, to subject them to higher margin requirements. This thesis analyses the provisions of the Dodd-Frank Act and the European Markets and Infrastructure Regulation developed by the US and the EU respectively to implement that objective and argues that the risk management procedures in both regimes should be revised and further developed in order to accomplish the objectives of the G20 Summit and help stabilize the financial system.

La crise financière de 2008 a eu des conséquences importantes sur l'économie mondiale. Suite à l'effondrement du système financier mondial, les membres du sommet du G20 ont décidé de prendre des mesures pour renforcer la régulation du système financier international. Concernant les produits dérivés conclus de gré à gré – soit les produits échangés à l'extérieur du marché formel – l'objectif est notamment de compenser les contrats par des contreparties centrales. Quand une telle compensation n'est pas applicable, il faudrait rendre ce type de contrats sujet à des exigences marginales plus grandes. Cette thèse analyse la loi Dodd-Frank et le règlement européen sur les produits dérivés de gré à gré, les contreparties centrales et les référentiels centraux. Elle soutient que les procédures entourant la gestion du risque devraient être révisées et développées plus amplement afin d'accomplir les objectifs du G20 et de stabiliser le système financier.

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A. Introduction

The financial crisis of 2008 had unprecedented global effects. The United States (US) and the European Union (EU) especially suffered from the consequence. Numerous banks and other financial institutions experienced losses into the billions of dollars when their counterparties defaulted and had to file for bankruptcy. The failure of one player spread to another and eventually affected the whole economy. Governments had to decide whether to save insolvent institutions. Some were bailed out with tax payers' money, while others were left to bankruptcy.

As soon as the first banks and financial institutions suffered losses, debates about the reasons for the downfall of the financial system began. Focusing on the two institutions that suffered the most in the US market - the insurer American International Group, Inc. (AIG) and the bank Lehman Brothers - specialists argued that over-the-counter (OTC) derivatives, and more precisely credit default swaps (CDS), had caused the crisis. OTC derivatives had not been subject to mandatory centralized clearing requirements before the crisis of 2008 but rather bilateral netting agreements. Information about the contracts was known to the parties themselves but was usually not publically available. The lack of transparency and the interdependence of the OTC derivatives market made it difficult to analyse and identify the level of risks involved and the nature of those risks¹.

In light of this analysis, the G20 member states summit in Pittsburgh in 2009 agreed on a set of policy resolutions to ensure the stabilisation of the financial system, especially in regard to the OTC derivatives market. In response to those resolutions, the US adopted the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) on July 21, 2010. Two years

¹ Preamble recital 4 EC, Regulation (EU) No 648/2012 of the European Parliament and the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, [2012] OJ, L 201/1 (cited as EMIR).

later, in July 2012, the EU adopted the European Markets and Infrastructure Regulation (EMIR).

Both the US and EU regimes, which are not yet fully implemented, deal with the requirements for centralized clearing of OTC derivatives. Formerly bilaterally-executed OTC derivatives contracts are now to be subjected to clearing through a central counterparty (CCP). In order to ensure a safe post-trade environment, the regulations also impose risk management standards for the CCPs, such as margin and capital requirements, reporting requirements as well as license requirements. As will be seen, OTC derivatives are subject to the central clearing obligation only if they are deemed to belong to a sufficiently standardized class to be cleared centrally. However, those contracts that will continue to be cleared bilaterally will face stricter margin and reporting obligations.

Since both regimes were developed and endorsed shortly after the financial crisis, they do not contain many concrete technical details. The task of drafting technical standards instead has been delegated to regulatory agencies, the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC) in the case of the Dodd Frank Act, and the European Securities and Markets Authority (ESMA) in the case of the EMIR.

This thesis will analyse and compare the American and European regulatory proposals, focussing in particular on a critical assessment of the risk management aspects for centrally and bilaterally cleared contracts. The purpose of the risk management proposals is to ensure a safe post-trade environment and to protect market participants and CCPs from default and bankruptcy. The failure of a large CCP could have an enormous ripple effect that could result in another financial crisis. It is therefore of particular importance that – in addition to the development of general clearing obligations for OTC derivatives – sufficient standards are enacted to ensure the stability and prevent the bankruptcy of a CCP. For those OTC derivatives that are not suitable for centralised clearing, it is equally important to implement minimum

6

margin requirements to ensure the safety and stability of the bilateral OTC market. The thesis will also give an overview of the derivatives that will be subject to the new regimes, focussing particularly on CDSs in view of the major role they played in the financial crisis.

While clearing requirements and risk management procedures are a first step towards a safer and more stable financial system, it will be argued in this thesis that the US and EU regimes, especially the Dodd-Frank Act, do not provide sufficient risk management procedures. It will be shown that the currently proposed standards cannot guarantee the safety of CCPs and CCP members. Thus, the aim of the regulation to stabilize the financial market and to eliminate the risk posed by CDSs can only be achieved partially. The thesis will argue that it will be necessary to reassess and refine the technical standards and that more concrete and stricter risk management procedures such as capital requirements are necessary to prevent a run on and the failure of the CCP. In this respect, it will be shown that the Dodd-Frank Act and the EMIR could benefit from borrowing aspects of each other's standards and rules. Regarding derivatives that will continue to be settled bilaterally it will be shown that it is necessary to implement RTS in order to ensure the enforcement of mandatory margin requirements.

Part B of the thesis will review what derivatives are and the classes of derivatives that will be the focus of the thesis. Part C will give an overview of the financial crisis of 2008. Part D will explain the basic terms relevant to the regulatory proposals, such as clearing and central counterparty. Part E will analyse and explain the provisions relating to centralised clearing and bilateral clearing under the Dodd-Frank Act and the EMIR. Part E will also analyse the scope of the clearing obligation, the authorization of clearinghouses, the classes of derivatives that are subject to the clearing obligation, the capital and margin requirements for centrally cleared and non-centrally cleared derivatives as well as the reporting requirements. Part F concludes.

B. What are OTC derivatives?

For the purpose of this thesis it is necessary to define what derivatives are. A uniform legal definition does not exist. Admittedly the Dodd-Frank Act provides definitions of the terms "swap" and "security-based swap"² and the EMIR defines the terms "derivative" and "OTC derivative"³. But these definitions only refer to types or subcategories of derivatives; they do not define the term derivative or swap itself.

In economic terms, one can define derivatives as instruments that have a value that is derived from an underlying asset⁴. Derivatives create obligations and rights that are related to the underlying asset⁵. The underlying asset can be nearly anything, from gold to weather to orange juice. In a derivative the value of the underlying asset or the likelihood that a certain event related to the asset occurs or not occurs is established. When the market situation changes, the value of the asset will be reassessed. Due to the continual reassessment of the value of the asset, the payment obligation of the participants of the derivative can change over time⁶.

The economic definition of derivatives is broad and captures a wide range of financial products⁷. Indeed, the definition encompasses almost all types of newly innovated or developed financial products⁸.

In addition to the economic definition, a number of different legal definitions exist. Legal dictionaries define derivatives as "financial instrument[s] whose value depends on or is derived

⁴ Kalbaugh, Gary E. *Derivatives Law and Regulation* (New York: Wolters Kluwer Law, 2014) at p. 2; CCH. *Dodd-Frank Wall Street Reform and Consumer Protection Act: law, explanation and analysis*, (Chicago: Wolters Kluwer Law, 2010) at p. 250; Scalcione, Raffaele. *The Derivatives Revolution – A Trapped Innovation and a Blueprint for Regulatory Reform* (New York: Wolters Kluwer Law, 2011) at p. 9.

² Section 711, 761 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, H. R. 4173 (2010) (cited as: Dodd-Frank Act).

³ Article 2 (5), (7) of the EMIR.

⁵ McBride, Paul M. "The Dodd-Frank Act and OTC Derivatives: The Impact of Mandatory Central Clearing on the Global OTC Derivatives Market" (2010) 44 Int'l Law 1077 at p. 1081.

⁶ McBride, supra note 5 at p. 1081.

⁷ Scalcione, supra note 4 at p. 130.

⁸ Scalcione, supra note 4 at p. 136.

from the performance of a secondary source such as an underlying bond, currency or commodity"⁹. One distinction between derivatives and other financial products is that the purchaser of the derivative does not need to own the underlying asset¹⁰.

Some legal definitions, such as the definition in the EMIR, describe derivatives by reference to financial instruments captured by the term. Thus, the EMIR defines derivatives as options, futures, swaps and forward rate agreements that may be settled physically or in cash or must be settled in cash¹¹.

Another way of defining derivatives is based on the similarities that the financial instruments, which are commonly referred to as derivatives (options, futures, swaps etc.), have in common¹². A definition using this approach describes a derivative as "a contract or financial instrument or a combination of contracts and financial instruments that gives a trust the right or obligation to participate in some or all changes in the price of a tangible or intangible asset or group of assets, or changes in a rate, an index of prices or rates, or other market indicator for an asset or a group of assets"¹³.

Seeing the numerous definitions of derivatives it would have been desirable if the Dodd-Frank Act and the EMIR proposed a standardized definition of the term derivative.

For the purpose of this thesis the concept of derivatives will be limited to the derivatives that are currently the subject of the Dodd-Frank Act and the EMIR, namely, OTC derivatives and

⁹ Garner, Bryan A. *Black's Law Dictionary* (West, 2008, 8th Edition) at p. 475; Scalcione, supra note 4 at p. 136. ¹⁰ Barnet, Todd. "The Door is Still Ajar: Analysis and Shortcomings of the CFTC'S Final Rule on the Mandated Clearing of Certain Derivatives" (2013-214) 12 DePaul Bus & Comm LJ 147 at p. 150.

¹¹ Article 2 (5) of the EMIR, points (4) to (10) of Section C of Annex I to EC, 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 [2004] OJ, L 145/1 (cited as EU Directive 2004/39/EC). ¹² Scalcione, supra note 4 at p. 139.

¹³ Scalcione, supra note 4 at p. 138; Derivatives and Options, AR Code § 28-70-414 (2014).

more precisely foreign exchange derivatives and swaps, which are subcategorized as interest rate, equity and credit derivatives.

OTC derivatives are contracts that are privately negotiated and traded. The OTC market operates outside the regulated market. The regulated market is defined as a multilateral system that is managed by a market operator to bring together third party buying and selling interests in financial instruments that will lead to the conclusion of contracts¹⁴. OTC derivatives are bilaterally negotiated between the counterparties and usually not standardised. In this way, counterparties can frame the contract to suit their individual needs and can access a broader range of derivatives contracts. Thus, the terms and conditions of OTC derivatives can be customised in relation to size, underlying assets, delivery dates, duration and margin¹⁵. OTC derivatives offer more flexibility but are correspondingly less marketable and participants have to ensure that the terms actually reflect what they want to achieve and that the contract is legally enforceable¹⁶.

In contrast to OTC derivatives which are characterised by decentralisation, exchange traded derivatives are rule-based endeavours¹⁷, requiring membership in the exchange where the contract will be executed. The exchange typically imposes rules on its members and their clients concerning such matters as margin, reporting, loss sharing obligations and limits on speculative positions. The exchange might also only accept certain types of derivatives for trading¹⁸.

Foreign exchange derivatives are agreements between two parties to exchange a notional amount of capital in a settlement currency that is valued in a different currency. The currency is calculated at a designated exchange rate on a specific date in the future¹⁹. The foreign

¹⁴ Article 4 (1) (14) of the EU Directive 2004/39/EC.

¹⁵ Scalcione, supra note 4 at p. 13.

¹⁶ McBride, supra note 5 at p. 1086.

¹⁷ McBride, supra note 5 at p. 1085.

¹⁸ McBride, supra note 5 at p. 1086.

¹⁹ Rechtschaffen, Alan N. *Capital markets, derivatives and the law* (Oxford: Oxford University Press, 2009) at p. 169.

exchange derivative can be traded at a premium or at a discount. If the current currency spot rate is lower than the currency rate determined in the contract, the derivative is traded at a premium. If the spot rate is higher, the foreign exchange is traded at a discount²⁰. Parties of foreign exchange derivatives might enter into the contract to protect themselves against currency fluctuation. Usually foreign exchange derivatives do not require payments until the settlement of the contract; there are no ongoing payments during the contract period. Nevertheless, since the exchange rate can move significantly between the date of the formation of the contract and the actual exchange of the currency, the counterparties will usually collect margin as collateral to secure the transaction²¹.

Another category of derivatives that is subject to the two regimes is swaps. Swaps can be subcategorized as interest rate, equity and credit default swaps. The terms swap and security-based swap have been made subject to the Dodd-Frank Act. The term swap has the meaning it has under the Commodity Exchange Act²², whereas the term security-based swap is defined under the Security Exchange Act of 1934²³. For the purpose of the thesis it is important to know that the term swap under the Commodities Exchange Act includes interest rate swaps, credit default swaps and equity swaps. A security-based swap under the Securities Exchange Act includes all swaps as they are defined under the Commodities Exchange Act if the swap is based on a narrow-based security index, on a single security or on an occurrence or non-occurrence related to a security if the event affects the financial statement directly²⁴. Swaps are usually privately negotiated to meet the parties' individual needs.

A form of swaps are interest rate swaps (IRS), also called "plain vanilla" because they are the simplest form of swaps. Interest rate derivatives – or swaps - are contracts between two parties

²⁰ Rechtschaffen, supra note 19 at p. 169; US, Federal Reserve System, Trading and Capital Markets Activities Manual (2011) § 4320.I. available at: http://www.federalreserve.gov/boarddocs/supmanual/trading/trading.pdf.

²¹ Rechtschaffen, supra note 19 at p. 169, 170.

²² Section 711 of the Dodd-Frank Act.

²³ Section 761 of the Dodd-Frank Act.

²⁴ Section 3(a) (68) of the Securities Exchange Act, 15 USC §78a (1934) (cited as: Securities Exchange Act).

that are based on the agreement to exchange money at an agreed notional amount, following a detailed payment plan over an agreed period of time²⁵. While one party pays a fixed rate, the other one pays a floating rate, which will be based on an underlying index such as LIBOR (London Inter Bank Offer Rate)²⁶. The parties will calculate the difference between the floating rate and the fixed rate periodically²⁷. When the interest rates decreases or increases the payments between the parties will flow back and forth. The contract can convert fixed rate debt to floating rate debt or vice versa²⁸. IRS are used to manage the cost and risk related to changes in the interest rate of a loan.

In contrast to IRS, equity swaps are agreements to exchange fixed rate and floating rate payments where the floating rate is based on the performance of an underlying share or an equity index such as S&P 500²⁹. Periodically the value of the underlying share will be calculated. Based on the decrease or increase of the value the parties will make payments to each other. The reasons for entering into an equity swap are various. The parties might want to pursue a corporate finance strategy, reduce transaction costs, gain market access or hedge against risks³⁰. A company can use equity swaps to buy back own shares to a fixed price to protect itself from having to purchase the share to a higher price, for example to increase earnings or to satisfy shareholders³¹.

Another subcategory are credit derivatives. Credit derivatives allow the issuer to transfer and isolate specific credit risk of an underlying asset from one party to another at agreed cost³². The

²⁵ Rechtschaffen, supra note 19 at p. 172.

²⁶ Benjamin, Joanna. *Financial Law* (Oxford: Oxford University Press, 2007) at recital 4.38; Clearing Requirement Determination Under Section 2(h) of the CEA, Final Rule 77:240 Federal Register (2012) at p. 18 (cited as: Section 2(h)).

²⁷ Filler, Ronald H. & Markham, Jerry W. *Regulation of Derivative Financial Instruments (Swaps, Options and Futures)* (St. Paul: West Academic Publishing 2014) at p. 8.

²⁸ Filler & Markham, supra note 27 at p. 8.

²⁹ Benjamin, supra note 26 at recital 4.40.

³⁰ Parker, Edmund. Equity Derivatives – Documenting and Understanding Equity Derivative Products. (London: Globe Law and Business, 2009) at p. 12.

³¹ Parker, supra note 30 at p. 28.

³² Rechtschaffen, supra note 19 at p. 179.

underlying asset can but does not have to be in the ownership of the party. One of the major categories of credit derivatives are credit default swaps (CDS). In a CDS contract, one party bets on the possibility that a debt issuer defaults. The exchange of payments is based on the performance of the underlying asset³³. CDS are similar to insurance contracts but the protection buyer does not need to suffer any loss³⁴. If the credit event does not occur, then the protection seller incurs no obligation³⁵. The credit event can be any negative development linked to the debt obligation³⁶ such as a decline in creditworthiness or a default under a certain debt instrument³⁷. CDS can be combined with other derivatives and can create almost any risk profile the parties' desire³⁸. For example, the credit default swap can be purchased by the lender to bear the borrowers firms default, but not the downturn of the related industry. The CDS can be shaped in a way that the lender would be compensated in the event of the downturn of the industry³⁹.

Derivatives, regardless of whether they are exchange traded or traded on the OTC market, can be used for different purposes. The main uses are hedging and speculation.

Hedging, as a tool of risk management, provides protection against loss allocable to changes in market conditions. Derivatives used for hedging shift an undesired risk from the party otherwise directly exposed to that risk to a party that is more willing to bear the risk⁴⁰. Hedging is often referred to as the main reason for the development of the derivatives industry⁴¹. The reasons to use derivatives for hedging are diverse. Hedging might be used to protect: (i) an exporter with

³³ Baseri, Nazanin. "Credit Default Swaps and Clearing" (2011) 3:1 American University Legislation and Policy Brief 39 at p. 41; Skeel, David A. Jr. & Partnoy, Frank. "The Promise and Perils of Credit Derivatives" (2006-2007) 75 U Cin L Rev 1019 at p. 1021.

³⁴ Rechtschaffen, supra note 19 at p. 179; Amicus curiae. Brief of Int'l Swap and Derivatives Association, Inc. (ISDA) in Aon Financial Products Inc v Société Générale 476 F (3d) 90 (2nd Cir 2007).

³⁵ Benjamin, supra note 26 at recital 4.59.

³⁶ Barnet, supra note 10 at p. 152; Shadab, Houman B. "Counterparty Regulation and Its Limits: The Evolution of the Credit Default Swaps Market" (2009-2010) 54 NY L Sch L Rev 689 at p. 690.

³⁷ Filler & Markham, supra note 27 at p. 291.

³⁸ Skeel & Partnoy, supra note 33 at p. 1024.

³⁹ Skeel & Partnoy, supra note 33 at p. 1024.

⁴⁰ Benjamin, supra note 26 at recital 5.06.

⁴¹ Scalcione, supra note 4 at p. 48.

income in euros and expenses in sterling from a drop in the exchange value; (ii) a manufacturer from rises in commodity prices; or (iii) a borrower with floating rate obligations and fixed rate income from rises in the interest rate⁴². In addition to these examples, equity derivatives can also be used for hedging. A company may enter into an equity swap to become protected against adverse price movements. Another type of derivatives that can be used for hedging is CDS. Credit default swaps can be used to hedge risks which are associated with lending to a particular counterparty⁴³. For example, a bank gives a loan to a company and enters into a CDS with a third party over the same amount of money to hedge against the risk arising from the loan. If the company defaults, the third party will make a payment to the bank. In this way the bank can limit its loss from the defaulting company, since this one will not be able to pay back the loan. On the other hand, if the company pays back the loan, the bank will make a payment to the third party and limit its profits from the loan⁴⁴. Hedging takes away the risk but it also takes away the possibility of gaining profits⁴⁵.

