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Firma dello studente

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*For my family  
and all those who believed in me,  
even when I couldn't...*



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# Introduction

It all started in the Middle Ages, where trading stocks first began in Europe. Basically, people traded the ownership of any company, that time. It had little or no regulation at all, so it was kind of a fraud. Then, the exchanged trades started in America. Securities markets in the United States began with speculative trading in issues of the new government. In 1791, the country's **first stock exchange** was established in Philadelphia, the leading city in domestic and foreign trade. An exchange in New York was set up in 1792, when 24 merchants and brokers decided to charge commissions while acting as agents for other persons, and to give preference to each other in their negotiations. They did much of their trading under a tree at 68 Wall Street. Government securities formed the basis of the early trading. Stocks of banks and insurance companies added to the volume of transactions. The building of roads and canals brought more securities to the market. In 1817, the New York brokers decided to organize formally as the **New York Stock and Exchange Board**. Thereafter, the stock market grew with the industrialization of the country. In 1863, the **New York Stock Exchange** adopted its present name. Both New York Stock Exchange and American Stock Exchange created on 1842 excluded companies that couldn't afford fees or meet listing requirements. For that reason, it was necessary to create another kind of market: in 1870s smaller companies, unlisted on exchanges, are traded. Their shares were bought and sold in retail settings and the certificates and cash traded were literally **“over-the-counter”**<sup>1</sup>.

In early 1900s Roger Babson (an American entrepreneur, economist and business theorist) together with Arthur Elliott published circular with information on unlisted companies, such as price and volume. In 1913, they created the National Quotation Bureau (NQB) and issued information on unlisted stocks. In 1930s, NQB printed information in **pink sheets** and delivered to brokerages. These “pink sheets” were unregulated for decades and while it listed many trustworthy, solid companies, fraud still prevailed. Much of the regulation of the OTC market was affected through the NASD (National Association of Securities Dealers), created in 1939, by an act of Congress to establish rules of conduct and protect members and investors from abuses. Although retail prices of OTC transactions were not publicly reported,

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<sup>1</sup> A history of the Over-the-counter markets, All copyrights to 5 Waves LLC (Financial consulting and advisory company)

[https://www.slideshare.net/5wavesllc?utm\\_campaign=profiletracking&utm\\_medium=sssite&utm\\_source=ssslideview](https://www.slideshare.net/5wavesllc?utm_campaign=profiletracking&utm_medium=sssite&utm_source=ssslideview)

the NASD began publishing inter-dealer prices for the issues on its national list in February 1965. In 1971, the NASD created a fully integrated, computerized trading system called the NASDAQ (National Association of Securities Dealers Automated Quotation system). This allowed NASD members to post competing bids and offers for a variety of stocks. Thus, the electronic “Over the Counter” (OTC) market was created. This was a major departure from the “auction” markets of old (NYSE, AMEX, etc), with their Specialists. OTC market trading does not take place on physical stock exchanges; such trading is most significant in the United States, where requirements for listing stocks on the exchanges are quite strict. It is often called the "**off-board market**" and sometimes the "**unlisted market**" though the latter term is misleading because some securities traded there, are listed on an exchange. OTC trading was most often accomplished by telephone, telegraph, or leased private wire. Now the computers, with either Internet access or direct electronic connections are taking over this route of trading<sup>2</sup>.

Nowadays’ regulations have a definition of what is called “financial instrument” and what can be traded in exchange markets and/or in over-the-counter markets. On the **first** chapter, I will explain what financial instruments are, their types and how do they work financially and legally. The **second** chapter will contain the regulation on trading in regulated markets of financial instruments before and after the 2008 Global Financial Crisis, whilst the **third** one will describe and regulate the non-exchange-traded markets, the so-called “Over-the-counter”.

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<sup>2</sup> History of trading, All copyrights to Online Trading Academy,  
<https://www.tradingacademy.com/resources/financial-education-center/history-of-trading.aspx>

## CHAPTER 1: Financial Instruments

A **financial instrument** is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument to another entity<sup>3</sup>.