When derivatives are used for speculation, the goal is simply profit making. The speculator has no commercial interest in the underlying interest in contrast to the hedger. Rather, the speculator seeks to extract profits from the marketplace by speculating as to changes in future market conditions⁴⁶ affecting the value of the underlying asset. Derivatives might be used to speculate on (i) the failure of an obligor to make a payment or a downgrade in the creditworthiness⁴⁷; (ii) a significant change in interest rates; or (iii) currency fluctuations. Speculation is a discrete vehicle to achieve the wanted exposure. While speculation can bring high profits, it has

⁴² Benjamin, supra note 26 at recital 5.05.

⁴³ CCH, supra note 4 at p. 252.

⁴⁴ Skeel & Partnoy, supra note 33 at p. 1021.

⁴⁵ Benjamin, supra note 26 at recital 5.07.

⁴⁶ Scalcione, supra note 4 at p. 50; Benjamin, supra note 26 at recital 5.09.

⁴⁷ Filler & Markham, supra note 27 at p. 292.

drawbacks. It can increase the cost of capital due to earning volatility. Losses resulting from speculation can be significant enough to cause the insolvency of the speculator⁴⁸.

The use of the classes of derivatives that has been describes before is relevant under the Dodd-Frank Act and the EMIR because foreign exchange derivatives, IRS and CDS can be used for hedging as well as for speculation. Speculation poses significant risks to the financial markets especially since the speculative behavior has increased in recent years. The use of these three groups of derivatives is therefore important under the two regimes. Equity derivatives on the other hand are used for hedging. The use of equity is therefore less important. However, equity derivatives are the third largest group of OTC derivatives in the global economy after IRS and foreign exchange derivatives⁴⁹. The big market share has an important influence in making these derivatives subject to the two regimes.

C. The financial crisis of 2008

The financial crisis of 2008 had enormous consequences not only in the US and the EU but also globally. Its effects were even more negative than those of the Great Depression of the 1920s⁵⁰. The failure of most significant players in the financial market - the so-called too-big-to-fail institutions, affected smaller financial institutions across the global economy.

Specialists have debated about the causes of the financial crisis and possible responses to prevent further crises. Causes that have been discussed range from deregulatory changes in securities legislation, lax bank lending, run on banks and moral hazard to speculation with

⁴⁸ Scalcione, supre note 4 at p. 50.

⁴⁹ Bank for International Settlements, OTC Derivatives Market Activity (2011), Table 19, available at:

http://www.bis.org/statistics/otcder/dt1920a.pdf (last visited: June 2015) (cited as: BIS, Market Activity). ⁵⁰ Crotty, James. "Structural causes of the global financial crisis: a critical assessment of the 'new financial architecture'" (2009) 33 Cambridge Journal of Economics 563 at p. 563.

derivatives⁵¹. As to the latter, many critics posit that OTC derivatives and specifically CDS were the main reason for the financial crisis. Other critics argue that CDS alone were not the reason. It also has been argued that the crisis resulted from an interaction between CDS and false credit ratings by credit rating agencies. An analysis showed that changes in the available information about the credit risk of financial institutions were not reflected in the credit ratings⁵².

Since the crisis, derivatives, and especially OTC derivatives, have been the subject of regulatory proposals⁵³. The OTC market grew significantly in recent years as can be seen in the figure below. In 2007, the notional value of outstanding OTC derivatives was \$ 600 trillion accounting for three times the global economy⁵⁴. The notional amount does not equate the potential loss. Partly it has been argued that the potential loss at risk is much smaller than the notional value. However, as observed in the crisis it is possible to lose a substantial amount of the notional value, especially when the derivatives contracts are linked to one another⁵⁵.

⁵¹ Pacces, Alessio M. "Illiquidity and Financial Crisis" (2012-2013) 74 U Pitt L Rev 383 at p. 395 f.; Sornette, Didier & Woodard, Ryan. "Financial Bubbles, Real Estate Bubbles, Derivative Bubbles, and the Financial and Economic Crisis" (2009) 09:15 Swiss Finance Institute Research Paper 1 at p. 6 f., available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1407608 (last visited: July 2015).

⁵² Flannery, Mark J. & Houston Joel F. & Partnoy, Frank. "Credit Default Swap spreads as viable substitutes for Credit Ratings" (2010) 158 University of Pennsylvania Law Review 2085 at p. 2098, available at:

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1666350 (last visited: June 2015).

⁵³ Credit Rating Agencies are in focus of regulation as well. However, this paper will focus in OTC derivatives only.

⁵⁴ Denning, Steve. "Lest we forget: Why we had a financial crisis" *The Forbes* (22 November 2011) available at: http://www.forbes.com/sites/stevedenning/2011/11/22/5086 (last visited: June 2015).

⁵⁵ Denning, Steve. "Big Banks and Derivatives: Why Another Financial Crisis Is Inevitable" *The Forbes* (8 January 2013) available at: http://www.forbes.com/sites/stevedenning/2013/01/08/five-years-after-the-financial-meltdown-the-water-is-still-full-of-big-sharks/ (last visited: August 2015).





The reason for the increased use of OTC derivatives leading up to the crisis was a change in US legislation. Until December 20, 2000 derivatives had been subject to clearing requirements under the Commodity Exchange Act (CEA)⁵⁷. The central objective of the CEA regarding derivatives was the provision of guarantees in case of financial constraints or failures⁵⁸. The Act required the interposition of a well-capitalized intermediary between the counterparties. The intermediary's purpose was to ensure that sufficient margin was available for the undertaken contracts.

The CEA ought to have ensured the risk-free use of derivatives. Nevertheless, financial institutions found ways to use derivatives for speculation and caused dramatic losses⁵⁹. Even

⁵⁶ International Monetary Fund. "Making Over-the-Counter Derivatives safer: The role of Central Counterparties" (2010) Chapter 3 at p. 3, available at:

https://www.imf.org/external/pubs/ft/gfsr/2010/01/pdf/chap3.pdf (last visited: June 2015).

⁵⁷ Greenberger, Michael. "Out of the Black Hole: Regulatory Reform of the Over-the-Counter Derivatives Market" (2010) 2010:51 U Maryland Research Paper 1 at p. 102 available at:

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1689180 (last visited: July 2015). ⁵⁸ Greenberger, supra note 57 at p. 102.

⁵⁹ Stout, Lynn A. "Derivatives and the Legal Origin of the 2008 Credit Crisis" (2011) 1 Harv Bus L Rev 1 at p. 22.

though some critics at the time were concerned that the then-current regulation was insufficient to protect against systemic risk, the US government aimed for a change in regulation and specifically a deregulation of derivatives. The members of the President's Working Group stated that "there is no compelling evidence of problems involving swap agreements" and suggested that "many types of swap agreements should be excluded from the CEA"⁶⁰. The Working Group's recommendations were substantially embodied in the Commodities Futures Modernization Act (CFMA) of 2000⁶¹.

The goal of the change in the law was reducing systemic risk and promoting innovation in the financial sector. A central argument was that self-regulation would prevent banks and financial institutions from excessive risk-taking⁶². The CFMA was adopted "to promote legal certainty, enhance competition, and reduce systemic risk in markets for futures and over-the-counter derivatives, and for other purposes"⁶³. In order to achieve that purpose, derivatives were excluded from the ban on off-exchange trading⁶⁴ and margin requirements were eliminated. A central belief of the legislator in adopting the CMFA was that OTC derivatives would be used for hedging purposes but not for speculation⁶⁵.

Even though OTC derivatives can be used for risk management and to increase liquidity, they can also be used to increase leverage in the financial system. Derivatives can be used for speculation on a small capital base because no requirements for margin or capital exist⁶⁶. As a

⁶⁰ Kalbaugh, supra note 4 at p. 53.

⁶¹ Kalbaugh, supra note 4 at p. 57.

⁶² Johnson, Kristin N. "Clearinghouse Governance – Moving beyond Cosmetic Reform" (2011-2012) 77 Brook L Rev 681 at p. 686.

⁶³ H.R. 5660 106th Congress 2d session at p. 1, available at: http://www.cftc.gov/files/ogc/ogchr5660.pdf (last visited: April 2015); US, The President's Working Group on Financial Markets, Over-the-Counter Derivatives Markets and the Commodity Exchange Act (1999) available at: http://www.treasury.gov/resource-center/fin-mkts/Documents/otcact.pdf at p. 6.

⁶⁴ Stout, supra note 59 at p. 21.

⁶⁵ Stout, supra note 59 at p. 22.

⁶⁶ US, Committee on Banking, Housing, and Urban Affairs, 111th Cong, S Report 111 – 176 (2009-2010) 1 at p. 30 (cited as S Report).

result of the deregulation of the OTC derivatives more and more financial institutions engaged in speculative derivatives trading⁶⁷.

Following the adoption of the CFMA, major financial institutions became more involved with subprime-mortgage-backed securities. Mortgage-backed securities (MBS) are "debt obligations that represent claims to the cash flows from pools of mortgage loans"⁶⁸. Mortgages are well suited for securitization because the interest obligation of the borrower is a predictable income stream⁶⁹.

Securitization is the transfer of a financial relationship into tradable securities. The financial relationship is the contract between the parties; in the case of a MBS it is the loan. The process of transforming the contract into a tradable security⁷⁰ through securitization is illustrated by the diagram below.

⁶⁷ Stout, supra note 59 at p. 5.

⁶⁸ US, Securities and Exchange Commission, Mortgage-Backed Securities,

http://www.sec.gov/answers/mortgagesecurities.htm (last visited July 2015).

⁶⁹ Griffith, Sean J. "Governing Systemic Risk: Towards a Governance Structure for Derivatives Clearinghouses" (2011-2012) 61 Emory LJ 1153 at p. 1165.

⁷⁰ Fabozzi, Frank J. & Kothari, Vinod. "Securitization: The Tool of Financial Transformation" (2007) 07:07 Yale ICF Working Paper 1 at p. 3 available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=997079 (last visited: June 2015).



Securitization of loans is a financing technique for the bank or financial institution that issues the MBS⁷². Very briefly the process can be described as follows: a bank issues a loan and the borrower gives a mortgage to secure the loan⁷³. The bank is referred to as the asset originator. The originator then sells a pool of mortgage loans that it has originated to a special purpose vehicle (SPV) that is created solely to hold these financial claims⁷⁴. When the bundle of loans is sold to the SPV, the originator transfers the legal interest in the loans. In this way the bank can write the loans off its balance sheet and the SPV owns the cash flows that are linked to the loans. The SPV bundles the different pools of mortgages and certifies them according to the investor's demands⁷⁵. Usually there are different tranches created: senior tranches, mezzanine

⁷¹ Jobst, Andreas. "What is securitization?" (2008) Finance & Development 48 at 48.

⁷² Martin, John D. "A Primer on the Role of Securitization of the Credit Market Crisis of 2007" (2009) 1 at p. 1, available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1324349 (last visited: July 2015).

⁷³ Levitin, Adam J. & Twomey, Tara. "Mortgage Servicing" (2011) 28 Yale J on Reg 1 at p. 13.

⁷⁴ Bethel, Jennifer E. & Ferrell, Allen & Hu, Gang. "Legal and Economic Issues in Litigation arising from the 2007-2008 Financial Crisis" (2008) 1 at p. 9, available at: http://papers.ssrn.com/abstract=1096582 (last visited: July 2015); Levitin, Adam J. & Wachter, Susan M. "Explaining the Housing Bubble" (2012) 100 Georgetown Law Journal 1177 at p. 1188.

⁷⁵ Simkovic, Michael. "Competition and Crisis in Mortgage Securitization" (2013) 88 Ind LJ 213 at p. 214.

tranches and junior tranches. The different tranches are associated with different levels of risk, with the junior tranche being the most risky. The investor in the most risky tranche has the last claim on generated income but is the first to be called on for losses⁷⁶.

The bundled loans are rated by credit rating agencies and sold into the capital market to investors by the SPV⁷⁷. Securitization is thus the selling of securities whose payments (principal and interest) are linked to a pool of cash flows that are owned by a SPV.

Many of these MBS received CDS coverage, which means the MBS was referenced by a CDS contract⁷⁸. A CDS is an agreement whereby the seller compensates the buyer in the event of default in the repayment of the loan. Investors and/or issuer of MBS used CDS to hedge against the default risk of the underlying loan. Using CDS to limit the exposure to the risk of the securitized loans, the demand for riskier loans was created, what in turn contributed to the crisis⁷⁹.

When selling the MBS the financial institution receives payment that can be used to issue more loans or make further investments. MBS were a popular form of short term funding⁸⁰. Since the originator can also issue the MBS it would retain exposure, even though the securities did not need to be written down on the balance sheet⁸¹. Many MBS received a triple A rating by credit rating agencies, which made the issuance of these financial investments easier. When the housing market went down, the MBS got downgraded and had to be written down on the balance sheets⁸². The loss in market value represented a liquidity problem for the financial

⁷⁶ Jobst, supra note 71 at p. 49.

⁷⁷ Gorton, Gary & Metrick, Andrew. "Securitization" (2011) 1 at p. 4, available at:

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1909887 (last visited: June 2015).

⁷⁸ Arentsen, Eric & Mauer, David C. & Rosenlund, Brian & Zhang, Harold H. & Zhao, Feng. "Subprime Mortgage Defaults and Credit Default Swaps" (2012) 1 at p. 12, available at:

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2023682 (last visited: August 2015).

⁷⁹ Arentsen & Mauer & Rosenlund & Zhang & Zhao, supra note 78 at p. 25.

⁸⁰ Pacces, supra note 51 at p. 397.

⁸¹ Gubler, Zachary J. "The Financial Innovation Process: Theory and Application" (2011) 36 Del J Corp L 55 at p. 82.

 $[\]overline{^{82}}$ Gubler, supra note 81 at p. 82.

institutions⁸³. Counterparties would collect more collateral from their contracting party and, clients of banks would withdraw the cash from their accounts to protect their own position in case of the bankruptcy of the bank. In this way liquidity problems for those institutions were created⁸⁴.

The financial breakdown in the wake of the financial crisis was most evident in the mortgage securitization market⁸⁵. The Financial Crisis Inquiry Commission concluded that CDSs played a significant role⁸⁶. A number of the main players in the US financial market were negatively affected when the housing market went down. The US government dealt with their impending bankruptcy in different ways. Whereas the American International Group Inc. was saved through a bailout of \$85 million⁸⁷, the fourth largest US bank Lehman Brothers was left to bankruptcy.

I. The AIG bailout

In September 16, 2008 the American International Group Inc. (AIG) announced it suffered losses into the billions⁸⁸. The company reported a quarterly loss of \$61.7 billion in 2008⁸⁹.

AIG is "a holding company which, through its subsidiaries, is engaged in a broad range of insurance and insurance-related activities in the United States and abroad"⁹⁰. Starting in the

⁹⁰ AIG, 2007 Annual Report (Form 10-K), (Feb. 27, 2008) at 3 available at

⁸³ Schwarcz, Steven L. "Understanding the Subprime Financial Crisis" (2008-2009) 60 S C L Rev 550 at p. 554.

⁸⁴ Gubler, supra note 81 at p. 82.

⁸⁵ Kalbaugh, supra note 4 at p. 59.

⁸⁶ Kalbaugh, supra note 4 at p. 60; US, National Commission on the Causes of the Financial and Economic Crisis in the United States, The Financial Crisis Inquiry Report (Washington DC: US Government Printing Office, 2011) at p. xiv, 50-51; Some critics do not belief that CDS are the major contributor of the financial crisis since solely AIG and Lehman Brothers suffered major losses but did not affect further financial institutions through their CDS business.

⁸⁷ Sjostrom, William K. Jr. "The AIG Bailout" (2009) 66 Wash & Lee L Rev 943 at p. 944.

⁸⁸ Stout, supra note 59 at p. 26.

⁸⁹ Lou, Wujiang. "Valuation of Mortgage-Backed-Securities – A Portfolio Credit Derivatives Approach" (2009) 1 at p. 1, available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1369708 (last visited: July 2015); Kalbaugh, supra note 4 at p. 60.

http://www.aig.com/Chartis/internet/US/en/2007-10k_tcm3171-440886.pdf (last visited: July 2015).

early 2000s, AIG increased its involvement in CDS contracts through its subsidiary American International Group Financial Product, Inc. (AIGFP). AIGFR's participation increased dramatically between 2003 and 2006. In that time period, it underwrote \$3 trillion in derivatives with no money reserved for future claims,⁹¹ becoming one of the main participants in the global trade of derivatives⁹².

AIGFP sold CDSs that insured corporate credits⁹³. The underlying assets were subprimemortgage-backed securities. Since the beneficiary need not own the referred asset, AIGFP was able to insure for many times the value of the outstanding credit⁹⁴. Because AIGFP's guarantor was AIG and the issued securities received an AAA rating, AIGFP was considered to be a low risk counterparty⁹⁵. Contract partners saw AIG as a strong and wealthy business partner, and initially did not require either AIG or AIGFP to post collateral for the CDS contracts⁹⁶.

However, when the value of the CDSs deteriorated and the product was downgraded, AIGFP was obliged to post huge amounts of collateral⁹⁷. As the obligations exceeded AIGFP's financial capabilities, its guarantor AIG had to post collateral for the outstanding CDSs. Because of the huge number of outstanding CDSs, AIG could not meet the collateral demands⁹⁸.

AIG's liquidity crisis could have easily turned into a bankruptcy with disastrous consequences for the global economy at different levels: workers could have lost their insurances plans, pension plans could have suffered losses in their investment portfolios, global commercial and investment banks could have suffered losses on loans to AIG as well as on derivatives contracts,

⁹¹ Denning, supra note 54.

⁹² US, Federal Reserve Bank, Actions related to AIG (2012) available at: http://www.ny.frb.org/aboutthefed/aig/ (last visited July 2015) (cited as: US, Federal Reserve Bank).

⁹³ Simpson, Carney. "Do End-Users Get the Best of Both Worlds?-Title VII of Dodd-Frank and the End-User Exception" (2012) 69 Wash & Lee L Rev 1759 at p. 1767.

⁹⁴ Rechtschaffen, supra note 19 at p. 174.

⁹⁵ S Report supra note 66 at p. 30; Crotty, supra note 50 at p. 569.

⁹⁶ Roe, Mark J. "Clearinghouse Overconfidence" (2013) 1 at p. 6 available at:

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2224305 (last visited: June 2015).

⁹⁷ International Monetary Fund, Global Financial Stability Report (April 2010) Chapter 3 at p. 9 Box 3.3.

⁹⁸ Simpson, supra note 93 at p. 1767.

and a decrease in confidence in the insurance market could have led to a run on the whole industry⁹⁹.

To prevent these consequences the New York Federal Reserve was authorized to extend a secured revolving credit facility to AIG of up to \$85 billion in accordance with of the Federal Reserve Act¹⁰⁰. In exchange for the federal loan, AIG transferred 79.9 % of its equity to a trust of the United Stated Treasury¹⁰¹.

II. The failure of leading banks

During the financial crisis major banks reported losses. The government reacted to these reports and the pending failure of these financial institutions in different ways. While Bear Stearns was bailed out by the Federal Reserve, Lehman Brothers was left to bankruptcy, Merrill Lynch was rescued in an acquisition by the Bank of America, and Goldman Sachs and Morgan Stanley were converted to bank holding companies¹⁰².

All of the above mentioned banks had invested in mortgage-backed securities and suffered losses when the housing market turned downwards. For the purpose of this thesis, the focus in this part is on Bearn Stearns, as it was the first bank in the United States that suffered major losses, as well as on Lehman Brothers since it incurred the most losses and was not saved by the U.S. government.

In 2007, Bear Stearns already was facing major liquidity problems. Its business was concentrated on mortgage-backed securities. When the housing market declined, the bank was forced to liquidate hedge funds invested in mortgage-backed securities, to meet its payment

⁹⁹ US, Federal Reserve Bank, supra note 92.

 $^{^{100}}$ Section 13 (3) of the Federal Reserve Act, 12 USC § 226 (1913).

¹⁰¹ US, Federal Reserve Bank, supra note 92.

¹⁰² S Report, supra note 66 at p. 237.

obligations. Its financial situation became even more fragile when the bank could not find buyers for the now-toxic assets. After it sought assistance from the U.S. government, the Federal Reserve announced a bailout through an arrangement with JPMorgan Chase on March 14, 2008¹⁰³.

Lehman Brothers faced a similar situation with a different result. Lehman Brothers occupied a leading role in the mortgage-backed securities market. By the end of May 2008, Lehman Brothers held 900.000 positions in derivatives worldwide with a net value of approximately \$21 billion¹⁰⁴.

From 2005 to 2006, the bank was the largest producer of mortgage-backed securities and was party to CDSs, interest rate swaps and foreign exchange derivatives; the three most common types of derivatives¹⁰⁵. Lehman's business was largely focused on housing related assets. This focus made the bank especially vulnerable to a downturn in that market¹⁰⁶.

Starting in 2007, Lehman began to suffer losses from its positions in mortgage-backed securities. When the bank could not meet its payment obligations, it tried to raise capital. Even though it was able to raise \$6 billion in capital, this was not enough to meet its obligations¹⁰⁷. When Lehman's financial situation became public, major banks stopped trading with it. In a panic, banks and customers withdrew their positions from Lehman which made its liquidity situation even worse. Not seeing another way to raise more capital, Lehman tried to find a buyer. The Bank of America and Barclays Bank expressed immediate interest¹⁰⁸.

¹⁰³ S Report, supra note 66 at p. 40; Gubler, supra note 81 at p. 87.

 ¹⁰⁴ Lartey, Richard. "What caused the collapse of Lehman Brothers?" (2012) 1 at p. 6, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2130200 (last visited: March 2015).
¹⁰⁵ Lartey, supra note 104 at p. 4 - 5.

 $^{^{106}}$ Lartey, supra note 104 at p. 5.

¹⁰⁷ Bernanke, B. S. Lessons from the failure of Lehman Brothers, (20 April 2010) Committee on Financial Services, U.S. House of Representatives, Washington, D.C. available at:

http://www.federalreserve.gov/newsevents/testimony/bernanke20100420a.htm (last visited: June 2015); Lartey, supra note 104 at p. 5.

¹⁰⁸ Davidoff, Stevan M. & Zaring, David. "Big Deal: The Government's Response to the Financial Crisis" (2009) 1 at p. 27, available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1306342 (last visited: July

Before Lehman could enter into negotiations, Merrill Lynch announced that it was willing to enter into a merger to ensure its own survival. One day later, on September 15, 2008 Merrill Lynch and the Bank of America announced the acquisition in an approximately \$50 billion transaction¹⁰⁹. This acquisition left Lehman Brothers with Barclays Bank as the only possible buyer. But Barclays was aware of Lehman's financial situation and refused to enter into a merger without governmental assistance. Lehman had to file for bankruptcy on September 15, 2008 after the U.S. government refused to assist in the merger¹¹⁰. The Federal Reserve had concluded that Lehman Brothers did not have sufficient capital to qualify for the governmental action plan which had been announced to stabilise the financial market¹¹¹.

D. G 20 summit and general terminology

The dramatic consequences of the financial crisis of 2008 and the significant role of derivatives within the crisis led to several regulatory proposals regarding derivatives.

At the G 20 summit in Pittsburgh in September 2009, the member states agreed to take steps to strengthen the international financial regulatory regime¹¹². The central objective of the summit was the implementation of global standards to ensure a level playing field, to avoid fragmentation of markets, regulatory arbitrage and protectionism. In regard to OTC derivatives, the objective was to have standardized OTC derivatives contracts traded on exchanges or

26

^{2015);} Hilsenrath, Jon. "Paulson, Bernanke Strained for Consensus in Bailout" *Wall St J* (10 November 2008) available at: http://www.wsj.com/articles/SB122628169939012475 (last visited: July 2015).

¹⁰⁹ Sorkin, Andew R. "Lehman Files for Bankruptcy; Merrill Is Sold" *The New York Times*, (14 September 2008) available at: http://www.nytimes.com/2008/09/15/business/15lehman.html?pagewanted=all&_r=2 (last visited: July 2015).

¹¹⁰ S Report, supra note 66 at p. 41; Bernanke, supra note 107; Stout, supra note 59 at p. 26.

¹¹¹ Davidoff, supra note 108 at p. 27; Nocera, Joe, Andrewa, Edmund L. "Struggling to Keep Up as the Crisis Raced On" *The New York Times* (22 October 2008) available at:

http://www.nytimes.com/2008/10/23/business/economy/23paulson.html?pagewanted=all (last visited: July 2015).

¹¹² G20 Research Group, G20 Leaders Statement: The Pittsburgh Summit (2009) available at: http://www.g20.utoronto.ca/2009/2009communique0925.html.report (last visited: July 2015).

electronic trading platforms, to clear these contracts through central counterparties and where clearing was not feasible, to subject the contract to higher capital requirements¹¹³.

Even though the proposed timeline – clearing of derivatives "by end-2012 at the latest"¹¹⁴ – has not been met, the implementation of the new regulations continues to move forward.

I. Clearing

As noted above, a central objective of the proposed regulation was to subject OTC derivatives to centralized clearing. The term clearing can have different meanings, depending on the context. Generally, clearing describes the calculation of trade obligations between counterparties¹¹⁵. Clearing occurs after the trade and before the delivery. It addresses the default of the parties after the trade has occurred¹¹⁶.

The meaning of clearing is extended when the term is used in the context of securities clearing. Clearing of securities means the calculation, reconciliation and confirmation of the mutual obligations¹¹⁷. The purpose of clearing in this context goes beyond the general meaning and includes further tasks. The reason is that the clearing of securities can include a well-capitalized intermediary, known as a central counterparty. A CCP fulfils a broad range of purposes which are reflected in the meaning of clearing, including trade and position management, risk and collateral management and delivery management¹¹⁸.

¹¹³ G20, supra note 107 at No. 13.

¹¹⁴ G20, supra note 107 at No. 13.

¹¹⁵ Huang, Jiabin. *The law and regulation of central counterparties* (Oxford: Hart Publishing, 2010) at p. 15.

¹¹⁶ Yates, Madeleine. *The law of global custody: legal risk management in securities investment and collateral* (West Sussex: Bloomsbury Professional, 2013) at p. 9.

¹¹⁷ Schaper, Torsten in Engelen, Peter-Jan & Lannoo, Karel. *Facing new regulatory frameworks in securities trading in Europe* (Antwerp: Intersentia 2010) at p. 128.

¹¹⁸ Huang, supra note 115 at p. 15.

A more detailed definition of clearing is found in the EMIR. According to the EMIR clearing is "the process of establishing positions, including the calculation of net obligations, and ensuring that financial instruments, cash, or both, are available to secure the exposures arising from those positions"¹¹⁹.

In contrast to the EMIR, the Dodd-Frank Act does not define the term clearing. Nevertheless, from the purpose of CCPs under the Dodd-Frank Act one can derive the scope of clearing. Clearing can be described as the process of substitution of the credit of the CCP for the party's credit, the arrangement of netting of obligations on a multilateral basis and the provision of arrangements that transfer or mutualize credit risk among the parties¹²⁰.

The definitions under the EMIR and the Dodd-Frank Act both state that clearing includes the netting of the counterparty's positions through an intermediary that will secure the exposure of the positions. Under both definitions, clearing provides risk management, in particular the management of credit risk.

II. Central Counterparties

Central counterparties are the intermediaries between the participants in a trade. CCPs become the buyer to the seller and the seller to the buyer¹²¹. A central counterparty, also referred to as clearinghouse, clearing agency or derivatives clearing organisation (DCO), is the counterparty to each participant in the trade and guarantees the performance of the contracts¹²². The legal relationship between the participants is replaced by two new contracts: between the CCP and

¹¹⁹ Article 2 (3) of the EMIR.

¹²⁰ US, CFTC, Derivatives Clearing Organizations, available at:

http://www.cftc.gov/IndustryOversight/ClearingOrganizations/index.htm (last visited: June 2015).

¹²¹ EMIR Regulation (EU) 648/2012, Article 2 (1); Turing, Dermot. *Clearing and settlement in Europe* (West Sussex: Bloomsbury Professional, 2012) at p. 25.

¹²² Pirrong, Craig. "The Clearinghouse Cure" (2008-2009) Regulation 44 at p. 46, available at:

http://www.cato.org/sites/cato.org/files/serials/files/regulation/2008/11/v31n4-1.pdf (last visited: July 2015).

the seller and between the CCP and the buyer¹²³. Clearing of derivatives through a CCP offers a number of benefits, including enabling multilateral netting, increased transparency for regulators and the public due to the available information, and counterparty risk management¹²⁴.

Because a clearinghouse assumes the responsibilities of all its clearing members it is able to net the positions of the different clearing members. The CCP can offset the positions and the clearing members only need to pay the outstanding difference. In this way, central clearing contributes to risk reduction in the financial system¹²⁵.

A CCP does not incur the risk of fluctuations in the derivatives contract but has to bear the risk when a party defaults and this at the same time decreases the risk for the party that did not default¹²⁶.

A central counterparty has several means to minimize the risk that may occur in the post-trade situation. First, a party who wishes to clear the trade through a CCP has to be a member of the CCP. The central counterparty will accept an application only if the applicant has sufficient financial means and stability to ensure a safe business. Furthermore, the CCP will review the member's credit worthiness on a regular basis¹²⁷. The membership qualification requirements and ongoing monitoring help to minimize the risk of the default of a member¹²⁸.

Another risk management tool of a central counterparty is the collateral requirement. The requirement ensures the limitation of the losses of the CCP. Clearing members have to provide collateral in the form of initial and variation margin. A clearing member has to pay a certain amount of money as initial margin, which is not determined by the member's credit worthiness

¹²³ Schaper, Torsten in Engelen & Lannoo, supra note 117 at p. 128.

¹²⁴ Allen, Julia Lees. "Derivatives Clearinghouses and Systemic Risk: A Bankruptcy and Dodd-Frank Analysis" (2012) 64 Stan L Rev 1079 at p. 1086.

¹²⁵ Allen, supra note 124 at p. 1086.

¹²⁶ Barnet, supra note 10 at p. 157; Pirrong, supra note 122 at p. 46.

¹²⁷ Huang, supra note 115 at p. 53.

¹²⁸ McBride, supra note 5 at p. 1097.

but by the type of the product and the size of the position, to an account of the CCP^{129} . The initial margin will cover at least a part of the outstanding obligation¹³⁰ and will only be calculated once¹³¹. If the price of the security rises and the initial margin provided by the member is not sufficient to compensate, the member has to provide further collateral, known as variation margin¹³². The variation margin reflects the unrealized loss or profit of the clearing member¹³³. If the member cannot provide the variation margin, it will be closed out^{134} . That means that a CCP will refuse to clear trades of that member¹³⁵.

In addition to the margin requirement, clearing members have to contribute to the default fund of the CCP. The default fund is used to cover losses that occur after the initial and variation margin accounts of a defaulting clearing member are exhausted¹³⁶. The default fund is a mutual fund of all clearing members and functions as a risk-sharing or insurance agreement between the clearing members¹³⁷. If a member defaults, the CCP will first empty the margin account of the defaulting member. If the amount is not sufficient to cover the default, the CCP will use the default fund contribution of the defaulting member and after, the default fund contribution of the other members to cover the losses. If the payment obligation is still not satisfied, the clearing house will then use its own equity to satisfy the obligation¹³⁸. The CCP may never use the margin account of non-defaulting members to cover the losses of a defaulting member¹³⁹.

¹²⁹ Turing, supra note 121 at p. 82, retical 5.3; McBride, supra note 5 at p. 1098.

¹³⁰ Pirrong, supra note 122 at p. 46.

¹³¹ McBride, supra note 5 at p. 1098.

¹³² Pirrong, supra note 122 at p. 46.

¹³³ McBride, supra note 5 at p. 1098.

¹³⁴ Dale, Richard. "Risk Management in US Derivative Clearing Houses" (1998) 3 YB Int'l Fin & Econ L 13 at

p. 18. ¹³⁵ Bank for International Settlements, Quarterly Review: International banking and financial market developments (2009) at p. 50 available at: http://www.bis.org/publ/qtrpdf/r qt0909.pdf (last visited: July 2015) (cited as: BIS, Quarterly Review).

¹³⁶ McBride, supra note 5 at p. 1098.

¹³⁷ Pirrong, supra note 122 at p. 47.

¹³⁸ Hull, John. "The Changing Landscape for Derivatives" (2014) 2428983 Rotman School of Management Working Paper 1 at p. 4, available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2428983 (last visited: July 2015).

¹³⁹ Fuchs, Philipp, "EMIR – Die neue Martkinfrastruktur für OTC-Derivate" (2012) 8 ÖBA 520 at p. 523.

Theoretically, the margin account of each member is sufficient to cover its default, but the default fund provides additional resources for extreme market situations¹⁴⁰.

Interposing a clearinghouse between the participants of a derivatives contract can help to stabilise the financial system. The parties to a derivative no longer face the credit risk of the other party individually. This risk is shifted to the CCP¹⁴¹. Opponents of central clearing argue that it simply concentrates the credit and default risk in the CCP and can lead to a weakening of the financial system if the clearinghouse is not strong enough to withstand the default of all its clearing members¹⁴². The more members a CCP has, the greater the danger that the default of several members could result in a bankruptcy of the CCP. A failure of a CCP could then affect further clearing members and connected financial institutions.

To prevent its failure, the CCP has to introduce measures to ensure its own stability. Whether the risk management procedures of the Dodd-Frank Act and the EMIR are sufficient to ensure the stability of clearinghouses will be addressed later in the thesis in the analysis of these regimes¹⁴³.

III. Centralized vs. bilateral clearing

Before the financial crisis most derivatives were executed bilaterally, meaning that there was no clearinghouse interposed between the participants. The regulatory proposals will mean that more and more derivatives are subject to a central clearing requirement. Nevertheless, the proposals recognize that some derivatives will continue to be netted bilaterally. To understand the difference between the situation before the financial crisis and the new regulatory

¹⁴⁰ McBride, supra note 5 at p. 1098.

¹⁴¹ McBride, supra note 5 at p. 1099.

¹⁴² Barnet, supra note 10 at p. 157; Johnson, supra note 62 at p. 694.

¹⁴³ See section E.III.

framework after the crisis, it is necessary to understand the difference between bilateral and centralized clearing.

When using bilateral clearing the clearing arrangements take place between the initial buyer and seller¹⁴⁴. No intermediary is interposed between the parties. Collateral and margin requirements are negotiated between the parties. Usually the parties will use a netting agreement such as the ISDA master agreement¹⁴⁵. Nevertheless, the parties do not have to use a standard agreement. Contracts can be negotiated independently according to the customer's needs. Margin and collateral requirements can be below market average¹⁴⁶. The margin typically will be calculated based on the creditworthiness of the counterparty and not based on the product, but the margin may be lower if the counterparties have a close business relationship. For example, as observed earlier, before the financial crisis, AIG was considered to be a creditworthy counterparty and was not required to post collateral initially. Since the requirements are exclusively negotiated between the parties, bilateral clearing is less transparent than central clearing and information on prices and quantities is more difficult to come by. The components of the contracts also are not standardized and will vary from one to another¹⁴⁷.

Nevertheless, bilateral clearing has its advantages. Because the margin requirements are negotiated by contract between the parties, bilateral clearing can theoretically be less costly than centralised clearing. Furthermore, a broader range of products can be cleared between the parties¹⁴⁸. However, a change in bilateral clearing has occurred after the financial crisis. For those derivatives that will still be cleared bilaterally, the Dodd-Frank Act and the EMIR propose

¹⁴⁴ BIS, Quarterly Review, supra note 135 at p. 47 f.

¹⁴⁵ Turing, supra note 121 at p. 9.

¹⁴⁶ BIS, Quarterly Review, supra note 135 at p. 47 f.

¹⁴⁷ BIS, Quarterly Review, supra note 135 at p. 49.

¹⁴⁸ BIS, Quarterly Review, supra note 135 at p. 48 f.

minimum margin and reporting¹⁴⁹. As a result, compared to the situation before the crisis, bilateral clearing is costlier as it was before.

In contrast to bilateral clearing, centralized clearing is more standardized. Because clearing is performed by the CCP, the collateral requirements are uniform for all contracts of the CCP, and the margin movement is enforced by the CCP¹⁵⁰. Moreover, centralized clearing is more transparent since CCPs are required to provide information on quantity and price of the cleared products¹⁵¹

As observed earlier, the clearinghouse is counterparty to all trades and can net the positions of all participants multilaterally. In this way the parties only need to pay the difference in the positions they owe each other. The CCP also enforces the collateral requirements. From the perspective of the participants, the risk management is simplified because there is a standardized requirement for all contracts and, the CCP ensures the execution of the obligations and oversees the margining¹⁵².

As noted earlier, even though centralised clearing provides a number of advantages, there are also disadvantages. A CCP concentrates credit risk and can spread bankruptcy to all its members. It is therefore necessary for the CCP to establish sufficient risk management procedures to ensure the safety of the clearinghouse itself and of its clearing members.

E. The Dodd-Frank Act and the European Markets and Infrastructure Regulation

As a result of the G 20 summit in September 2009, the US adopted the Dodd–Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) on July 21, 2010 as a federal law. Two

¹⁴⁹ See the margin requirements for non-cleared derivatives below section E. IV.

¹⁵⁰ BIS, Quarterly Review, supra note 135 at p. 48.

¹⁵¹ Turing, supra note 121 at p. 80.

¹⁵² BIS, Quarterly Review, supra note 135 at p. 49.

years later, in July 2012, the European Parliament and the European Council adopted the European Market and Infrastructure Regulation (EMIR)¹⁵³. Both regulations dealt with a number of requirements for centralized clearing but have not yet been fully implemented.

Part VII of the Dodd-Frank Act deals with the regulation of OTC derivatives. The authority for the oversight of OTC derivatives has been split between the Commodity Futures Trading Commission (CTFC) and the Securities and Exchange Commission (SEC)¹⁵⁴. While the SEC has oversight over security-based swaps¹⁵⁵, the CFTC has jurisdiction over swaps¹⁵⁶. Even though oversight authority has been split between the two agencies, there is an agreement to set common standards in order to promote financial stability¹⁵⁷. Moreover, the requirements for swaps and security-based swaps are substantively identical¹⁵⁸.

The CFTC and the SEC was given one year after the enactment of the Dodd-Frank Act to formulate standards¹⁵⁹. The agencies met most of the deadlines but had to ask for an extension on some standards.

For the purpose of making concrete the rules set out in the EMIR, the European Securities and Market Authority (ESMA) has adopted "Technical Standards under the Regulation (EU) No. 648/2012 on OTC Derivatives, CCPs and Trade Repositories"¹⁶⁰ which have had to be considered from counterparties since March 2013. While most technical standards have been and will be prepared by ESMA, a few have to be prepared in consultation with the European Banking Authority (EBA) and the European Insurance and Occupational Pension Authority

¹⁵³ Regulation (EU) No. 648/2012.

¹⁵⁴ CCH, supra note 4 at p. 248.

¹⁵⁵ Section 763 (b) of the Dodd-Frank Act, adding Sect 17A (i) -(j) of the CEA.

¹⁵⁶ CCH, supra note 4 at p. 248.