**Financial instrument** is a general term used to describe a monetary asset that can be traded, or packages of capital that may be traded; depending on the type of financial instrument the owner is entitled to either be a part of an entity, usually a corporation, or aim at interest and return of a principal amount equal to the face value of the financial instrument. Financial instruments that give the owner an equity in the business are usually referred as **stock**. Financial instruments that entitle the owner to interest and principal payments are usually called **bonds**. In general, they can be real or virtual documents representing a legal agreement involving any kind of monetary value. Technically, savings accounts, loans and even accounts receivables are considered financial instruments, although they are not as liquid as stocks and bonds because both parties have to agree to their seller a transfer. **Derivatives** are another type of financial instrument. A derivative's value is based on market value of an underlying asset because ultimately a derivative is a right usually to an option to buy or sell the underlying asset up to the time the option expires. Financial instruments are the corner stone of the financial economy. The ability of investors to trade financial instruments through financial markets provides efficient flow and transfer of capital to its most profitable uses.

Largely, financial instruments may be divided into two types: cash instruments and derivative instruments. The values of cash instruments are directly influenced and determined by the markets, otherwise called money markets. These can be securities that are readily transferable. Cash instruments may also be deposits and loans which can be transferred only when both borrower and lender agree for the transfer. Cash instruments often offer complete capital security, anyway they may become subject to credit risk. Credit risk is the risk that one party to a financial instrument (cash instrument, in this case) will cause a financial loss for the other party by failing to discharge an obligation. As a result, the capital value of cash instruments

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<sup>3</sup> European Commission Accounting Rule 11 (December 2011) AND IAS 32.11

will not fluctuate if interest rates fluctuate. Since cash instruments are highly liquid, it can be used by institutions with very long-term liabilities, to meet their immediate cash flow needs.

The value and characteristics of derivative instruments are based on the vehicle's underlying components, such as assets, interest rates or indices. These can be over-the-counter (OTC) derivatives or exchange-traded (listed) derivatives, depending on where derivatives trade. Over-the-counter derivatives are private contracts between counterparties. Unlike over-the-counter derivatives, listed derivatives are more structured and standardized contracts in which the underlying assets, the quantity of the underlying assets and settlement are specified by the exchange. Over-the-counter derivatives are private contracts that are traded between two parties without going through an exchange or other intermediaries. Therefore, over-the-counter derivatives could be negotiated and customized to suit the exact risk and return needed by each party. Although this type of derivative offers flexibility, it poses credit risk because there is no clearing corporation.

These differences are the main arguments I will discuss later; the evolution of these two derivative markets, pre- and post-financial crisis; the risks and their dealing after 2007 credit crash, especially on OTC derivative markets.

Financial instruments may also be divided according to asset class, which depends on whether they are **debt-based** or **equity-based**. Short-term debt-based financial instruments last for one year or less. Securities of this kind come in the form of T-bills and commercial paper. Cash of this kind can be deposits and certificates of deposit (CDs). Exchange-traded derivatives under short-term debt-based financial instruments can be short-term interest rate futures. OTC derivatives are forward rate agreements. Long-term debt-based financial instruments last for more than a year. Under securities, these are bonds. Cash equivalents are loans. Exchange-traded derivatives are bond futures and options on bond futures. OTC derivatives are interest rate swaps, interest rate caps and floors, interest rate options, and exotic derivatives.

Securities under equity-based financial instruments are stocks. Exchange-traded derivatives in this category include stock options and equity futures. The OTC derivatives are stock options and exotic derivatives. There are no securities under foreign exchange. Cash equivalents come in spot foreign exchange. Exchange-traded derivatives under foreign exchange are currency

futures. OTC derivatives come in foreign exchange options, outright forwards and foreign exchange swaps.

Officially in force, Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (MIFID II) defines **eleven types of financial instruments**<sup>4</sup> as following:

- 1) Transferable securities;
- 2) Money-market instruments;
- 3) Units in collective investment undertakings;
- 4) Options, futures, swaps, forward rate agreements and any other derivative contracts relating to securities, currencies, interest rates or yields, emission allowances or other derivatives instruments, financial indices or financial measures which may be settled physically or in cash;
- 5) Options, futures, swaps, forwards and any other derivative contracts relating to commodities that must be settled in cash or may be settled in cash at the option of one of the parties other than by reason of default or other termination event;
- 6) Options, futures, swaps, and any other derivative contract relating to commodities that can be physically settled provided that they are traded on a regulated market, a MTF (Multilateral Trading Facilities), or an OTF (Organised Trading Facilities), except for wholesale energy products traded on an OTF that must be physically settled;
- 7) Options, futures, swaps, forwards and any other derivative contracts relating to commodities, that can be physically settled not otherwise mentioned in point 6 of this Section and not being for commercial purposes, which have the characteristics of other derivative financial instruments;
- 8) Derivative instruments for the transfer of credit risk;
- 9) Financial contracts for differences.
- 10) Options, futures, swaps, forward rate agreements and any other derivative contracts relating to climatic variables, freight rates or inflation rates or other official economic