¹⁵⁷ Clearing Agency Standards for Operation and Governance, 17 CFR Part 240 (2011) at p. 10.

¹⁵⁸ The requirements for swap clearing amend the Commodities Exchange Act (CEA) and the requirements for security-based swap clearing amend the Securities Exchange Act of 1934 (Exchange Act).

¹⁵⁹ Section 774 of the Dodd-Frank Act.

¹⁶⁰ Schuster, Gunnar & Ruschkowski, Alexander. "EMIR – Überblick und ausgewählte Aspekte" (2014) 2 ZBB/JBB 123 at p. 124.

(EIOPA)¹⁶¹. Many regulatory technical standards (RTS) have not yet been implemented by the European Commission.

The following part of the thesis will analyse and compare the Dodd-Frank Act and the EMIR.

I. Scope of regulation

1. Clearing Obligation

As explained above, the clearing obligation for derivatives was introduced because of its ability to reduce risk. As also explained above, during centralized clearing the central counterparty becomes party to both sides of the trade (buyer to the seller and seller to the buyer).

The clearing obligation is set out in the Dodd-Frank Act and in the EMIR in the following ways.

a. The Dodd-Frank Act

The clearing obligation for OTC derivatives is set out the Dodd-Frank Act for non-securitybased swaps (swaps)¹⁶² and for security-based swaps¹⁶³. According to the Act, it is unlawful to engage in a swap or a security-based swap unless the swap or security-based swap has been submitted for clearing to a clearing agency¹⁶⁴. The institution that performs clearing has to be registered under the Securities Exchange Act in the case of clearing security-based swaps, and under the Commodity Exchange Act in the case of clearing non-security-based swaps. The clearing obligation applies to swaps and security-based swaps that have been entered into after

¹⁶¹ Köhling, Lambert & Adler, Dominik. "Verordnung über OTC-Derivate, zentrale Gegenparteien und Transaktionsregister" part 1 (2012) WM 2125 at p. 2126.

¹⁶² Section in section 723 of the Dodd-Frank Act.

¹⁶³ Section 763 of the Dodd-Frank Act.

¹⁶⁴ Section 723 of the Dodd-Frank Act; CCH, supra note 4 at p. 276.
the enactment of the Dodd-Frank Act^{165} and requires them to be sent to clearing as soon as technologically practicable after the execution of the contract but no later than the end of the day^{166} .

The clearing requirement applies to swap dealers or security-based swap dealers and major swap participants or major security-based swap participants. A swap or security-based swap dealer is a party that enters in the ordinary course of its business into a swap or security-based swap on its own account and includes every party that makes a market or becomes commonly known as a dealer or market maker. Exempted from the definition is a party that participates as a swap or security-based swap dealer only in a minimal quantity¹⁶⁷.

The de minimis quantity has been defined by the CFTC and the SEC. Swap dealers that engage in swaps with an aggregate gross notional amount of \$3 billion or less and an aggregate gross notional amount of \$25 million with a special entity are exempt from the definition of swap dealer provided these thresholds are not exceeded within a period of 12 month. A special entity includes organisations such as municipalities, other political subdivisions and employee benefit plans¹⁶⁸. The de minimis threshold for security-based swaps is different for CDSs and other security-based swaps. Over a period of 12 months, a dealer can enter into CDSs having a notional amount of up to \$3 billion to benefit from the exemption. For the other security-based swaps, the threshold over 12 months is a notional amount of \$150 million¹⁶⁹.

If the counterparty is not a swap or security-based swap dealer, the clearing requirement is still applicable if the counterparty is a major swap participant or a major security-based swap

¹⁶⁵ By implication section 3C (f) of the Exchange Act, as added by section 763 of the Dodd-Frank Act.

¹⁶⁶ § 50.2 (a) (2) CFR; Section 2(h), supra note 26 at p. 54.

¹⁶⁷ Section 713 (a); 763 (a) of the Dodd-Frank Act; McBride, supra note 5 at p. 1103.

¹⁶⁸ CFTC, Q&A – Final Rulemaking Regarding Further Defining "Swap Dealer", "Major Swap Participant" and "Eligible Contract Participant" at p. 2, available at:

http://www.cftc.gov/ucm/groups/public/@newsroom/documents/file/msp_ecp_qa_final.pdf (last visited: June 2015) (cited as: CFTC, Q&A).

¹⁶⁹ SEC, Fact Sheet: Defining Swaps related Terms, available at:

http://www.sec.gov/News/Article/Detail/Article/1365171492905 (last visited: June 2015).

participant. Such a participant includes a party that holds a substantial quantity of swaps or security-based swaps of major product categories and does not engage in hedging or a party that holds an outstanding exposure on swaps or security-based swaps that could seriously harm financial stability¹⁷⁰. A substantial quantity of swaps exists when the daily average uncollateralized exposure is at least \$1 billion as well as when the daily average and potential future exposure exceeds \$2 billion¹⁷¹. The threshold for a substantial quantity of security-based swaps is identical¹⁷².

Furthermore, the clearing obligation is limited to financial counterparties. The clearing obligation does not apply if the counterparty that is engaged in a swap or security-based swap is a non-financial counterparty¹⁷³. A non-financial counterpart is argumentum e contrario every entity that is not covered by the definition of a financial counterparty. Financial counterparties are swap and security-based swap dealers, major swap and security-based swap participants, commodity pools, private funds, employee benefit plans and persons that are predominantly engaged in the banking or financial business¹⁷⁴. Also exempt from the definition of financial counterparty are businesses that use derivatives for the purpose of hedging underlying commercial risks¹⁷⁵ related to interest rate and foreign exchange exposure¹⁷⁶.

In summary, in order to be subject to the clearing obligation, swap or security-based swap dealers and major swap or security-based participants must be a financial counterparty and must use the derivative for a purpose other than hedging or mitigating risk¹⁷⁷.

¹⁷⁰ Section 721 (a) (16); 771 (a) (16) of the Dodd-Frank Act; McBride, supra note 5 at p. 1103.

¹⁷¹ CFTC, Q&A, supra note 168 at p. 2.

¹⁷² SEC, Fact Sheet, supra note 169.

¹⁷³ Section 723, 763 of the Dodd-Frank Act.

¹⁷⁴ Section 723 (a) (3) of the Dodd-Frank Act; CCH, supra note 4 at p. 277.

¹⁷⁵ Section 723, 763 of the Dodd-Frank Act.

¹⁷⁶ CCH, supra note 4 at p. 277.

¹⁷⁷ McBride, supra note 5 at p. 1104.

The parties to a swap contract are required to verify whether the swap is subject to the clearing requirements. Based on the determination of the classes of derivatives that are subject to the clearing obligation, the participants can analyse if the swap has to be cleared. An important point in verifying whether the clearing obligation applies will be for the participants to provide accurate information on the swap, such as pricing information. The DCOs are allowed to sanction participants that provide false information. Every contract that is entered into after the enactment of the Dodd-Frank Act must also fulfill reporting requirements. The contract must be reported within 90 days or within a period of time determined by the CFTC¹⁷⁸.

While a participant who fulfills the forgoing requirements will be subject to the clearing obligation, there are a few exceptions. Exempt from the clearing requirements are swap and security-based swap contracts entered into before the enactment of the Dodd-Frank Act, if these contracts have been reported according to standard requirements¹⁷⁹. Swap contracts and security-based swap contracts entered into before the Dodd-Frank Act was adopted, must be reported to a swap data repository within 180 days after the Act came into effect.

Another exemption from the clearing obligation is found in section 50.2 of the Final Rule formulated by the CFTC¹⁸⁰. According to that provision, foreign governments, foreign central banks and international financial institutions are not subject to the clearing obligation.

b. The EMIR

Articles 4 and 5 of the EMIR provide that OTC derivatives can no longer be cleared bilaterally but rather have to be cleared through a central counterparty¹⁸¹. Counterparties are subject to this

¹⁷⁸ CCH, supra note 4 at p. 277.

¹⁷⁹ CCH, supra note 4 at p. 277; section 2 (h) (5)-(6) of the CEA, as added by section 723 (a) (3) of the Dodd-Frank Act; section 763 of the Dodd-Frank Act; Section 2(h), supra note 26 at p. 55.

¹⁸⁰ Section 2(h), supra note 26 at 74,315.

¹⁸¹ Schuster, supra note 160 at p. 124.

obligation when the underlying contract fulfils the requirements of article 4 and the derivatives belong to one of the classes of derivatives specified in article 5 (2).

First, the contracts must be concluded between (i) two financial counterparties, (ii) a financial and a non-financial counterparty, (iii) two non-financial counterparties, (iv) a financial or non-financial counterparty and an entity from a third country¹⁸² or (v) two entities from a third country¹⁸³.

In case of situation (ii) – (iv) the clearing requirement exists only when the positions of the contracts exceed a threshold¹⁸⁴. The threshold, calculated on the rolling average positions over 30 working days, varies from EUR 1 billion to EUR 3 billion in the gross notional value of the derivatives contract and is different for each specific classes of derivatives¹⁸⁵. In calculating the threshold, the gross notional value of the derivatives contracts which results from the net balance of positions and exposure, is taken into account¹⁸⁶. On the other hand, not included in the calculations are positions that are concluded as hedging tools in the treasury financial or commercial activity of the non-financial counterparty¹⁸⁷. ESMA is of the opinion that a derivatives contract measurably reduces risk when the accounting treatment is that of a hedging contract pursuant to the International Financial Reporting Standards (IFRS)¹⁸⁸ and the International Accounting Standards (IAS)¹⁸⁹. The reference to accounting rules is to IAS and

¹⁸² A third country is a country that is not member of the European Union.

¹⁸³ Article 4 (1) (a) (i)-(v) of the EMIR.

¹⁸⁴ Article 10 (1) of the EMIR, Art 11 of the EU Regulation No 149/2013.

¹⁸⁵ Article 10 (1) of the EMIR, Art 11 of the EU Regulation No 149/2013:

[&]quot;(a) EUR 1 billion in gross notional value for OTC credit derivative contracts;

⁽b) EUR 1 billion in gross notional value for OTC equity derivative contracts;

⁽c) EUR 3 billion in gross notional value for OTC interest rate derivative contracts;

⁽d) EUR 3 billion in gross notional value for OTC foreign exchange derivative contracts;

⁽e) EUR 3 billion in gross notional value for OTC commodity derivative contracts and other OTC derivative contracts not provided for under points (a) to (d)".

¹⁸⁶ Ferrarini, Guido & Saguato, Paolo. "Reforming Securities and Derivatives Trading in the EU: from EMIR to MIFIR" (2013) 13:02 Journal of Corporate Law Studies 319 at p. 338.

¹⁸⁷ Ferrarini & Saguato, supra note 186 at p. 338; Fuchs, supra note 139 at p. 524.

¹⁸⁸ ESMA, Consultation Paper: Draft Technical Standards for the Regulation on OTC Derivatives, CCPs and Trade Repositories ESMA/2012/379 (2012) at Annex II, Chapter VII, Article 1 (1) (c).

¹⁸⁹ ESMA, Consultation Paper: Draft Technical Standards for the Regulation on OTC Derivatives, CCPs and Trade Repositories ESMA/2012/379 (2012) at No. 57 at p. 14.

IFRS solely but not to local rules since these could differ. Nevertheless, the ESMA expects that derivatives contracts that qualify as hedge under local law would also qualify under IAS and IFRS¹⁹⁰.

The clearing obligation applies to financial counterparties without any exemption. The term financial counterparty includes investment firms, credit institutions, insurance, assurance and reinsurance undertakings, institution for occupational retirement provision and alternative investment funds¹⁹¹. The specified institutions have to be authorized according to EU Directives¹⁹². Pension funds are exempt from the clearing requirement until August 15, 2015¹⁹³.

In contrast to financial counterparties, non-financial counterparties are generally exempt from the clearing obligation as long as the above mentioned threshold is not exceeded. The EMIR defines a non-financial counterparties as an undertaking that is established in the Union and not mentioned in article 2 $(1) - (8)^{194}$. A non-financial counterparty is, according to the definition every additional undertaking.

An entity from a third country has to fulfil the clearing requirements when the entity would be subject to the clearing obligation if they were established in the European Union¹⁹⁵.

Another requirement under the EMIR is the time of conclusion of the contract¹⁹⁶. The contract partners are obliged to clear OTC derivative contracts when the contract is entered into or novated on or after the date when the clearing obligation came into effect¹⁹⁷ or on or after the date when a CCP is authorized to clear OTC derivative and ESMA has been notified of it. This

¹⁹⁰ ESMA, Consultation Paper: Draft Technical Standards for the Regulation on OTC Derivatives, CCPs and Trade Repositories ESMA/2012/379 (2012) at No. 61 at p. 15.

¹⁹¹ Article 2(1) - (8) of the EMIR.

¹⁹² EU Directive 2004/39/EC, Directive 2006/48/EC, Directive 73/239/EEC, Directive 2002/83/EC, Directive 2005/68/EC, Directive 2009/65/EC, Article 6 (a) of Directive 2003/41/EC, Directive 2011/61/EU.

¹⁹³ http://www.esma.europa.eu/page/Non-Financial-Counterparties-0 (last visited: April 2015).

¹⁹⁴ Article 2 (9) of the EMIR.

¹⁹⁵ Article 4 (1) (a) of the EMIR.

¹⁹⁶ Article 4 (1) (b) of the EMIR.

¹⁹⁷ Article 4 (1) (b) (i) of the EMIR.

notification¹⁹⁸ however has to take place before the clearing obligation came into effect and the remaining maturity of the OTC derivatives contract has to exceed the minimum maturity in the technical standards formulated by ESMA¹⁹⁹. The latest draft technical standards from ESMA propose different maturities for the different classes of OTC derivatives. The approach followed by ESMA has the effect that contracts do not need to be restructured later on, if they fulfill the requirements of article 4 and are subject to the clearing obligation. However, as long as the minimum maturity remains undetermined, the practical effect is that all contracts of derivatives classes that have been registered²⁰⁰ pursuant to article 5 (1) will be subject to the clearing obligation since it cannot be foreseen whether the contracts will qualify for the exemption.

The clearing obligation exists only if both requirements are fulfilled. If only one of the parties is subject to the clearing obligation or if the contract was entered into before the clearing obligation came into effect, the parties do not have to clear their OTC derivatives contract²⁰¹.

The EMIR also sets out exemptions from the clearing obligation²⁰². Exempt are members of the European System of Central Banks (ESCB) and member state bodies that fulfil the same tasks, other European Union public bodies charged with or intervening in the management of the public debt and the Bank of International Settlements (BIS).

c. Comparison

The Dodd-Frank Act and the EMIR have a slightly different focus. While the clearing obligation under the EMIR applies to financial and non-financial counterparties, the Dodd-Frank Act has a broader definition of financial counterparties and exempts non-financial

¹⁹⁸ Article 5 (1) of the EMIR.

¹⁹⁹ Article 4 (1) (b) (ii), Article 5 (2) (c) of the EMIR.

²⁰⁰ Fuchs, supra note 139 at p. 525.

²⁰¹ Köhling & Adler, supra note 161 at p. 2129.

²⁰² Article 1 (4) of the EMIR.

counterparties. Both regulations provide a small number of exemptions. The broader definition under the Dodd-Frank Act is partly a result of interim arrangements under the EMIR, such as the exemption of pension funds until August 2015.

A difference between the regimes is the general exemption for non-financial counterparties under the Dodd-Frank Act. This exemption goes hand in hand with the obligation to report executed derivatives contracts. The reporting requirements ensure that the non-financial counterparty identifies the parties to the contract and registers the derivative at a trade depository²⁰³. It is thought that reporting will thus ensure oversight and transparency. In contrast, the exemption from the clearing requirement for non-financial counterparties under the EMIR is based on a threshold. A non-financial counterparty that exceeds the threshold becomes a major participant in the derivatives market and will be subject to the clearing requirement. The thresholds for non-financial counterparties under the EMIR and for dealer and major market participant under the Dodd-Frank Act are similar. For this reason, there is no need for a further exemption of non-financial counterparties under the Dodd-Frank Act.

Both regimes provide an exemption from the clearing requirement if the derivatives contract is used to hedge commercial risk. Hedging is used to mitigate risk. Since risk mitigation ensures a safe use of the derivatives the need for clearing does not exist.

The possible consequences of a failure of a market participant are the reason for the limited number of exemptions. Too many exemptions would open the window to an uncertain regulation of the derivatives market and undermine the objective of the G 20 summit decision to regulate the OTC derivatives market. On the other hand, an overly strict regime would restrain innovation, preclude customized risk management and promote regulatory arbitrage towards less regulated institutions and markets²⁰⁴. It is therefore essential for the regulator to

²⁰³ Section 2(h), supra note 26 at p. 56.

²⁰⁴ Le Vine, Barry. "The Derivative Market's Black Sheep: Regulation of Non-Cleared Security- Based Swaps Under Dodd-Frank" (2011) 31 Nw J Int'l L & Bus 699 at p. 719.

find the right balance between the mitigation of systemic risk and the preservation of the viability of an innovative market. Both regimes found that a threshold for market participation was essential to distinguish between major and minor players in order to apply the clearing obligation only to those participants that exceed the threshold.

The EMIR clearing obligation captures a broader number of market participants. However, until the technical standards are fully implemented, it cannot be legally enforced. Until then, the clearing of OTC derivatives is on voluntary basis. In light of the consequences of the 2008 financial crisis, the urgency of implementing the standards is obvious.

2. Authorization of CCPs

The Dodd-Frank Act and the EMIR set out standards which a CCP has to fulfil in order to be authorized or registered as a clearinghouse for derivatives that are subject to the clearing requirement under these regimes.

a. The Dodd-Frank Act

The Dodd-Frank Act requires clearing agencies to register with the CFTC or the SEC or both, depending on the kind of derivative the agency wants to clear. Registration is required if the operations of a participant or dealer involve swaps and security-based swaps²⁰⁵. A DCO might be exempt from registration with the CFTC if the DCO is sufficiently supervised by the SEC and vice versa²⁰⁶.

²⁰⁵ Section 15F (a)-(c) of the Exchange Act, as added by section 764(a) of the Dodd-Frank Act.

²⁰⁶ Section 725 (b) of the Dodd-Frank Act; CCH, supra note 4 at p. 281.

Clearing agencies that wish to clear security-based swaps have to fulfil the registration requirements of the Exchange Act²⁰⁷. To qualify under these rules, the CCP must be able to facilitate and organize a prompt and accurate clearing of the transactions of its members. The Commission is empowered to review the rules of the clearing agencies to ensure the fair treatment of its clearing members, and the reasonableness of fees and charges²⁰⁸. The DCO must also provide access to its books and records²⁰⁹.

A CCP that wishes to clear non-exempt non-security based swaps has to register with the CFTC in accordance with CFTC Regulation²¹⁰. The DCO that clears swaps must provide all data to the CFTC that are deemed to be necessary to ensure an accurate application of the regulation²¹¹. Accordingly, the DCO has to submit pricing data and data about the type of transaction and its size without disclosing information that could identify the participants²¹².

Moreover, in order to be registered and maintain their registration the DCOs have to comply with certain core principles under the Dodd-Frank Act. These principles include the provision of financial resources, risk management procedures and ongoing membership assessment²¹³.

The Dodd-Frank Act not only requires that the DCO be authorized but also that major swap or security-based swap participants and swap or security-based swap dealers be registered, within one year of the of the enactment of the Dodd-Frank Act, major swap and major security-based swap participants as well as swap dealers and security-based swap dealers have to register with the SEC or the CFTC in order to be authorized to clear OTC derivatives.

²⁰⁷ Section 17A and 17Ab2-1 of the Exchange Act.

²⁰⁸ Section 17A of the Exchange Act.

²⁰⁹ Section 725 (e) of the Dodd-Frank Act.

²¹⁰ Regulation 39.3 (17 CFR 39.3).

²¹¹ Section 2 (a) (13) of the CEA; Section 5b (k) (5) of the CEA, as added by section. 725 (E) of the Dodd-Frank Act.

²¹² Section 2 (a) (13) of the CEA.

²¹³ Section 725 of the Dodd-Frank Act.

b. The EMIR

An entity that wishes to provide clearing services for derivatives has to apply for authorization²¹⁴. The application has to be send to the competent authority. The competent authority is the authority specified by the member states²¹⁵.

The authorization encompasses specific clearing activities and classes of financial instruments. If the CCP wishes to clear more than one category of derivatives, an existing authorization can be extended by submitting a request to the competent authority. In order to be granted an authorization the CCP has to fulfill capital requirements, as referred to below²¹⁶.

The authorization is granted by the competent authority in collaboration with the college of supervisors established pursuant to the EMIR²¹⁷. The distribution of authority between the competent authority and the college is intended to ensure an independent assessment and decision making process. According to article 18 of the EMIR the members of the college are to be ESMA, the CCP's competent authority and the competent authorities responsible for the supervision of actions closely linked to the CCPs actions²¹⁸. The college's task is to ensure coordination and supervision of the CCP and to prepare opinions and exchange information²¹⁹.

After receiving a complete application, the competent authority must conduct a risk assessment of the CCP within four months²²⁰. As part of the risk assessment process, the competent authority must analyse whether the CCP fulfills the applicable capital requirements and has sufficient stress tests and risk management procedures in places to ensure the safety of the CCP and the clearing members. A report about the risk assessment must be sent to the college. After

²¹⁴ Article 14 (1) of the EMIR

²¹⁵ Article 2 (13), 10 (5), 22 of the EMIR.

²¹⁶ See section E.III.

²¹⁷ Article 17, 18 of the EMIR.

²¹⁸ Precise list in article 18 (2) of the EMIR.

²¹⁹ Article 18 (2), (4) of the EMIR.

²²⁰ Article 19 (1) of the EMIR.

a period of 30 days, the college must render a joint or majority opinion determining whether the applicant fulfills the requirements to conduct clearing services as a CCP²²¹. If the opinion is positive, the competent authority will authorize a CCP.

Even after authorization has been granted, the competent authority may withdraw the authorization if the CCP does not comply with the regulation, has made false statements, has infringed the requirements or has not made use of the authorization within twelve months²²².

In order to ensure compliance with the requirements set out in the regulation, the CCP is subject to ongoing on-site inspections²²³ and supervision²²⁴. A report about the review and evaluation of the CCP must be presented at least annually. The review must include an assessment of the resilience of the CCP²²⁵.

c. Comparison

Both regimes require clearinghouses to register for every class of derivatives they wish to clear. The mandatory clearing requirement can be extended and CCPs can clear derivatives that are not subject to the clearing obligation on a voluntary basis.

The clearing obligation under the Dodd-Frank Act and the EMIR can theoretically help to stabilize the financial system. The CCP that is interposed between the original participants of a derivatives contract can promote the stability of the financial system because of the shifting of the counterparty risk to the CCP. In this way, the risk that the failure of one participant will spread to connected participants is reduced because the CCP will be a financially stronger

²²¹ Article 19 of the EMIR.

²²² Article 20 of the EMIR.

²²³ Article 21 of the EMIR.

²²⁴ Article 22 of the EMIR.

²²⁵ Article 21 of the EMIR.

counterparty²²⁶. For example, one could argue that a bailout of AIG would not have been necessary if the company had cleared its derivatives contracts through a clearinghouse. AIG's counterparties did not initially collect collateral from AIG. If a CCP had been interposed between AIG and its contract partner, the CCP would have collected collateral from AIG. In the event of default, the clearinghouse would have used the collateral to settle the derivatives contracts²²⁷. The argument that the interposition of a CCP would have averted the need for the AIG bailout is however theoretical since the CDSs that were issued by AIG were not sufficiently standardised to be subject to the clearing requirement²²⁸.

Critics have further argued that due to the limited number of CCPs that will clear derivatives a systemically important institution will be created. That means a few big clearinghouses will clear a large volume of derivatives for many market participants. The counterparty risk of all its clearing members will be concentrated in the CCP. Even before the enactment of the Dodd-Frank Act, more derivatives already were being cleared at clearinghouses. Specialists predict that a large majority of derivatives will be cleared through CCPs within the coming years²²⁹. Currently, the majority of derivatives is cleared through four clearing houses owned by CME Group and Intercontinental Exchange of the US, LCH.Clearnet, controlled by the London Stock Exchange Group, and Deutsche Börse²³⁰.

One way to reduce the systemic risk created by the concentration of clearing in a few large CCPs would be to split them into a number of smaller CCPs and to ensure interoperability between the CCPs²³¹. Where the parties to a trade chose different CCPs to clear their contracts,

²²⁶ McBride, supra note 5 at p. 1106.

²²⁷ Roe, supra note 96 at p. 11.

²²⁸ Duffie, Darrell. "The Failure Mechanics of Dealer Banks" (2010) 24:1 Journal of Economic Perspectives 51 at p. 67.

²²⁹ Skeel, David A. *The new financial deal: understanding the Dodd-Frank Act and its (unintended) consequences* (New Jersey: John Wiley & Sons, Inc., 2011) at p. 70.

²³⁰ Stafford, Philip. "Centralised risk raises systemic worries over derivatives" *The Financial Times* (28 April 2015) available at: http://www.ft.com/intl/cms/s/0/51ffc6a2-e443-11e4-9e89-00144feab7de.html (last visited: June 2015).

²³¹ McBride, supra note 5 at p. 1108.

a contract between the two CCPs will automatically arise on the same terms the parties agreed on. In this way the CCPs interoperate with one another in managing the risk²³². While the EMIR has established rules regarding interoperability, this approach has been rejected by the CFTC and the US Congress because it is costlier and not supported by the industry²³³.

Another way to reduce systemic risk and stabilize CCPs is to implement strict risk management procedures for CCPs. Risk management procedures under the Dodd-Frank Act and the EMIR will be addressed below in part E.III.

3. Third country CCPs

a. The Dodd-Frank Act

Section 738 of the Dodd-Frank Act requires the Commission to establish registration requirements and exemptions for non-US CCPs. The Act provides that a non-US CCP can be exempted from registration under US law if it is subject to comprehensive and comparable regulation in its home country²³⁴.

However, neither the CFTC nor the SEC have yet proposed standards on the registration requirements and exemption for third country clearinghouses.

It remains to be seen whether the agencies will propose standards for third country CCPs or whether they will require them to comply with all the requirements of the Dodd-Frank Act.

²³² LCH.Clearnet. CCP Interoperability, available at: http://www.lchclearnet.com/asset-classes/listed-derivatives/london-stock-exchange-derivvaties-markets/ccp-interoperability (last visited: August 2015).

²³³ McBride, supra note at p. 1108, footnote 267.

²³⁴ ISDA, Regulation of OTC derivatives markets: A comparison of EU and US initiatives (2012) at p. 23 available at:

http://www2.isda.org/search?headerSearch=1&keyword=Regulation+of+OTC+derivatives+markets+A+compari com+of+EU+and+US+initiatives (last visited: June 2015).

b. The EMIR

The European Markets and Infrastructure Regulation establishes rules for third country CCPs that wish to clear derivatives contracts through clearing members established in the European Union. As of April 2015, the European Securities and Market Authority (ESMA) had recognized ten third country CCPs established in Australia, Hong Kong, Japan and Singapore²³⁵.

The process of recognition of third country CCPs will take place between the ESMA and the competent authority of the home country of the CCP. Effective supervision and enforcement of the national law as well as the existence of an equivalent system of anti-money laundering and terrorist finance acts are requirements of the recognition. The process of recognition of a third country CCP is similar to the process of authorization of a CCP established in a member state. The recognition process will be conducted by ESMA directly²³⁶. Article 25 of the EMIR provides for the establishment of a similar regulatory system for the protection of clearing members that are established inside the European Union.

c. Comparison

Both the Dodd-Frank Act and the EMIR provide for the possibility of recognizing third country CCPs in order to allow cross-border clearing. While the European Regulation bases third country CCP recognition on agreements between the respective countries, the Dodd-Frank Act requires compliance with the US law unless exemptions are provided. Agreements with third countries are not contemplated. This approach might require non-US CCPs to comply with higher standards than they are subject to under their national regulation and might keep CCPs

²³⁵ ESMA, ESMA recognises third-country CCPs (29 April 2015) available at:

http://www.esma.europa.eu/de/node/78298?t=326&o=home.

²³⁶ Article 25 of the EMIR.

from entering the US market. Bilateral agreements between states or exemptions from national requirements to enable third country CCPs to enter a foreign market could help to open the market internationally.

Up to now, the EU has not recognized US clearinghouses as equivalent to European CCPs, nor has the US recognized European CCPs as comparable to US CCPs. It remains to be seen whether, and subject to what agreements or exemptions, the US and the EU will recognise each other's clearinghouses. Since both markets are major players in the global economy, it is foreseeable that a recognition will take place in the near future.

II. Classes of Derivatives

Although the Dodd-Frank Act and the EMIR set out clearing requirements for derivatives, the drafting of the technical standards and the analysis of the classes of derivatives that are to be subject to the clearing requirement has been delegated to agencies. Under the Dodd-Frank Act, the SEC and the CFTC are responsible for formulating the technical standards. Under the EMIR, the standards will be formulated by the ESMA.

There are two different approaches available to identify the different classes of derivatives: the bottom-up and the top- down approach.

1. Bottom-up Approach

The bottom-up approach refers to the identification of the relevant classes of derivatives on the basis of the classes which are already cleared through a CCP²³⁷. The competent Commission or agency analyse the classes of derivatives that are cleared by authorized or recognized CCPs and

 $^{^{237}}$ Article 5 (2) of the EMIR.

decides whether these classes should be subject to mandatory clearing²³⁸ taking into account the available pricing information for the OTC derivatives contract, the liquidity and volume of the contract as well as the degree of standardization of the contract and the operation process²³⁹. The overall goal is to ensure that those derivatives that are likely to increase systemic risk are subject to mandatory clearing.

A CCP that wishes to clear a class of derivatives is permitted to submit a proposal to do so²⁴⁰. The proposal has to be authorized by the competent authority or agency²⁴¹. The competent authority is the national authority that authorized the CCP to clear derivatives. Under the Dodd-Frank Act, the CFTC and the SEC are the competent authorities; under the EMIR, the competent authorities are the national authorities in the member states.

The bottom-up approach will be triggered every time a CCP is authorized to clear a specific class of derivatives²⁴².

2. Top-down Approach

The second approach used to identify the classes of derivatives to be subject to the clearing obligation is the top-down approach. Under this approach, the ESMA, the CFTC and the SEC must identify the relevant classes of derivatives on their own initiative. The top-down approach will be used to identify classes of derivatives that are not yet cleared by a CCP but where it is

²³⁸ ESMA, OTC derivatives and clearing obligation, available at: http://www.esma.europa.eu/page/OTC-derivatives-and-clearing-obligation (last visited: July 2015).

 $^{^{239}}$ Article 5 (4) (a) – (c) of the EMIR.

²⁴⁰ IOSCO, Technical Committee of the International Organization of the Securities Commissions, Requirements for Mandatory Clearing OR05/12 (2012) at p. 5.

²⁴¹ Article 5 (1) of the EMIR.

²⁴² ESMA, Final Report: Draft technical standards on the Clearing Obligation – Interest Rate OTC Derivatives ESMA/2014/1184 (2014) at p. 7 (cited as: ESMA, Final Report).

thought that a clearing obligation would be desirable²⁴³ because of the market share or the risks associated with the relevant class.

When a class of derivatives is found to be suitable for clearing but is currently not cleared by CCPs, the competent authority is entitled to investigate the reasons why not²⁴⁴. The criteria taken into account in deciding if clearing is desirable are the same as in the bottom-up approach. Since the top-down approach allows for the identification of classes of derivatives that are not already cleared, it can contribute to an extension of the clearing obligation especially in the light of a change in the market environment²⁴⁵.

3. The Dodd-Frank Act

As explained earlier, under the Dodd-Frank Act the clearing requirements apply to swaps and security-based swaps. The Act defines swaps and security-based swaps very broadly to include most swap transactions and options. The broad definitions ensure that the clearing requirement applies to the different types of derivatives that are known today as well as types of derivatives that may arise in future²⁴⁶. The clearing requirement applies to all categories of swaps and security-based swaps that the CFTC and SEC determine to be required to be cleared²⁴⁷. Derivatives that are not subject to the clearing obligation will instead be subject to higher margin requirements to ensure the safety of the market.

At this point, the CFTC has proposed clearing for a broad range of interest rate swaps (IRS) and credit default swaps (CDS). Proposals for other classes of derivatives have not yet been published by the CFTC or the SEC. The CFTC focused on the classification process for credit

²⁴³ Article 5 (3) of the EMIR; IOSCO, supra note 240 at p. 5.

²⁴⁴ Recital 18, Preamble of the EMIR.

²⁴⁵ EMSA, Final Report, supra note 232 at p. 10.

²⁴⁶ McBride, supra note 5 at p. 1102.

²⁴⁷ McBride, supra note 5 at p. 1103.

default swaps first, since they were seen as a major cause of the financial crisis²⁴⁸. CDS have an important share of the derivatives market and as it was seen in the financial crisis, a huge influence on the market²⁴⁹.

The Commissions can investigate when a swap is not subject to clearing. However, the Commissions may not require a DCO to list a swap or a group of swaps for clearing as this would threaten the DCO's financial integrity²⁵⁰.

The CFTC had to consider whether swaps that have a clearable and a non-clearable part should be subject to the clearing requirement and concluded that they should be exempt from clearing when the swap serves legitimate business purposes²⁵¹.

a. Credit default swaps

The CFTC decided that two classes of CDS should be subject to mandatory clearing. In reaching that conclusion, the Commission analysed the data provided by the Bank of International Settlement (BIS) on the volume of outstanding OTC derivatives. As of December 2011, the outstanding notional amount of CDS was \$28 trillion²⁵². The huge notional amount of outstanding CDS and the role played by CDS during the financial crisis motivated the Commission to subject two classes of CDS to the clearing requirement. One class comprises "untranched indices covering North American corporate credits, the CDX.NA.IG and the CDX.NA.HY"²⁵³. The second class is based on "the untranched indices covering European

²⁴⁸ Section 2(h), supra note 26 at p. 5.

²⁴⁹ Section 2(h), supra note 26 at p. 5.

²⁵⁰ CCH, supra note 4 at p. 277.

²⁵¹ Barnet, supra note 10 at p. 167; Section 2(h), supra note 26 at 74,316.

²⁵² BIS, Market Activity, supra note 49 at table 19.

²⁵³ Section 2(h), supra note 26 at p. 9.

corporate credits, the iTraxx Europe, the iTraxx Europe Crossover, and the iTraxx Europe High Volatility"²⁵⁴.

The two classes of CDS made subject to the clearing requirement include only these CDS with a longer tenor - meaning the amount of time left until maturity- of three to ten years. Not subject to the clearing obligation are CDS with tenors of one and two years. During the public consultation period, it was suggested that CDS with a short tenor should be covered on the basis that market participants might begin to use CDS with shorter tenors more often to escape the clearing obligation²⁵⁵. In light of this risk, the CFTC will monitor the market and reserves the right to subject CDS with a short tenor to clearing if their use increases²⁵⁶.

b. Interest Rate swaps

The CFTC analysed IRS and found that they have the largest market volume in terms of the outstanding notional amount. When the Commission made this determination in December 2011, IRS had \$500 trillion in notional amount²⁵⁷. IRS are suitable for clearing because the ISDA standardized definition for IRS is often used. The use of a standardized definition throughout the clearinghouses facilitates a faster execution of the contracts since common terms are used. IRS have been divided into four classes: fixed-to-floating swaps, basis swaps, overnight index swaps (IOS) and forward rate agreement swaps (FRA). The four classes represent a substantial portion of the swap market and are therefore subject to the clearing requirement²⁵⁸. Within the classes, the Commission developed the following criteria for determining when the clearing obligation applies: (1) the currency in which the notional and

²⁵⁴ Section 2(h), supra note 26 at p. 9.

 $^{^{255}}$ Section 2(h), supra note 26 at p. 10.

 $^{^{256}}$ Section 2(h), supra note 26 at p. 10.

²⁵⁷ Section 2(h), supra note 26 at p. 18; BIS, Market Activity, supra note 49 at Table 19.

²⁵⁸ Section 2(h), supra note 26 at p. 19.

payment amounts of the swap are denominated, (2) the rates for the swap and (3) the termination date²⁵⁹.

The currencies in which the swap is denominated can increase credit risk if the payment or calculation is in a different currency than the currency related to the underlying purpose of the swap²⁶⁰. IRS denominated in US Dollars, Euros, Sterling and Yen will be subject to the clearing obligation²⁶¹. The rates for the swap also are an important factor to decide whether a swap needs to be subject to the clearing requirement because the rates used for each leg of the swap are necessary to define the swap²⁶². The CFTC determined that IRS using LIBOR and EURIBOR will be subject to the clearing requirement. In the case of overnight index swaps the floating rate will be determined according to FedFunds, EONIA, SONIA²⁶³. Finally, the termination date was also considered to be an important factor in deciding if a swap needs to be subject to the clearing and basis swaps the termination date ranges from 28 days to 50 years. The termination date for overnight index swaps range from three days to three years and finally the termination date for overnight index swaps ranges from seven days to two years.

4. The EMIR

The EMIR applies to all OTC derivatives as defined in the regulation²⁶⁵. The concrete scope of the clearing obligation, nevertheless, does not arise from the EMIR itself. Rather, according to

²⁵⁹ Section 2(h), supra note 26 at p. 20.

²⁶⁰ Section 2(h), supra note 26 at p. 21.

²⁶¹ Section 2(h), supra note 26 at p. 54.

 $^{^{262}}$ Section 2(h), supra note 26 at p. 21.

²⁶³ Section 2(h), supra note 26 at p. 54.

²⁶⁴ Section 2(h), supra note 26 at p. 21.

²⁶⁵ Article 2 (5), (7) of the EMIR.

article 5 (2) the ESMA has the obligation to provide technical standards regarding the classes of derivatives that will be subject to the clearing obligation.

As part of the process of developing technical standards, ESMA grouped derivatives into four different categories: Interest Rate, Equity, Credit, and Foreign Exchange²⁶⁶. ESMA began the consultation process regarding these classes of derivatives in the first half of 2014. The feedback received has led to a different timeline regarding the production of draft technical standards. The process for interest rate derivatives is the most advanced one of the four different derivatives classes. ESMA has sent a draft RTS regarding interest rate derivatives which have recently been endorsed by the European Commission²⁶⁷. Regarding equity derivatives, credit derivatives and foreign exchange derivative, ESMA has published consultation papers and continues the consultation process²⁶⁸.

All proposals and outcomes of the public consultation process are based on the bottom-up approach described earlier in the thesis. The top-down approach has not yet been used to identify classes of derivatives that should be subject to the clearing requirement.

a. Interest Rate Derivatives

In determining what classes of interest rate OTC derivatives should be subject to the clearing requirement, the ESMA took the structure of interest rate derivatives into account, especially the type of notional amount. Whether the notional amount is constant, variable or conditional affects whether and to what extent the notional amount changes during the tenor of the derivative. A constant notional amount does not vary over the lifetime of the contract, whereas a variable notional amount varies in a predictable way and a conditional notional amount varies

²⁶⁶ ESMA, OTC derivatives and clearing obligation, available at: http://www.esma.europa.eu/page/OTC-derivatives-and-clearing-obligation (last visited: July 2015).