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<sup>4</sup>Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance OJ L 173, 12.6.2014, p. 349–496 <http://data.europa.eu/eli/dir/2014/65/oj>

statistics that must be settled in cash or may be settled in cash at the option of one of the parties other than by reason of default or other termination event, as well as any other derivative contracts relating to assets, rights, obligations, indices and measures not otherwise mentioned in this Section, which have the characteristics of other derivative financial instruments, having regard to whether, inter alia, they are traded on a regulated market, OTF, or an MTF;

- 11) Emission allowances consisting of any units recognised for compliance with the requirements of Directive 2003/87/EC (Emissions Trading Scheme)<sup>5</sup>.

**1. “Transferable securities”** means those classes of securities which are negotiable on the capital market, with the exception of instruments of payment, such as shares in companies and other securities equivalent to shares in companies, partnerships or other entities, and depositary receipts in respect of shares; bonds or other forms of securitised debt, including depositary receipts in respect of such securities; or any other securities giving the right to acquire or sell any such transferable securities or giving rise to a cash settlement determined by reference to transferable securities, currencies, interest rates or yields, commodities or other indices or measures<sup>6</sup>. We consider that instruments are negotiable on the capital markets when they are capable of being traded on the capital markets. Examples of instruments which do not amount to transferable securities include securities that are only capable of being sold to the issuer (as some industrial interests) and OTC derivatives as settled by a confirmation under an ISDA master agreement. According to Commission Regulation (EC) No 1287/2006 of 10 August 2006 (MIFIR), if transferable securities can be traded between the parties to a transaction, and subsequently transferred without restriction, and if all securities within the same class as the security in question are fungible, then they will be considered freely negotiable<sup>7</sup>. Those that are subject to a restriction on transfer should not be considered as freely negotiable, instead those that are not fully paid may be considered

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<sup>5</sup>Directive 2014/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU OJ L 173, 12.6.2014, p. 349–496, Annex I, Section C Financial Instruments

<sup>6</sup> Article 4 point 44 (page 37) Directive 2014/65/EU of the European Parliament and of the council of May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU.

<sup>7</sup> Art. 35(1) of Chapter V “Admission of financial instruments to trading”, COMMISSION REGULATION (EC) No 1287/2006 of 10 August 2006 implementing Directive 2004/39/EC of the European Parliament and of the Council as regards recordkeeping obligations for investment firms, transaction reporting, market transparency, admission of financial instruments to trading, and defined terms for the purposes of that Directive

as freely negotiable if arrangements have been made to ensure that the negotiability of such securities is not restricted and that adequate information concerning the fact that the securities are not fully paid, and the implications of that fact for shareholders, is publicly available<sup>8</sup>.

So, there are two big separations about transferable instruments:

- Equity instruments (shares)
- Debt instruments (bonds)

There are differences between them from the legal and financial point of view. In a corporation, bonds are a debt between company (issuer) and public (subscriber), it is inbounded of the money and outbound of the bond, its percentage of interest is known. On the other hand, in order to obtain shares from a listed company, one should buy shares on the market, or issue new shares capital. In this case, the person has the right of the vote, but the gain is unpredictable. The connection between these two big instruments is “the convertible bonds”, which are usually used by banks to NOT issue new shares on the market.

**2. “Money-market instruments”** means those classes of instruments which are normally dealt in on the money market, such as treasury bills, certificates of deposit and commercial papers and excluding instruments of payment<sup>9</sup>. Money market is used by participants as a means for borrowing and lending in the short term, with maturities that usually range from overnight to just under a year. An instrument is only a money market instrument if it also meets these conditions:

- ✓ it has a value that can be determined at any time;
- ✓ it does not fall into sections C4 to C10 of Annex 1 to MiFID (derivatives);
- ✓ it has a maturity at issuance of 397 days or less

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<sup>8</sup> Art. 35(2)(3) of Chapter V “Admission of financial instruments to trading”, COMMISSION REGULATION (EC) No 1287/2006 of 10 August 2006 implementing Directive 2004/39/EC of the European Parliament and of the Council as regards recordkeeping obligations for investment firms, transaction reporting, market transparency, admission of financial instruments to trading, and defined terms for the purposes of that Directive

<sup>9</sup> Definition “Money market instrument” (19), DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

**3. “Units in collective investment undertakings”** includes units in both regulated and unregulated collective investment schemes and units or shares in an Alternative Investment Fund (AIF) which are represented by shares in closed-ended corporate schemes, such as shares in investment trust companies. The so-called “UCITS management company” means a management company (as defined in Council Directive 85/611/EC of 20 December 1985) on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS)<sup>10</sup>. When admitting to trading units in a collective investment undertaking, whether or not that undertaking is constituted in accordance with Directive 85/611/EEC, a regulated market will satisfy itself that the collective investment undertaking complies or has complied with the registration, notification or other procedures which are a necessary precondition for the marketing of the collective investment undertaking in the jurisdiction of the regulated market<sup>11</sup>. With regard to over-the-counter (OTC) derivatives, requirements should be set in terms of the eligibility of counterparties and instruments, liquidity and ongoing assessment of the position. The purpose of such requirements is to ensure an adequate level of investor protection, close to that which they obtain when they acquire derivatives dealt in on regulated markets<sup>12</sup>.

**4. “Emissions Trading Scheme”** (Emission allowances) is the eleventh category that Directive 2014/65/EU (MIFID II) added on financial instruments list with respect to Directive 2004/39/EC (MIFID I) now repealed. Directive 2003/87/EC establishes a scheme for greenhouse gas emission allowance trading within the Community (also referred to as the

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<sup>10</sup> Definition “Units in collective investment undertakings” (24), DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

<sup>11</sup> Art. 36(1) of Chapter V “Admission of financial instruments to trading”, COMMISSION REGULATION (EC) No 1287/2006 of 10 August 2006 implementing Directive 2004/39/EC of the European Parliament and of the Council as regards recordkeeping obligations for investment firms, transaction reporting, market transparency, admission of financial instruments to trading, and defined terms for the purposes of that Directive

<sup>12</sup> Point 45, Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS)



‘Community scheme’) in order to promote reductions of greenhouse gas emissions in a cost-effective and economically efficient manner<sup>13</sup>.

**5. “Derivatives”** are the most interesting financial products. A derivative is a security with a price that is dependent upon or derived from one or more underlying assets. The derivative itself is a contract between two or more parties based upon the asset or assets. Its price is determined by fluctuations in the underlying asset, including stocks, bonds, commodities, currencies, interest rates and market indexes. Derivative instruments are the derivatives that are listed or listable on the market<sup>14</sup>. Their underlyings are also listed. The characteristics of these instruments are: pricing and liquidity. Instead derivative contracts are not listed, they are just written contracts between two parties – there is no capital market, in this case. Derivative contracts are characterized by pricing (kind of) and illiquidity.

Initially, derivatives were used to balance the gap between national and foreign exchange rates for international trades of goods. With differing values of national currencies, international traders needed a system of measuring these differences. Today, derivatives are based upon a very wide variety of transactions and have many more uses and functions. There are even derivatives based on weather data, such as the amount of rain or the number of sunny days in a particular region.

There are several types of derivatives; being in a category of security rather than a specific kind, derivatives hold a variety of functions and applications, based on type. Certain kinds of derivatives can be used either for hedging or insuring against risk on an asset. Derivatives can also be used as speculation in “betting” on the future price of an asset or in avoiding exchange rate issues. For example, an American investor purchasing shares of a European company by using a European exchange (using Euro) would be exposed to exchange-rate risk while holding that stock. To hedge this risk, the investor could purchase currency futures to lock in a specified exchange rate for the future stock sale and currency conversion back into U.S. Dollars. In any case, many derivatives are characterized by high leverage.