²⁶⁷ http://www.esma.europa.eu/page/OTC-derivatives-and-clearing-obligation (last visited: April 2015).

²⁶⁸ http://www.esma.europa.eu/page/OTC-derivatives-and-clearing-obligation (last visited: April 2015).

in an unpredictable way²⁶⁹. Another consideration relevant to the clearing requirement is the maturity of the contract or its tenor. Contracts with short maturities are not subject to the clearing requirements, as noted earlier, since the clearing requirement can be a burden for the counterparties. The risk management procedures shall not be disproportionate to the maturity of the contract²⁷⁰.

ESMA has proposed that four sub-categories of interest rate derivatives should be subject to clearing: basis swaps, fixed-to-float interest rate swaps, forward rate agreements and overnight index swaps. For all these sub-categories, only those derivatives with a variable or constant notional amount will be subject to clearing²⁷¹. In addition, the clearing requirement is limited to derivatives that have single currency settlement denominated in EUR, GBP, USD and for basis swaps and fixed-to-float swaps also in JPY²⁷². The maturity can be up to 50 years for basis swaps, and fixed-to-float swaps and up to 3 years for forward rate agreements and overnight index swaps.

On August 6, 2015 the European Commission endorsed the RTS provided by ESMA. The clearing obligation will be phased in over a period of three years to allow especially smaller market participants to begin to comply with the new clearing obligation²⁷³.

b. Equity

ESMA has published a final report following the public consultation on equity derivatives but technical standards have not yet been drafted. Following the authorization process for CCPs to

 ²⁶⁹ ESMA, Revised Opinion: Draft RTS on the Clearing Obligation on Interest Rate Swaps 2015/ESMA/511 (2015) at p. 16 (cited as: ESMA Revised Opinion).

²⁷⁰ ESMA Revised Opinion, supra note 261 at p. 19.

²⁷¹ ESMA Revised Opinion, supra note 261 at Annex 1, Table 1-4.

²⁷² ESMA Revised Opinion, supra note 262 at Annex 1, Table 1-4.

²⁷³ ESMA, Financial stability: new Commission rules on central clearing for interest rate derivatives (6 August 2015) available at: http://europa.eu/rapid/press-release_IP-15-5459_en.htm?locale=en (last visited: August 2015).

clear some classes of equity derivatives, ESMA decided not to submit RTS within a period of 6 months after the authorization even tough 6 months is according to article 5 (2) of the EMIR the time period in which ESMA must submit RTS. An exception from this deadline is possible if ESMA finds some of the proposed classes are not suitable for clearing²⁷⁴. During the open public consultation, ESMA suggested it would be necessary to carry out further analysis regarding the classes of equity that should be subject to the clearing requirement. The respondents supported this delay²⁷⁵.

It follows that at this time, there are no classes of equity derivatives proposed for clearing by ESMA even though two CCPs applied for authorization to clear equity derivatives. The CCPs that are authorized to clear equity derivatives clear lookalike contracts and flexible options. Even though the contracts cleared by the authorized CCPs are standardised and the price information is easily accessible, ESMA will primarily focus on other groups of equity in determining the classes that should be subject to the clearing requirement because the market for lookalike contracts and flexible options is relatively small compared to the rest of the equity market²⁷⁶.

The last update regarding the clearing obligation for equity derivatives was publish in October 2014.

c. Credit derivatives

During the consultation process, ESMA focused on a number of criteria to determine which kinds of credit derivatives should be subject to the clearing requirements. The criteria include the product type and sub-type and the geographical zone, tenor and series number. ESMA has

²⁷⁴ Preamble, Recital 15 of the EMIR; ESMA, Final Report, supra note 242 at p. 34.

²⁷⁵ ESMA, Final Report, supra note 242 at p. 33.

²⁷⁶ ESMA, Consultation Paper: Clearing Obligation under EMIR (no. 1) ESMA/2014/799 (2014) at p. 73.

identified two classes of credit derivatives suitable for clearing: untranched index CDS and single name CDS²⁷⁷.

ESMA has suggested that the clearing requirement should apply to European untranched index CDS for series 11 onwards and a maturity of 5 years²⁷⁸. This decision was based on the finding that untranched index CDS have a larger volume per contract then single name CDS have. Contracts with a maturity of 5 years were made subject to the clearing requirement since they were found to be the most active ones²⁷⁹. The reason to require only those contracts to be cleared that belong to series 11 and onwards was based on an analysis of credit derivatives that showed that even though older series usually become less active, they have a large volume and their inclusion therefore reflected the appropriate balance between volume and outstanding risk²⁸⁰.

Technical standards for credit derivatives have not yet been drafted. However, in its latest update in November 2014, ESMA stated that draft RTS will be delivered to the European Commission. Its analysis of credit derivatives, as published in its consultation paper, is relatively limited compared to the interest rate derivatives. It remains to be seen whether the draft RTS will include a more detailed analysis.

d. Foreign Exchange

According to the Bank of International Settlements, foreign exchange derivatives represent the second largest group of derivatives with an outstanding notional amount of \$75 trillion²⁸¹ as of December 2014.

²⁷⁷ ESMA, Consultation Paper: Clearing Obligation under EMIR (no.2) ESMA/2014/800 (2014) at p. 11.

²⁷⁸ ESMA, Consultation Paper: Clearing Obligation under EMIR (no.2) ESMA/2014/800 (2014) at p. 44.

²⁷⁹ ESMA, Consultation Paper: Clearing Obligation under EMIR (no.2) ESMA/2014/800 (2014) at p. 24.

 ²⁸⁰ ESMA, Consultation Paper: Clearing Obligation under EMIR (no.2) ESMA/2014/800 (2014) at p. 24.
²⁸¹ ESMA, Consultation Paper: Clearing Obligation under EMIR (no.3) ESMA/2014/1185 (2014) at p. 22; BIS,

ESMA has suggested that non-deliverable forwards should be subject to the clearing requirement. This proposal is based on the submission of the CCPs that currently clear foreign exchange derivatives. The non-deliverable forward classes that will be subject to the clearing obligation are those that have a cash settlement denomination in USD and a maturity of 3D-2Y. Including contracts with the shortest maturity is justified because these contracts have a higher concentration of liquidity. Contracts with a concentration of liquidity bear a higher credit and counterparty default risk than those with less liquidity. Although there is less evidence of a concentration of liquidity in contracts with a longer maturity, they carry more risk by their very nature than those with a short-term maturity. In order to mitigate systemic risk, ESMA therefore found it necessary to also include contracts with a longer maturity in the clearing requirement²⁸².

ESMA will engage in further public consultation on the classes of non-deliverable forwards to be subject to clearing before it drafts regulatory technical standards for submission to the Commission²⁸³.

5. Comparison

A striking difference between the Dodd-Frank Act and the EMIR is the terminology used to identify the classes of derivatives that should be subject to the clearing obligation. While the EMIR uses the term derivatives, the Dodd-Frank Act speaks of swaps and security-based swaps. Given that swaps are generally seen as a subcategory of derivatives, one might conclude that the EMIR has a broader scope than the Dodd-Frank Act. However, a closer look at the regulatory standards and consultation papers issued by ESMA, the SEC and the CFTC shows

 ²⁸² ESMA, Consultation Paper: Clearing Obligation under EMIR (no.3) ESMA/2014/1185 (2014) at p. 35.
²⁸³ ESMA, Feedback Statement: Consultation on the Clearing Obligation for Non-Deliverable Forwards 2015/ESMA/234 (2015) at p. 13.

that the agencies in fact focus on the same classes of derivatives: Interest Rate Swaps, Foreign Exchange, Credits Default Swaps and Equity. The broad definition of swaps and security-based swaps under the Dodd-Frank Act captures most derivatives that are available on the market and might be used in future. In this way, both regimes apply to the same categories of derivatives.

Nevertheless, both regulations missed the opportunity to define the term derivative. A definition would give more certainty to the market about the range of financial products that are subject to these regimes. The missed opportunity to define derivatives and the broad definition of swaps and security-based swaps has interesting consequences under the Dodd-Frank Act. Because there are two agencies responsible for oversight and derivatives are regulated under the CEA and the Exchange Act, the separation of derivatives could result in inconsistent regulation. For example, even though the definition of swaps allocates credit default swaps to the oversight of the CFTC, at the same time one form of CDS, namely single name CDS, are regulated by the SEC. Instead of making all CDS subject to the oversight of one agency they are split between two²⁸⁴. More generally, the allocation of oversight to two different agencies, the CFTC and the SEC, also creates the potential for inconsistent regulation across the entire field of derivatives. Indeed, prior to the drafting of the Dodd-Frank Act a merger of the CFTC and the SEC was supported by the Federal Treasury to ensure uniform oversight and regulation²⁸⁵. Recognizing that a benefit of a single regulator for derivatives is the preparation of consistent rules, the European regulation established the new agency ESMA to oversee the securities market.

Another difference between the two regimes is that the technical standards under the Dodd-Frank Act are much more advanced than the ones under the EMIR. Although the Dodd-Frank Act was implemented two years before the EMIR, the technical standards were published within two years of its adoption. In contrast, under the EMIR, even three years after its implementation,

²⁸⁴ Scalcione, supra note 4 at p. 357.

²⁸⁵ Scalcione, supra note 4 at p. 354 in footnote 32.

only the RTS to IRS have recently been endorsed by the European Commission. On the other hand, ESMA plans to draft RTS for IRS, CDS, Equity and Foreign Exchange, whereas the CFTC has only published RTS for IRS and CDS and no attempt to provide RTS for Equity and Foreign Exchange has yet been made by the SEC or the CFTC.

A reason for the different pace of implementation of RTS can be found in the different timeframes and procedures for implementation. While the Dodd-Frank Act provides 30 days for consultation and a 90 days determination period²⁸⁶, the EMIR provides a 6 month determination period²⁸⁷. In addition, the CFTC and the SEC have the authority to implement final rules for the clearing requirements, whereas the RTS drafted by ESMA need to be endorsed by the European Commission.

Expressly defining the classes of derivatives that are to be subject to clearing requirements carries with it the risk that parties will change the nature of their contracts so as to avoid being subject to clearing requirement²⁸⁸. This potential problem has been addressed by the CFTC. Section 50.10 of the Final Rule²⁸⁹ prohibits any evasion or abuse of the clearing exemptions and subjects any person that knowingly or recklessly engages in evasion or abuse of the clearing requirements to a monetary penalty²⁹⁰. However, there is no concrete guidance provided for the determination when the actions of the parties to a swap are not evasive or abusive except their belief that the transaction has a legitimate business purpose²⁹¹. In order to ensure greater certainty in the market and ensure the prevention of abuse and evasion the publication of more concrete guidelines would be preferable.

²⁸⁶ Section 723, 763 of the Dodd-Frank Act.

²⁸⁷ Article 5 (2) of the EMIR.

²⁸⁸ Barnet, supra note 10 at p. 164.

²⁸⁹ Section 2(h), supra note 26 Parts 39 and 50.

²⁹⁰ Section 2(h), supra note 26 Parts 39 and 50 at recital 157.

²⁹¹ Barnet, supra note 10 at p. 168.

The handling of swaps that have both a clearable and a non-clearable part also creates potential for circumvention. Instead of requiring the disentanglement of the swap so that the clearable part can be cleared or requiring the full swap to be cleared as long as one part of it requires clearance, the CFTC chose to exempt these swaps from the clearing requirement²⁹². This approach could lead participants to structure contracts in a way that they have a non-clearable part in order to circumvent the clearing obligation.

Admittedly, the problem of circumvention of the clearing obligation could be dismissed as solely theoretical since more and more derivatives have been cleared through CCPs even before the Dodd-Frank Act was implemented²⁹³. One could argue that this reflects the reluctance of market participants to engage in abusive behaviour after the dramatic consequences of the last financial crisis. Nevertheless, one cannot predict whether derivatives, at least those that are currently cleared voluntarily, will continue to be cleared at clearinghouses.

However, the circumvention problem is also less consequential under the new regimes. While derivatives that are not subject to the central clearing requirement will be cleared bilaterally, the new regimes make bilateral clearing subject to margin requirements. Thus a circumvention of the clearing requirement does not release participants from having to post collateral.

III. Risk management procedures

One of the central functions of a CCP is to offset the default risk of its clearing members and to shield the economy from the bankruptcy of individual market participants²⁹⁴. The capital requirements and the recovery plans of CCPs are the essential tools for management of these

²⁹² Barnet, supra note 10 at p. 167.

²⁹³ Skeel, supra note 229 at p. 70.

²⁹⁴ Fuchs, supra note 139 at p. 522.

risk²⁹⁵. Accordingly, the new regulatory bodies under the Dodd-Frank Act and the EMIR set standards for capital requirements for central counterparties and clearing members.

1. The Dodd-Frank

The Dodd-Frank Act contemplates margin and collateral requirements for DCOs, swap and security-based swap dealers and major swap and major security-based swap participants. Higher capital requirements are contemplated for security-based as opposed to non-security-based clearing agencies. The reason for this distinction is that security-based clearing agencies face additional risks, such as less available data about pricing as well as risks associated with jump-to-default swaps²⁹⁶.

The SEC and CFTC adopted margin and capital requirements²⁹⁷.

The SEC rule²⁹⁸ sets out the capital requirements for members of the CCP. Membership access to CCPs must be granted when the clearing member has a net capital equal or greater than \$50 million²⁹⁹. In contrast to the SEC rule, the CFTC rule³⁰⁰ does not set out a minimum amount of capital for the clearing member. Rather, the DCOs must establish standards to ensure that clearing members and participants have sufficient financial resources and operational capacity to be able to meet their obligations with the DCO. This approach leaves it to the DCO to formulate the concrete requirements itself.

²⁹⁵ Thomas Book, "Comment: Risk incentives critical in clearing recovery plans" *The Financial Times* (17 February 2015) available at: http://www.ft.com/intl/cms/s/0/45089278-b043-11e4-92b6-00144feab7de.html (last visited: June 2015).

²⁹⁶ Clearing Agency Standards for Operation and Governance, 17 CFR Part 240 (2011) at p. 25.

²⁹⁷ Section 764(a) of the Dodd-Frank Act; The SEC has adopted Rule 17Ad-22(b) and the CFTC has adopted 7 U.S. Code § 7a–1.

²⁹⁸ Rule 17Åd-22(b) (7).

²⁹⁹ Clearing Agency Standards for Operation and Governance, 17 CFR Part 240 (2011) at p. 18.

³⁰⁰ 7 U.S. Code § 7a–1 (C).

In addition to capital requirements for clearing members, the Dodd-Frank Act requires DCOs to collect margin. The SEC rule requires CCPs to use risk-based models and parameters to develop a system for determining sufficient margin amounts³⁰¹. The margin requirements must be used to limit credit exposure. No minimum amounts of margin are prescribed. The amount depends completely on the CCP's models and parameters and the size of the transactions. The CCP is required to review the margin requirements at least on a monthly basis since market situations can change rapidly and an ongoing review will ensure that they do not become outdated³⁰².

According to the CFTC rule the margin requirements must be sufficient to cover market exposure under normal market conditions and have to be calculated once each business day³⁰³. The DCO will be required to introduce risk management procedures and parameters that will need to be risk-based and reviewed on a regular basis. The DCO will calculate initial and variation margin. The amount of the initial margin has to be sufficient to protect the CCP against a 5-day movement in the value of the given swap or security-based swap portfolio. The initial margin must have a 99% confidence level³⁰⁴. The variation margin will be collected on a daily basis. The purpose of the variation margin is to capture mark-to-market changes in the value of the positions³⁰⁵.

An exemption from capital requirements is set out for end-users. The so called "End-User Exemption" is not explicitly defined in the Dodd-Frank Act. Rather, the regulator is not authorizes under the Dodd-Frank Act to impose margin on end users when they use swaps for the purpose of hedging³⁰⁶. The reason for the exemption is that a clearing obligation for end

³⁰¹ Rule 17A-22(b) (2).

³⁰² Clearing Agency Standards for Operation and Governance, 17 CFR Part 240 (2011) at p. 23.

³⁰³ Rule 7 U.S. Code § 7a–1 (D).

³⁰⁴ Section 2(h), supra note 26 at p. 11.

³⁰⁵ Section 2(h), supra note 26 at p. 11.

³⁰⁶ CCH, supra note 4 at p. 288.

users would increase costs and create rather than reduce risk³⁰⁷ given that hedging is an important tool for companies in diverse areas to manage costs and market volatility³⁰⁸.

Standards regarding guarantee funds have not found their way in the final rules proposed by the SEC and the CFTC. During the consultation process the SEC posed the question whether the requirements for a default/guarantee fund should be provided in the final rule³⁰⁹. In the end, the drafting of the guarantee fund requirements has been left entirely to the CCPs; no guidelines have been provided.

The SEC and the CFTC have instead provided rules dealing with general default procedures. Under the SEC rule clearing agencies are required to provide publicly available rules to enable timely action to be taken to contain losses and to ensure that liquidity is available to enable the CCP to continue to meet its obligations³¹⁰.

Regarding default procedures, the CFTC rule requires a DCO to hold the funds and assets of its clearing members in a way that will ensure their protection and minimize losses or delays in the event of default³¹¹. Moreover, default procedures established by DCOs have to be clear and publically available, and must be designed to contain losses in a timely manner, respond to liquidity concerns, as well as enable the DCO to meet all its obligations.

The Dodd-Frank Act also dictates that margin and default fund accounts be segregated from one another. The cash or securities that have been given by members as margin or default fund contributions must not be commingled with the funds of the broker and dealer and may not be

³⁰⁷ CCH, supra note 4 at p. 289.

³⁰⁸ Letter from Sen. Christopher Dodd and Sen. Blanche Lincoln to the Chairs of the House Finance Services and Agricultural Committees (30 June 2010).

³⁰⁹ Clearing Agency Standards for Operation and Governance, 17 CFR Part 240 (2011) at p. 27.

³¹⁰ Rule 17Ad-22 (d) (11).

³¹¹ Rule 7 U.S. Code § 7a–1 (F), (G).

used as margin or guarantee for any person or customer other than the one contributing the margin³¹².

In addition to the capital and margin requirements imposed on clearing members the SEC rule requires the CCP to provide sufficient financial resources of its own³¹³. The section does not establish a specific amount of capital but sets parameters on how to determine the amount. For a non-security-based clearing agency, the financial resources must minimally be sufficient to enable the agency to withstand the failure of the participant to which it has the largest exposure. For a security-based clearing agency the financial resources must be sufficient to enable the agency to withstand the failure of the two main participants to which it has the largest exposure.

According to the CFTC rule a DCO is required to have sufficient financial resources to enable the CCP to meet its financial obligations to its members and participants and to enable the CCP to cover operational costs for 1 year³¹⁴. The operational costs are calculated based on orders and have to be recalculated on an ongoing basis.

Critics have argued that CCPs should contribute more of their own capital into the default funds to ensure a stronger position in the event of the default of members. Under this approach, a part of the burden to pay for losses caused by defaulting members would be taken from non-defaulting members. It has been argued that the Commissions should therefore establish concrete rules for CCPs to contribute to the default fund of the CCP³¹⁵.