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<sup>13</sup> DIRECTIVE 2003/87/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC

<sup>14</sup> Article 2 point 5 (page 15) Regulation (EU) No 648/2012 of the European Parliament and of the council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories

Financial derivative instruments eligible for investment by an MMF (Money Market Funds) should only serve the purpose of hedging interest rate and currency risk and should only have as an underlying instrument interest rates, foreign exchange rates, currencies or indices representing those categories. Any use of derivatives for another purpose or on other underlying assets should be prohibited. Derivatives should only be used as a complement to the strategy of a Money Market Fund and not as the main tool for achieving the MMF's objectives. In the event that a Money Market Fund invests in assets labelled in another currency than the currency of the MMF, it is expected that the manager of the MMF would hedge the entire currency risk exposure, including via derivatives. Money Market Funds should be entitled to invest in financial derivative instruments if that instrument is traded on a regulated market or traded over-the-counter (OTC) provided certain conditions are fulfilled<sup>15</sup>.

## Common types of Derivatives

**A. Futures contracts** are one of the most common forms of derivatives. According to the Commission Delegated Regulation (EU) 2017/583 of 14 July 2016 supplementing Regulation (EU) No 600/2014 of the European Parliament and of the Council on markets in financial instruments with regard to regulatory technical standards on transparency requirements for trading venues and investment firms in respect of bonds, structured finance products, emission allowances and derivatives, Annex III: 'Future' is a contract to buy or sell a commodity or financial instrument in a chosen future date at a price agreed-upon at the beginning of the contract by the buyer and seller. Every futures contract has standard terms that dictate the minimum quantity and quality that can be bought (or sold), the smallest amount by which the price may change, delivery procedures, maturity date and other characteristics related to the contract. Thus, futures contract (or simply futures) is an agreement between two parties for the sale of an asset at an agreed upon price. One would generally use a futures contract to hedge against risk during a particular period of time. A futures contract can protect producers and suppliers from price changes. The buyer of a futures contract is taking on the obligation to buy the underlying asset when the futures contract expires. The seller of the futures contract is taking on the obligation to provide the

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<sup>15</sup> Point 26, Regulation (EU) 2017/1131 of the European Parliament and of the Council of 14 June 2017 on money market funds

underlying asset at the expiration date. For example, suppose that on August 31, 2017, John owned 10,000 shares of Fiat Chrysler Automobiles NV (FCA) stock, which were then valued at 12.65 Euro per share. Fearing that the value of his shares would decline, John decides to arrange a futures contract to protect the value of his stock. Michele, a speculator predicting a rise in the value of Fiat Chrysler Automobiles NV stock, agrees to a futures contract with John, saying that in one year's time Michele will buy John's 10,000 Fiat Chrysler Automobiles shares at their agreed-upon value of 12.65 Euro<sup>16</sup>.

The futures contract can be considered a sort of bet between the two parties. If the value of John's stock drops, his investment is protected because Michele has agreed to buy them at their August 31st, 2017 value, and if the value of the stock rises, Michele earns greater value on the deal, as he is paying August 2017 prices for stock in August 2018. A year later, August 31 rolls around and Fiat Chrysler Automobiles is valued at 14.56 Euro per share. Michele has benefited from the futures contract, purchasing shares at Euro 1.91 less per share than if he would have simply waited until August 2018 to buy stock. While this might not seem like much, this difference of 1.91 Euro per share translates to a discount of 19,100 Euro when considering the 10,000 shares that Michele buys. John, on the other hand, has "gambled" poorly and lost a substantial amount.

The Futures contract should not be entangled with spot contract which is understood as a contract for the sale of a commodity, asset or right, under the terms of which delivery is scheduled to be made within the longer of the following periods:

- a. two trading days;
- b. the period generally accepted in the market for that commodity, asset or right as the standard delivery period<sup>17</sup>.

**B. A forward contract** is a private agreement to buy and sell a commodity or a financial instrument at a future date. The price of the asset is fixed for the time where the contract is executed. According to MIFID I, a forward transaction is a contract that includes

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<sup>16</sup> Yahoo Finance <https://it.finance.yahoo.com/quote/FCA.MI?guccounter=1>

<sup>17</sup> Article 38(2) of the Commission Regulation (EC) No 1287/2006 of 10 August 2006 implementing Directive 2004/39/EC of the European Parliament and of the Council as regards record-keeping obligations for investment firms, transaction reporting, market transparency, admission of financial instruments to trading, and defined terms for the purposes of that Directive (OJ L 241, 2.9.2006, p. 1)

an obligation of at least one of the counterparties that has a due date which is later than for spot contract<sup>18</sup>. Forward contracts are an important kind of derivative similar to futures contracts, the key difference being that unlike futures, forward contracts (or “forwards”) are not traded on exchange market, rather only over-the-counter. Also forward contracts are settled at the end of the contract term, while futures contracts are settled day by day. Finally, speculators who bet on price changes work better on futures contracts, while parties who want to hedge the volatility inherent in the underlying asset use forward contracts. Forwards are highly customizable, because of their OTC nature, large corporations and institutions use them to hedge currency and interest rate. But the lack of central clearinghouses also increases the risk of default. That’s why lots of retail investors prefer futures contracts.