The rules require risk management procedures to be validated by a qualified and independent person on an annual basis³¹⁶. The person must have experience in risk management in general as well as in margin model validation, and must be familiar with a clearing agencies' procedures

³¹² Sect. 3E (b) (2) Securities Exchange Act, as added by Sect. 763 Dodd-Frank Act; Sect. 724 Dodd-Frank Act. ³¹³ Rule 17Ad-22(b) (3).

³¹⁴ Rule 7 U.S. Code § 7a–1 (B).

³¹⁵ Stafford, Philip. "US should consider tougher clearing rules" *The Financial Times* (04 December 2014) available at: http://www.ft.com/intl/cms/s/0/5243a9ec-7b95-11e4-b6ab-00144feabdc0.html (last visited: June 2015).

³¹⁶ Rule 17Ad-22(b) (4).

and operations³¹⁷. To ensure an objective validation of the margin requirements, the person must be involved in the clearing agencies' day to day margin operations. The Commission is of the opinion that an independent person will have a fresh angle when validating the models and is therefore more likely to find vulnerabilities³¹⁸.

2. The EMIR

The European Market and Infrastructure Regulation provides a multilevel fail-safe system, the so called line of defence³¹⁹. The line of defence offers a set of defence mechanisms to protect the CCP and its members against credit risk, counterparty risk and legal risk. To ensure the stability of the CCP, the EMIR established basic capital requirements which have been concretized by ESMA.

According to article 16 (1) of the EMIR a CCP must have an initial capital of at least EUR 7.5 million. The capital must be adequate to ensure an orderly winding-down or restructuring of the activities of the central counterparty and protect it against risk, namely counterparty, credit, operational, market, legal and business risks³²⁰ and also enable the CCP to carry on its daily business³²¹. The capital requirements are based on existing requirements for credit institutions and investment firms since CCPs are exposed to similar risks³²². Credit institutions under

³¹⁷ Clearing Agency Standards for Operation and Governance, 17 CFR Part 240 (2011) at p. 29.

³¹⁸ Clearing Agency Standards for Operation and Governance, 17 CFR Part 240 (2011) at p. 29.

³¹⁹ Fuchs, supra note 139 at p. 522.

 $^{^{320}}$ Article 16 (2) of the EMIR.

³²¹ Preamble 2 of the EC, Commission delegated Regulation (EU) No 152/2013 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 capital requirements for central counterparties, [2013] OJ, L 52/37 (cited as: EU Regulation No 152/2013).

³²² Preamble (2) of the EU Regulation No 152/2013.

European law are undertakings engaging in the business of taking deposits or other kinds of repayable funds from the public and using those funds to extend credit on its own account³²³.

In addition to the initial capital, members must contribute specific financial resources to cover potential losses³²⁴. Margin is one of these specific financial resources. The EMIR does not set out a specific amount of margin money but instead established a framework for how CCPs should calculate it. The framework imposes high margin requirements on CCPs. According to article 41 (1) a CCP must demand sufficient margin to cover at least 99% of potential losses resulting from exposure movements over an appropriate period of time. The CCP must require a full collateralization from its members on an at least daily basis. The calculation of the margin depends on the concrete derivatives contracts to be cleared in the CCP.

In addition to margin a CCP has to provide a default fund for its clearing members.³²⁵ The purpose of the default funds is to cover losses that exceed the losses covered by the margin. In this way the default fund provides an additional guaranty. The default fund must be sufficient to enable the CCP to withstand an extreme but plausible market situation³²⁶. In order to respond to the different risks of different classes of derivatives, the CCP must provide default funds for every class of derivatives it clears³²⁷ and establish a minimum amount under which the default fund may not fall³²⁸. If this minimum amount is reached the CCP may ask its non-defaulting members to provide additional funds³²⁹.

ESMA has set out standards which a CCP has to keep in mind in determining what constitutes an "extreme but plausible market situation". An extreme but plausible market situation has to

³²³ Article 4 (1) EC, Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 [2013] OJ, L 176/1.

³²⁴ Article 41 to 44 of the EMIR.

³²⁵ Article 42 of the EMIR.

 $^{^{326}}$ Article 42 (3) of the EMIR.

 $^{^{327}}$ Article 42 (4) of the EMIR.

 $^{^{328}}$ Article 42 (1) of the EMIR.

 $^{^{329}}$ Article 43 (3) of the EMIR.

identify all market risks that a CCP may potentially face including possible movements in market prices and reduced market liquidity for financial instruments based on historical market experience³³⁰.

The collateral requirements are intended to ensure the safety of the clearing members by taking the burden of the default risk from the individual clearing members. However, the default risk is now concentrated at the clearinghouse. As noted earlier, critics argue that systemic risk is not reduced by the new regulation but rather increased since the aggregate default risk of clearing members is now concentrated on one large player, the CCP. If the CCP cannot withstand the default, its failure will affect other clearing members with whom it deals and spread across the economy.

In recognition of this risk, the legislator therefore requires that a CCP accepts "highly liquid collateral" only³³¹. Draft RTS about the requirements for highly liquid collateral have not yet been published. Besides accepting cash collateral, the CCP may, if appropriate, also accept the underlying asset of a derivatives contract as collateral to cover the margin requirements³³². The acceptance of non-cash collateral is a special treatment provided for non-financial counterparties.

The legislator was aware of the possibility that in an extreme market situation the initial margin and the default fund might not be sufficient to compensate for a default. Therefore, article 43 requires members to provide further pre-funded financial resources. These are financial resources existing in addition to the capital requirement of EUR 7.5 million in article 16. The further financial resources must be sufficient to enable the CCP to withstand the default of at

³³⁰ Article 29, 30 of the EC, 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, [2013] OJ, L 52/41.

³³¹ Article 46 (1) of the EMIR.

 $^{^{332}}$ Article 46 (2) of the EMIR.

least two clearing members³³³. In the event of the default of another clearing member, the CCP may require additional funds from the non-defaulting clearing members³³⁴.

While posting the margins, collateral and other financial resources the CCP has to use so-called the default waterfall³³⁵. This means that to cover losses the CCP has to use the margin contribution of the defaulting member first, followed by the collateral contribution of the defaulting member, if necessary³³⁶. After having exhausted the default fund of the defaulting member, the CCP can use the default fund of the other clearing members and its own financial resources³³⁷. Under no circumstances can the CCP use the margin of non-defaulting clearing members to cover the losses of defaulting members.

To ensure the correct use of margin and collateral, the CCP has to separate the accounts and records of the different clearing members and of the CCP itself³³⁸. In addition, the CCP must separate the accounts and assets of the clearing member from those of the clearing member's clients. This separation is called "omnibus client segregation". The accounts of the clients can also be separated from each other, the so called "individual client segregation". The segregation of accounts and records is not only a requirement for the CCP but also for each clearing member. The clearing member itself need to keep separate accounts and must offer its clients at least the choice between omnibus and individual client segregation and inform the client about the cost and the level of protection each form of segregation offers³³⁹.

Moreover, the EMIR requires sufficient risk management procedures from a CCP which will be validated by the competent authority according to Art 19 EMIR³⁴⁰. The models and

 $^{^{333}}$ Article 43 (2) of the EMIR.

 $^{^{334}}$ Article 43 (3) of the EMIR.

³³⁵ Article 44 of the EMIR.

³³⁶ Article 44 (1), (2) of the EMIR.

³³⁷ Article 44 (3), (4), article 43 (1) of the EMIR.

³³⁸ Article 39 of the EMIR.

³³⁹ Article 39 (5) of the EMIR

 $^{^{340}}$ Article 41 (2) of the EMIR.
parameters used to establish these risk management procedures must take into account (i) the specific characteristics of the classes of derivatives that are to be cleared, (ii) the interval in which margin is collected, (iii) market liquidity and (iv) possible changes that can occur over the duration of the transaction³⁴¹.

3. Comparison

The risk management procedures of the Dodd-Frank Act as concretized by the SEC and the CFTC differ from each other in the degree of detail. While the rules implemented by the SEC set more detailed standards regarding membership requirements, the CFTC rules give the DCOs more detailed standards regarding margin requirements. The aim of both sets of rules is similar, only the degree of detail is different. In order to achieve consistent results it would have been preferable for both agencies to provide rules with the same degree of detail. The more concrete the standards are, the easier it will be for the CCPs and clearing members to implement them. As previously noted, it would also have been helpful to have given the authority to implement standards to one agency only to ensure consistent standards.

A striking difference between the Dodd-Frank Act and the EMIR is the capital requirements for clearing members. While the Dodd-Frank Act and more precisely the rules provided by the SEC require a minimum capital contribution for membership, the EMIR does not do so. The drafting of the membership requirements is left to the CCPs. On this point the requirements under the Dodd-Frank Act are higher than under the EMIR. Minimum capital requirements would ensure that CCPs could only accept financially strong clearing members.

In contrast to the Dodd-Frank Act the EMIR sets out higher capital requirements for the CCP itself. While the Dodd-Frank Act requires financial resources sufficient to withstand the default

 $^{^{341}}$ Article 41 (2) of the EMIR.

of one member (swaps) or two (security-based swaps), the EMIR requires financial resources sufficient to withstand the default of two participants and also requires the CCP to provide own capital of at least EUR 7.5 million. These higher capital requirements better ensure the stability of a CCP.

Another interesting difference between the two regimes is the way they deal with the default/guarantee fund. The concrete requirements are left to the CCPs to formulate. However, under the EMIR, the default fund is a mandatory requirement for CCPs and the ESMA provided guidelines for the default fund calculations, while the Dodd-Frank Act and the SEC and CFTC leave the default fund completely to the consideration of the clearinghouses.

Critics have pointed out that the risk management procedures under the new regulations are not strict enough. A CCP can fail because of two different situations: (i) insufficient margin or default fund procedures and (ii) the default of multiple members. A CCP needs to calculate sufficient margin and default fund contributions to be able to withstand the default of a clearing member. The margin requirements under the Dodd-Frank Act for non-security-based DCOs and the EMIR are similar. Both require an initial margin with a 99% confidence level. The margin requirements are high and sufficient to withstand the default of a clearing member under normal market conditions. However, the CCP has to be able to withstand the failure of clearing members in extreme market conditions. For those conditions, the CCP need to have own capital and needs to hold sufficient default fund contributions³⁴². It is necessary to prevent the insolvency of a clearinghouse. The insolvency of a clearinghouse could result in a run on the CCP, similar to the run on banks during the financial crisis.

Under the EMIR CCPs are allowed to collect further default fund contributions from nondefaulting members. However, it is questionable if a non-defaulting member will actually and

³⁴² Allen, supra note 124 at p. 1093.

within a short period of time be able to provide the additional funds. This is especially debatable when two major clearing members' have defaulted and smaller members have to provide additional money for the default fund. It is predictable that this additional contribution will be spent to cover the losses and the money will thus be lost for the non-defaulting members. It seems more likely that clearing members will try to protect their money, and in the worst case scenario terminate their membership in a CCP that is in financial distress. As was seen in the financial crisis of 2008, the imminent bankruptcy of a financial institution or bank can quickly result in a run on its assets. In the event of the financial distress of a clearinghouse, clearing members could attempt a run on it. Clearinghouses internal rules typically permit members to exit the clearinghouse and withdraw their contributions even in the event of its insolvency³⁴³. It is therefore necessary to implement standards to avoid a run on CCPs and to ensure compliance with rules permitting CCPs to collect further collateral from non-defaulting clearing members.

The latter problem has been recognizes by the BIS and IOSCO which proposed that procedures should be provided to help a CCP to recover in the event of volatile financial circumstances. These procedures should include the right to raise further financial resources from the clearing members, as contemplated by the EMIR. Not unexpectedly, the proposal has led to a debate between clearing members and clearinghouses. While clearing members argue that the CCPs should provide more capital of their own, the so called skin-in-the-game, the CCPs argue that the EMIR and the Dodd-Frank Act have already forced them to increase their capital compared to the situation before the crisis³⁴⁴. The debate is also connected to the use of the capital and the default waterfall. In the event of the default of a clearing member the CCP will use the default

³⁴³ Allen, supra note 124 at p. 1094; LCH.Clearnet. Rulebook - Clearing Member, non-Member Market Participant and Dealer Status (2014) Chapter 1 at p. 13, available at:

http://www.lchclearnet.com/documents/731485/762514/Procedures+section+1+-+23+06+15.pdf/86aadf00-aa45-4a4d-8f19-1b757697ed99 (last visited: June 2015).

³⁴⁴ Stafford, Philip. "Clearing house recovery plan urged" *The Financial Times* (15 August 2014) available at: http://www.ft.com/intl/cms/s/0/0037ad8e-547f-11e4-b2ea-00144feab7de.html (last visited: June 2015).

fund contribution of the defaulting member. In case this contribution is not sufficient to cover the losses, the CCP would then use its own contribution to the default find. Thus, if the CCP had skin-in-the-game this would ensure that the non-defaulting members would not pay or would pay to a smaller extent for the default of the defaulting member.

In conclusion, the rules provided under the Dodd-Frank Act and the EMIR could benefit by borrowing from each other. Under the EMIR minimum capital requirements for the membership in a CCP could be established to ensure the financial strength of the clearing member. In this way the formulation would not be left to the CCP and would be consistent for all CCPs within the scope of the EMIR. Moreover, it is necessary for the ESMA and the European Commission to finally implement all RTS regarding risk management procedures to ensure compliance with the standards. Under the Dodd-Frank Act on the other hand, more precise rules for margin requirements for security-based DCOs and rules for the guarantee fund of CCPs could be established to improve the risk management procedures and to ensure the stability of the financial system. While the EMIR provides guidelines for the drafting of rules for the default fund, the SEC and the CFTC do not. It is also important for the CCP to provide its own capital to ensure the operability of the CCP especially in the event of financial distress. The obligation for a CCP to provide minimum capital, as required under the EMIR, can help to ensure the stability of a CCP.

IV. Margin requirements for non-centrally cleared derivatives

Centralized clearing is only applicable to derivatives that are sufficiently standardized. The classes of derivatives that are not standardized will continue to be executed bilaterally. Due to the size of their market share they are considered to pose the risk of systemic contagion and spillover effects. To avoid these risk it has been considered necessary to impose margin

requirements on non-centrally cleared derivatives. Moreover, by imposing margin requirements on non-centrally cleared derivatives the G 20 emphasis on central clearing will be promoted, since bilateral clearing will not be easier or cheaper³⁴⁵.

To ensure global consistency, the competent authorities have followed the recommendation of the Bank of International Settlements (BIS) and the International Organization of Securities Commissions (IOSCO) on margin requirements.

1. The Dodd-Frank Act

The SEC and the CFTC have proposed standards for margin requirements for non-centrally cleared swaps and non-cleared security-based swaps.

The Securities Exchange Act requires initial and variation margin for non-centrally cleared security-based swaps to ensure the safety of the security-based swap dealer and major security-based swaps participant³⁴⁶.

The SEC has jurisdiction over non-bank security-based swap dealers and non-bank major security-based swap participants with the exception of banks which are subject to their prudential regulators³⁴⁷. The SEC proposed rules for the margin requirements for non-centrally cleared security-based swaps³⁴⁸. Rule 18a-1 proposes a minimum net capital for security-based swap dealers of \$ 20 million or a minimum net capital amount of 8% of the risk margin³⁴⁹.

Under the proposed Rule 18a-3 security-based swap dealers are required to calculate margin requirements on a daily basis. The daily calculation is necessary to define the amount of the

³⁴⁵ Bank of International Settlements, Margin requirements for non-centrally-cleared derivatives (2015) at p. 6 available at: http://www.bis.org/bcbs/publ/d317.pdf (last visited: June 2015) (cited as: BIS, Margin).

³⁴⁶ Section 15F of the Exchange Act as amended by section 764 of the Dodd-Frank Act.

³⁴⁷ CCH, supra note 4 at p. 311.

³⁴⁸ Rule 18a-1 and Rule 18a-3 of the Exchange Act.

³⁴⁹ Capital, Margin, and Segregation Requirements for Security-Based Swap Dealers and Major Security-Based Swap Participants and Capital Requirements for Broker-Dealers, 17 CFR Part 240 (2012) at p. 29.

currents exposure as well as future exposure. The security-based swap dealer is required to collect the amount that has been determined as sufficient margin from the participants. The margin can be collected in cash, securities and money market instruments³⁵⁰. The margin calculation must include initial and variation margin.

In contrast to security-based swap dealers, major security-based swap participants do not have to calculate margin for future exposure because they are not required to collect margin to cover this exposure. Major security-based swap participants are only required to calculate the current exposure they held with their counterparties on a daily basis³⁵¹.

The CFTC proposed margin requirements in 2011 and amended the requirements in a 2014 Proposal³⁵². The margin requirements under the 2014 Proposal are to come into effect by December 2015. Under the 2014 Proposal an initial margin does not need to be collected or posted if the transactions between the counterparties are below a threshold of \$ 65 million. Regarding the calculation of initial margin the CFTC proposes two alternatives. The initial margin can be calculated using standardized schedules based on a certain percentage of the notional amount of the swap. The second way of calculating the initial margin is to use an internal model provided by the counterparty which has to be approved by the CFTC. The margin model should be based on a 99% confidence level for a 10 day period³⁵³.

In contrast to initial margin, variation margin has to be posted for every notional amount. There is no minimum threshold permitted. The variation margin must be calculated on a daily basis³⁵⁴.

³⁵² Young, Mark D. & Donley, Maureen A. & Mastrogiacomo, Elisabeth A. "Prudential Regulators and CFTC Re-Propose Margin Requirements for Non-Cleared Swaps" (2014) 1 at p. 1, available at:

http://www.skadden.com/newsletters/Prudential_Regulators_and_CFTC_Re-

Propose_Margin_Requirements_for_Non-Cleared_Swaps.pdf (last visited: June 2015).

³⁵⁰ Rule 18a-3 of the Exchange Act; SEC, Fact Sheet: Proposing Rules Governing Capital, Margin, and Segregation Requirements for Security-Based Swap Dealers and Major Security-Based Swap Participants (2014), available at: https://www.sec.gov/News/Article/Detail/Article/1365171586085 (last visited: June 2015).

³⁵¹ Rule 18a-3 of the Exchange Act; SEC, Fact Sheet, supra note 350.

³⁵³ Young & Donley & Mastrogiacomo, supra note 352 at p. 4.

³⁵⁴ Young & Donley & Mastrogiacomo, supra note 352 at p. 4.

2. The EMIR

The drafting of RTS regarding the risk management procedures for non-centrally cleared derivatives has been delegated to the European Banking Authority (EBA). EBA has conducted a consultation process with the European Securities and Market Authority (ESMA) and the European Insurance and Occupational Pensions Authority (EIOPA) as well as a public consultation process³⁵⁵.

The risk management procedures drafted by the authorities are meant to ensure a mitigation of counterparty risk in bilaterally cleared contracts as well as to reduce systemic risk³⁵⁶. As noted earlier, the margin requirements are based on the standards published by the BIS and IOSCO to ensure global consistency³⁵⁷.

The proposed RTS establish a threshold to post and collect initial margin. The counterparties to a derivatives transaction can agree that no margin need be posted as long as the threshold of EUR 50 million is not exceeded. Furthermore, the parties may agree that no collateral need be exchanged if the value of the transaction does not exceed the minimum transfer amount of EUR 500.000^{358} .

When the transactions exceed the threshold, initial margin has to be exchanged. The calculation of the initial margin needs to be based on historical data going back at least three years. The initial margin needs to be consistent with a 99 % confidence interval over a period of 10 days.

³⁵⁵ EBA, Consultation Paper Draft regulatory technical standards on risk-mitigation techniques for OTC-

derivative contracts not cleared by a CCP under Article 11(15) of Regulation (EU) No 648/2012 (2015) at p. 3, available at:

https://www.eba.europa.eu/documents/10180/655149/JC+CP+2014+03+(CP+on+risk+mitigation+for+OTC+der derivati).pdf (last visited: June 2015).

³⁵⁶ EBA, supra note 355 at p. 3.

³⁵⁷ EBA, supra note 355 at p. 6.

³⁵⁸ EBA, supra note 355 at p. 23.

The margin calculation procedure must be revised every 6 months to ensure ongoing accordance with current market conditions³⁵⁹.

In order to safeguard the margin, the collateral taker is not permitted to re-use, re-hypothecate or re-pledge the collected margin and must ensure that no third party acquires legal title to it.

3. Comparison

The proposals on margin requirements under the Dodd-Frank Act and under the EMIR are similar to each other because they are based on the recommendation of the BIS and IOSCO. The thresholds for the initial margin vary slightly: \$ 65 million versus EUR 50 million. The current variation of EUR 7 million could be a result of currency fluctuations³⁶⁰. The RTS set high margin requirements which can help to prevent a circumvention of the central clearing requirement and also ensure the financial safety of market participants in the event of the default of a counterparty.

RTS under both regimes are not yet implemented. At this stage, margin for non-centrally cleared derivatives is collected on a voluntary basis only. The slow implementation process is partly a result of the late publication of international standards by the BIS and IOSCO. While the SEC and the CFTC published standards for margin requirements in 2012, they have since changed their proposed standards to accord with the international one. ESMA and EBA on the other hand had not drafted any guidelines before the international standards were published and still have not yet implemented the international standards. This delay is problematic since the groups of derivatives that were mainly responsible for the financial crisis are of a type that

³⁵⁹ EBA, supra note 355 at p. 29f.

³⁶⁰ As of the exchange rate from the 16th June 2015 \$ 65 million equals about EUR 57 million.

would still be subject to bilateral clearing. It is troubling that these derivatives are not even now, 7 years after the crisis, subject to mandatory margin requirements.

The BIS and IOSCO published margin requirements for non-centrally cleared derivatives to promote global consistency. The proposal warns of the potential ineffectiveness of margin standards if they are not similar on a global level. The potential risks of internationally inconsistent standards are regulatory arbitrage and an unlevel playing field. Regulatory arbitrage enables the circumvention of regulations by subjecting oneself to a regulatory regime with less strict standards. By locating itself in a jurisdiction that has lower margin requirements, a financial institutions could gain a competitive advantage over a financial institutions that is subject to higher margin requirements under its home law³⁶¹.

Critics have argued that margin requirements for non-cleared swaps pose systemic risk. While there is a risk associated with too little collateralization but also risks associated with high margin requirements. Indeed, mandatory collateralization is seen by some critics as equivalent to governmental price control. The higher the price of the transaction, the higher the amount of the margin required. In order to avoid higher margin, parties to swaps might restructure their contracts. A deviation from the usual structure can have a negative effect on a variety of financial products and can lead to an overtrading of mispriced derivatives. Both possible effects could pose liquidity risk and systemic risk since they increase cash flow volatilities³⁶².

On the other hand, critics argued that zero margin has negative effects as well. Zero margin might contribute to greater risk taking and moral hazard. In the event of the failure of participants a bailout with taxpayers' money might be unavoidable³⁶³.

³⁶¹ BIS, Margin, supra note 345 at p. 3-4.

³⁶² Le Vine, supra note 204 at p. 726.

³⁶³ Le Vine, supra note 204 at p. 726.

While both alternatives have negative side effects, Le Vine suggests that zero margin is the economically better solution³⁶⁴. However, zero margin for non-centrally cleared derivatives would leave in place the pre-crisis regulatory framework that ultimately requires huge taxpayer-funded bailout. Margin requirements, provided they are reasonable, will contribute to preventing another crisis and avoiding taxpayer bailouts. It thus seems to be the better solution to have minimum margin instead of no margin at all. In the short term it may affect market behavior, but in the longer term it will contribute to a safer financial environment. To ensure that margin requirements for non-centrally cleared derivatives are mandatory and are not circumvented, regulators should be encouraged to promptly implement the internationally agreed upon uniform standards.

V. Reporting requirements

The Dodd-Frank Act and the EMIR established reporting requirements for the participants of derivatives contracts. The reporting requirements are intended to ensure transparency in the market.

1. The Dodd-Frank Act

The CFTC and the SEC have proposed rules for swap and security-based swap data reporting. In 2014 the CFTC and the SEC reviewed their proposals and started a new consultation period to resolve challenges in the reporting process and to take into account standardization and consistency³⁶⁵.

³⁶⁴ Le Vine, supra note 204 at p. 728.

³⁶⁵ Review of Swap Data Recordkeeping and Reporting Requirements 79:58, 17 CFR (2014) Chapter I. at p. 1.

Both sets of the newly proposed rules require the submission of information regarding swaps and security-based swaps contracts to swap data repositories (SDR) and security-based swap data repositories (SBSR)³⁶⁶. Information has to be submitted for both cleared and non-centrally cleared contracts. The reporting requirements apply to swaps and security-based swaps that came into existence at or after the time of enactment of the Dodd-Frank Act.

Under the SEC rule, platforms that execute security-based swaps have to submit information to the SBSR³⁶⁷. Moreover, DCOs are required to submit information to the data repositories. Under the rule proposed by the CFTC, the DCO has to fulfill public reporting requirements for the clearing of swaps. The DCO has to submit the information to the CFTC, which then will make the information publically available.

The information required to be reported includes transaction, volume and price data, notional amount, termination date and all changes in the data³⁶⁸. Moreover, a DCO has to report whether it accepted or refused a swap or security-based swap for clearing³⁶⁹.

Real time reporting is required for transactions that are subject to mandatory clearing requirements, swap transactions that are cleared on a voluntary basis and certain exempt swap transactions³⁷⁰. The real time reporting requirement also applies to security-based swaps³⁷¹. Real time reporting means the disclosure of information as soon as technological practicable

³⁶⁶ The SEC proposed Rule 901 of Regulation SBSR (Regulation SBSR Reporting and Dissemination of Security-Based Swap Information, 17 CFR Part 242 (2015)) and the CFTC proposed part 45 of the swap data reporting and SDR rules (Review of Swap Data Recordkeeping and Reporting Requirements 79:58, 17 CFR (2014) Chapter I).

³⁶⁷ Rule 901 of Regulation SBSR.

³⁶⁸ ISDA. Regulation of OTC derivatives markets - A comparison of EU and US initiatives (2012) at p. 15, available at:

http://www2.isda.org/search?headerSearch=1&keyword=Regulation+of+OTC+derivatives+markets+A+compari com+of+EU+and+US+initiatives (last visited: June 2015).

³⁶⁹ Rule 901 Regulation SBSR Reporting and Dissemination of Security-Based Swap Information, 17 CFR Part 242 (2015).

 $^{^{370}}$ Subsection 13 (h) (1) of the CEA.

 $^{^{371}}$ Section 13m (1) C of the Exchange Act.

after the execution of the transaction³⁷². Records have to be kept by the SDR and SBSR for at least 5 years³⁷³.

For transactions that are not subject to the clearing obligation the CFTC is obliged to make information publically available without disclosing the business transactions of the participants³⁷⁴. Full disclosure requirements exist only for transactions subject to the mandatory clearing requirements.

2. The EMIR

According to article 9, CCPs and counterparties are obliged to report the details of any derivatives contract to a trade repository or to ESMA if there is no trade repository available. Every contract as well as every contract modification must be reported³⁷⁵. The reporting requirement applies to all contracts entered into on or after August 16, 2012. For contracts entered into before August 16, 2012 the reporting requirements apply if the contract is still outstanding on that date³⁷⁶.

The information that has to be submitted include information about the counterparties, such as their names and domiciles, and information about the derivatives contract such as clearing threshold, collateralization, notional amount and termination date. A detailed list of the information that needs to be submitted to the trade repository or ESMA was published in the RTS in 2013³⁷⁷.

³⁷² Section 2(a) (13) (A) of the CEA, as added by section 727 of the Dodd-Frank Act.

³⁷³ Rule 13n-5(b) (4) of the Securities Exchange Act; part 45 of the swap data reporting and SDR rules.

³⁷⁴ CCH, supra note 4 at p. 284.

³⁷⁵ Article 9 (1) of the EMIR.

³⁷⁶ Article 9 (1) (a), (b) of the EMIR.

³⁷⁷ Annex to EC, 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, [2013] OJ, L 52/1 (cited as: EU Regulation No 148/2013).

Where a derivatives contract is cleared, clearing must be reported as a modification of the existing contract³⁷⁸.

The information must be reported within the working day following the conclusion, modification or termination of the contract³⁷⁹. The counterparties must keep a record of every derivatives contract until 5 years after the termination of the contract³⁸⁰.

To ensure compliance, the submission of the necessary information by the CCP or counterparty to a trade repository or ESMA is deemed not to be a breach of any contractual or statutory restriction on disclosure of information³⁸¹.

Further reporting requirements have been established in MiFID and MiFID 2. These requirements include post-trade disclosure requirements for investment firms as well as pre-trade transparency requirements³⁸².

3. Comparison

The reporting provisions under the Dodd-Frank Act and the EMIR are quite similar. There are slight differences in the period of time allowed to report data to the trade repositories. Both regulations require the submission of transaction, volume and price data. Where the EMIR requires the submission of information about the counterparties involved in the transaction, the Dodd-Frank Act requires full disclosure only for centrally cleared derivatives and not for bilaterally cleared contracts.

³⁷⁸ Article 2 of the EU Regulation No 148/2013.

³⁷⁹ Article 9 (1) of the EMIR.

³⁸⁰ Article 9 (2) of the EMIR.

³⁸¹ Article 9 (4) of the EMIR.

³⁸² ISDA. Regulation of OTC derivatives markets - A comparison of EU and US initiatives (2012) at p. 15, available at:

http://www2.isda.org/search?headerSearch=1&keyword=Regulation+of+OTC+derivatives+markets+A+compari com+of+EU+and+US+initiatives (last visited: June 2015).

Some transparency requirements, such as the reporting requirements for investment banks, are regulated under MiFID and MiFID 2 on the European side, while the Dodd-Frank Act established all transparency and reporting requirements for swaps and security-based swaps. The result is similar, the separation under the European regulation is simply a result of previous regulations and the allocation of regulatory competence within the EU.

One difference between the Dodd-Frank Act and the EMIR is the provision in the latter about reporting not constituting a breach of confidentiality. Because of the full disclosure requirement under the EMIR, it provides, as noted above, that the submission of data is not be considered a breach of any contractual or statutory prohibition on disclosing confidential information. A comparable provision cannot be found in the Dodd-Frank Act but could usefully be added to ensure that the reporting requirements will be complied with and that the reporting party is protected from any liability to its contract partner.

VI. Drafting style and implementation timetable

While the Dodd-Frank Act is a document of 800 pages, the EMIR is 60 pages in length. The EMIR establishes rules for clearing and the authorization of CCPs. The Dodd-Frank Act on the other hand also establishes rules for trading, reporting and registration for parties involved in derivatives contracts. In the EU these matters are regulated by the Markets in Financial Instruments Directive (MiFID), the MiFID II and the Markets in Financial Instruments Regulation (MiFIR). The EMIR is a full new regulation and the Dodd-Frank Act amends existing regulations such as the Commodities Exchange Act and the Securities Exchange Act of 1934.

Both regimes have in common that they require the implementation of further rules and technical standards before they can become fully effective. The Dodd-Frank Act came into force two years before the EMIR and most standards that were required to be drafted have now

been implemented. Only a small number of rules, such as the margin requirements for noncentrally cleared derivatives proposed by the CFTC have not yet come into force.

In contrast, the implementation process under the EMIR is far from completed. The EMIR had suggested a timeframe until the end of 2012 for the ESMA to draft RTS and submit them to the European Commission for endorsement. The timeframe was based on the proposal of the G20 summit in 2009 in Pittsburgh³⁸³. The deadline is long past and ESMA has still not been able to draft or submit the RTS, especially those dealing with the classes of derivative that are subject to mandatory central clearing.

One reason for the slow implementation process on the European side could be the allocation of regulatory competences within the EU. The drafting of some of the RTS require EMSA to consult with other European Supervisory Authorities (ESAs). This consultation process can take a lot of time. Furthermore, the draft RTS provided by ESMA have to be endorsed by the European Commission. Even after they are submitted, the Commission has another 3 month to decide whether to endorse them. If the Commission decides not to, they will be sent back to EMSA for amendment and it has a period of 6 weeks to make the requested amendments³⁸⁴.

In the light of the radical nature of the changes that the Dodd-Frank Act and the EMIR bring to the OTC derivatives market, it is important that the reform process will not be rushed and there be adequate opportunity for reflection and review given that imprudent changes might cause destabilization of the financial market³⁸⁵. It can thus be expected that the current technical standards and final rules will need to be revised and corrected. Indeed, as we have seen, the SEC and the CFTC have reconsidered their rules for margin requirements for non-centrally

³⁸³ Preamble, recital 5 of the EMIR.

³⁸⁴ Article 10 (1) of the EC, Regulation (EU) No 1095/2010 of the European Parliament and of the Council 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, [2010] OJ, L 331/84.
³⁸⁵ Scalcione, supra note 4 at p. 379.

cleared derivatives. Under the EMIR, a review of the RTS is scheduled for August 2015³⁸⁶. It is questionable however if ESMA will review the RTS, since most RTS have not been implemented yet. It seems more likely that a review will not take place before the majority of RTS has been implemented and in force for a couple of years.

F. Conclusion

After the financial crisis of 2008 the members of the G 20 summit in 2009 decided to take action to strengthen the financial system include regulation of OTC derivatives. In particular, they recommended that these derivatives that had been a contributing factor to the financial crisis, especially CDS, should be subject to centralized clearing requirements.

However, despite the ensuing regulatory efforts, the group of derivatives that contributed to the insolvency of AIG and the bankruptcy of Lehman Brothers are still not subject to the central clearing obligation proposed by the Dodd-Frank Act in the US and the EMIR in the EU. According to the analysts, these types of derivatives are not sufficiently standardized to be eligible for centralized clearing. Admittedly, non-centrally cleared derivatives are not left out by the proposed new regimes. They are now subject – or will soon be subject - to general minimum margin requirements. These requirements are quite similar in the Dodd-Frank Act and the EMIR because both jurisdictions incorporated the international standards recommended by the BIS and IOSCO as the basis.

Internationally uniform margin requirements are likely sufficient to ensure a safe or at least safer post trade environment for non-centrally cleared derivatives. Moreover, this approach promotes the centralized clearing of standardized derivatives since even if market participants

³⁸⁶ Article 85 of the EMIR.

try to circumvent the central clearing obligation, they will still be subject to minimum margin requirements.

What is disappointing is that the minimum margin requirements and complementary risk management procedures such as reporting have not yet been implemented. At present, margin for non-centrally cleared derivatives is collected on a voluntary basis only. It is of critical importance to implement these standards as soon as possible to ensure that another downturn in the financial market does not generate another financial crisis.

The margin requirements for non-centrally cleared derivatives are not the only standards that have not yet been implemented. In particular, the RTS under the EMIR have not been implemented and in many cases have not even been drafted even though the goal of the G 20 summit was to make OTC derivatives subject to centralized clearing by the end of 2012. As a result, seven years after the financial crisis, central clearing still takes place only on a voluntary basis in the EU. A faster implementation process is necessary to stabilise the financial system and to prevent another financial crisis.

Regarding the drafted and implemented standards it can be seen that the regulatory approach to risk management procedures under the Dodd-Frank Act is characterized by broad general standards. Whereas the Act does not establish strict and clear rules regarding the default fund and the CCP's own capital, the proposed European counterpart is much more precise and less accessible to different interpretations. The vague drafting under the Dodd-Frank Act is dangerous because it can create uncertainty about what requirements have to be fulfilled. More precise and stricter standards can also contribute to ensuring consistency among the different CCPs. The drafting of the standards under the Dodd-Frank Act would benefit from clarification and the establishment of more concrete minimum standards to avoid room for different interpretations and uncertainty in the application of the regulation so as to ensure a safer post-trade environment.

A more precise concern related to both the Dodd-Frank Act and the EMIR is the stability of central counterparties. The majority of derivatives are cleared with the four biggest CCPs. The bigger the clearinghouse, the more likely it is that a default has catastrophic consequences not only for the clearinghouse but also for the clearing members. In order to reduce the concentration of systemic risk and ensure the stability of CCPs, it may be desirable to create smaller CCPs or to ensure interoperability among them. Higher capital requirements and stricter risk management procedures could also help to ensure greater stability of central counterparties.

The recent financial crisis demonstrated that central counterparties can survive the failure of a major clearing member. In 2008, LCH.Clearnet, Ltd (LCH) survived the default of Lehman Brothers, a major clearing member with \$9 trillion outstanding at the clearinghouse. The risk management procedures enabled LCH not only to survive the default but also ensured that the defaulting member paid the losses rather than the non-defaulting members³⁸⁷. LCH was able to pay Lehman's outstanding obligations with Lehman's contribution to its margin account and an auction to sell the outstanding contracts, without even using the default fund³⁸⁸.

Nevertheless, it should not be thought that the adoption of similar risk management procedures to those of LCH had would enable a clearinghouse to survive the default of a clearing member. After the Dodd-Frank Act and the EMIR have been enacted, the situation will be different from the situation before the crisis insofar as many more OTC derivatives will be cleared through central counterparties. The greater the volume, the greater the potential risk of default. Moreover, LCH had to survive the failure of one clearing member only, albeit a major one. One cannot be confident that the same procedures would enable a CCP to survive the failure of two or more major clearing members.

³⁸⁷ Allen, supra note 124 at p. 1081 f.

³⁸⁸ Allen, supra note 124 at p. 1090.

It is therefore of particular importance to establish risk management procedures sufficient to ensure the stability and financial resilience of CCPs. In this respect, the EMIR and the Dodd-Frank Act could benefit from each other. Minimum capital requirements for clearing members like those established by the Dodd-Frank Act could be implemented under the EMIR to ensure that a CCP only accepts financially strong clearing members. On the other side, a minimum capital requirement for the CCP like that found in the EMIR should be implemented in the Dodd-Frank Act to ensure that a CCP is not solely dependent on the clearing member's margin and default fund contribution in the event of the default of one or more clearing members. Requiring the CCP to thus have "skin-in-the-game" ensures that the payment of losses in a default situation will be borne not just by the defaulting member and the non-defaulting members but also by the CCP and thus can contribute to closer monitoring by the CCP of the financial situation of the members and diligent monitoring of margin requirements and so forth. It can ensure an orderly and funded winding down or restructuring of the CCP should this become necessary.

It is further suggested that the agency rules implementing the Dodd-Frank Act would benefit from more precision regarding the default fund along the lines of the requirements proposed under the EMIR. The CFTC and the SEC have left the drafting of the requirements for the default fund to the CCPs. No guidelines regarding the calculation of the default fund contributions have been given. The default fund is a critical risk management procedure. A CCP will most likely not survive the default of a clearing member without a sufficient default fund, when the margin contribution is not enough to cover the losses. Consequently, this important matter should not be left to the discretionary drafting of each CCP.

Admittedly, a change in the risk management requirements towards higher capital and default fund requirements would create a more expensive post-trade environment for participants. However, stronger risk management procedures aim to ensure the stability of the CCPs and the OTC derivatives market. Their immediate costs are by any measure smaller than the cost to the entire economy and the general taxpayers of another financial crisis.

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