Furthermore, according to the form of settlement, there are forward contracts that can be settled in cash or with physical delivery and forward contract that must be settled with physical delivery. The difference between them is that the second ones are not considered derivatives, as can be noted in Section C/6 of Annex I of Directive 2004/39/EC (MIFID I). This misunderstanding or absence of information creates confusion among market players and sometimes contracts that have to be settled with physical delivery are taken as derivatives when they are not.

**C. Swaps** are another common type of derivative. A swap is a derivative contract through which two parties exchange financial instruments, most often a contract agreeing to trade loan terms. Swaps can be made using interest rates, currencies or commodities. Most swaps involve cash flows based on a notional principal amount that both parties agree to. Usually, the principal does not change hands. Each cash flow includes one part of the swap. One cash flow is usually fixed while the other one is variable, which is based on a benchmark interest rate, floating currency exchange rate (currency), or index price (commodity).

**Interest Rate Swap (IRS)** is an exchange of future receives. Essentially one stream of future interest payments is exchanged for another, based on a specified principal amount. Each participant in the swap is referred to as a “party”, or together as “counterparties”.

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<sup>18</sup> Article 38(2)(a) of the MiFID Implementing Regulation (Commission Regulation (EC) No 1287/2006 of 10 August 2006 implementing Directive 2004/39/EC of the European Parliament and of the Council as regards record-keeping obligations for investment firms, transaction reporting, market transparency, admission of financial instruments to trading, and defined terms for the purposes of that Directive.

Financial institutions use interest rate swaps to manage credit risk, to hedge potential losses and/or to earn income through speculation. While interest swaps are very complex, they allow financial institutions and corporations to manage debt and risk more efficiently. The most common type of interest rate swap is the “vanilla swap”, where one party, the payer, agrees to pay a fixed-rate interest, while the other party, the receiver, agrees to pay floating-rate interest which is usually tied to the London inter-bank offered rate (LIBOR). If someone with a variable interest rate loan were trying to secure additional financing, a lender might deny him or her a loan because of the uncertain future bearing of the variable interest rates upon the individual’s ability to repay debts, possibly fearing that the individual will default. For this reason, he or she might try to switch their variable interest rate loan with someone else, who has a loan with a fixed interest rate that is otherwise similar. The loans will remain in the original holders’ names, the counterparties simply agree to make payments to one another based on the rise or fall of the floating interest rate. There are benefits and risks for both parties in the interest rate swap. In interest rates rise, the payer benefits because the fixed rate remains unchanged and the receiver now owes them the difference between the fixed rate and the floating rate. If interest rate goes down, the receiver wins, because their floating rate is now lower than the fixed rate and they will be receiving the difference from the payer. Yet this can be risky, because if one party defaults or goes bankrupt, the other will be forced back into their original loan.

**Currency swaps** – as said above, the switched part might not be just interest rate, but also exchange rate, so where the parties exchange interest and principal payments on debt denominated in different currencies. In a currency swap, two parties exchange the interest and the principal of a loan in one currency for the interest and the principal on another loan in another currency. Companies use currency swaps to get more favorable loan rates in foreign currencies than they could if they borrowed money from banks in the target currency. Currency swaps obviously can take place between countries. It is considered to be a foreign exchange transaction and is not required by law to be shown on a company's balance sheet. Unlike an interest rate swap, the principal is not a notional amount, but is exchanged along with interest obligations. There are three variations on the exchange of interest rates: fixed rate to fixed rate; floating rate to floating rate; or fixed rate to floating rate. This means that in a swap between euros and dollars, a party that has an initial obligation to pay a fixed interest rate on a euro loan can exchange that for a fixed interest rate in dollars or for a floating rate in dollars. Alternatively, a party whose euro loan is at a floating interest rate can exchange that

for either a floating or a fixed rate in dollars. A swap of two floating rates is sometimes called a **Basis swap**.

**Commodity swaps** are another type of swap derivative. They involve the exchange of a floating commodity price, for a set price over an agreed-upon period. A commodity swap is a contract where two sides of the deal agree to exchange cash flows, which are dependent on the price of an underlying commodity. It is usually used to hedge against the price of a commodity. A commodity swap consists of a floating component and a fixed component. The floating component is tied to the market price of the underlying commodity or agreed-upon commodity index, while the fixed component is specified in the contract. Most commodity swaps are based on oil, though any type of commodity may be the underlying, such as precious metals, industrial metals, natural gas, livestock and grains. Considering the nature and sizes of the contracts, typically large financial institutions engage in commodity swaps, not individual investors<sup>19</sup>.

**Debt-Equity swap** involves the exchange of debt for equity, it is a transaction in which the obligations or debts of a company or individual are exchanged for something of value, equity. In the case of a publicly traded company, this would mean bonds for stocks. It is a way for companies to refinance their debt or re-allocate their capital structure. A debt-equity swap is a refinancing deal in which a debt holder gets an equity position in exchange for cancellation of the debt. The swap is generally done to help a struggling company continue to operate. The logic behind this is an insolvent company cannot pay its debts or improve its equity standing. However, sometimes a company may simply wish to take advantage of favorable market conditions. Covenants in the bond indenture may prevent a swap from happening without consent. Debt-equity swaps can offer its debt holders equity because the business does not want to or cannot pay the face value of the bonds it has issued. To delay repayment, it offers stock instead. In other cases, businesses have to maintain certain debt/equity ratios, and inviting debt holders to swap their debts for equity if the company helps to adjust that balance. These debt/equity ratios are often part of financing requirements imposed by lenders. In other cases, businesses use debt-equity swaps as part of their bankruptcy restructuring<sup>20</sup>.

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<sup>19</sup>Commodity swap <https://www.investopedia.com/terms/c/commodityswap.asp>

<sup>20</sup> DISTRESSED FIRM VALUATION: REORGANIZATION PLAN AND GOING-CONCERN CAPITAL VALUE, Fabio Buttignon, University of Padua, December 2014

**Total Return swap**, here, the total return from an asset is exchanged for a fixed interest rate. This gives the party paying the fixed rate exposure to the underlying asset—a stock or an index, for example—without having to expend the capital to hold it<sup>21</sup>. Total Return Swap is a contract in which a payer and a receiver exchange the credit risk and market risk of an underlying asset. The payer owns the underlying asset, also called “the reference asset” which typically is a bond or an index or a loan. The payer agrees to pay the receiver the total return on the asset, including its market appreciation and coupons. If the reference asset depreciates, the receiver pays the depreciation to the payer, because the payer has transfer default risk, credit deterioration risk and market risk to the receiver. In exchange, the receiver pays the payer some other form of cash flow, that’s usually related to LIBOR – the benchmark rate that many banks charge each-other for short-term loans, another loan or a credit sensitive security. The receiver takes a long position (buy) on the underlying asset. The receiver expects a rise on value, without having to buy the asset on first. That eliminates the receiver’s buying costs and increases its leverage. Banks frequently use total return swaps to limit their exposure to credit risk. Hedge funds typically use them to receive returns on the reference asset without having to buy it. At the end of the swap contract, it will be either cash settled which means no capital (underlying asset) exchanged, just interest payment, or physical delivery that means there will be an actual transfer of shares.

Swaps do not trade on exchange markets, and retail investors do not generally engage in swaps. Rather, swaps are over-the-counter contracts primarily between businesses or financial institutions. Because they trade over the counter (OTC), the contracts are between two or more parties according to their desired specifications and can be customized in many different ways.

**D. Options** are another common form of derivative. An option is a contract that sets a price on time for the sale or purchase of a financial asset. It derives its value from the performance of the underlying security. The contract offers the buyer the right, but not the obligation, to buy (call option) or sell (put option) the underlying asset at an agreed-upon price during a certain period of time or on a specific date. The agreed upon price is called the

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<sup>21</sup>Total Return Swap <https://www.investopedia.com/terms/t/totalreturnswap.asp>

strike price. European options can only be exercised on the expiration date (exercise date). Exercising means using the right to buy or to sell the underlying security.

**Call options**<sup>22</sup> give the option buyer the right to buy an underlying security at the strike price, so the buyer wants the stock to go up. On the other hand, the option writer needs to give the underlying security to the option buyer, at the strike price, in the event that the stock's market price exceeds the strike price. An option writer who sells a call option believes that the underlying stock's price will drop or stay the same relative to the option's strike price during the life of the option, as that is how they will earn maximum profit. The writer's maximum profit is the premium received when selling the option. If the buyer is right, and the stock rises above the strike price, the buyer will be able to acquire the stock for a lower price (strike price) and then sell it for a profit at the current market price. However, if the underlying stock is not above the strike price on the expiration date, the option buyer loses the premium paid for the call option.

**Put options** give the option buyer the right to sell at the strike price, so the put buyer wants the stock to go down. The opposite is true for a put option writer. For example, a put option buyer is bearish on the underlying stock and believes its market price will fall below the specified strike price on or before a specified date. On the other hand, an option writer who writes a put option believes the underlying stock's price will stay the same or increase over the life of the option. If the underlying stock's price closes above the specified strike price on the expiration date, the put option writer's maximum profit is achieved. They get to keep the entire premium received. Conversely, a put option holder benefits from a fall in the underlying stock's price below the strike price. If the underlying stock's price falls below the strike price, the put option writer is obligated to purchase shares of the underlying stock at the strike price.

An option is similar to a futures contract in that it is an agreement between two parties granting one the opportunity to buy or sell a security from or to the other party at a predetermined future date. The key difference between options and futures is that with an option, the buyer is not obligated to make the transaction if he or she decides not to, hence the name "option." The exchange itself is, ultimately, optional. Like with futures, options may be used to hedge the seller's stock against a price drop and to provide the buyer with an

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<sup>22</sup>Chapter 1, Options, futures and other derivatives, John C. Hull



opportunity for financial gain through speculation. An option can be short or long, as well as a call or put.

**E. Credit derivative** is essentially a financial asset such as forward contract, swap and option for which the price is driven by the credit risk of economic agents, such as private investors or governments. Credit derivatives transfer credit risk related to an underlying entity from one party to another without transferring the actual underlying entity. For example, a bank concerned that one of its customers may not be able to repay a loan can protect itself against loss by transferring the credit risk to another party while keeping the loan on its books<sup>23</sup>.

A credit derivative is a loan sold to a speculator at a discount to its true value. Though the original lender is selling the loan at a reduced price, and will therefore see a lower return, in selling the loan the lender will regain most of the capital from the loan and can then use that money to issue a new and (ideally) more profitable loan. If, for example, a lender issued a loan and subsequently had the opportunity to engage in another loan with more profitable terms, the lender might choose to sell the original loan to a speculator in order to finance the more profitable loan. In this way, credit derivatives exchange modest returns for lower risk and greater liquidity.

There are many types of credit derivatives including credit default swaps (CDS), collateralized debt obligations (CDO), total return swaps, credit default swap options and credit spread forwards. In exchange for an upfront fee, referred to as a premium, banks and other lenders can remove the risk of default entirely from a loan portfolio. The value of the credit derivative is dependent on both the credit quality of the borrower and the credit quality of the third party, denoted as the counterparty. However, the credit quality of the counterparty is more important than the borrower. In the event the counterparty goes into default or cannot honor the derivatives contract, the lender does not receive a payment and the premium payments end.

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<sup>23</sup>Credit Derivative definition <https://www.investopedia.com/terms/c/creditderivative.asp>

**F. Mortgage-Backed Security** is another kind of derivative, which is a broad category defined by the fact that the assets underlying the derivative are mortgages. Mortgage-backed securities (MBS) are a type of bond representing an investment in a pool of real estate loans. To understand what mortgage-backed security is, we need to know what does a bank do when it issues a mortgage. How does a mortgage become an MBS? Let's say, person A wants to buy a house, costing X euros. So, he goes to the bank and applies for a mortgage home loan for X euros and in return of borrowing this money, the bank would make person A to pay an interest, for example 10%. Before the world of mortgage-backed securities, the bank would simply keep this loan on its loan books, receiving the principal and the interest during all the duration of the loan (30 years, for example). One side of this arrangement is that the bank must keep the loan for the full 30 years, tied up both capital and resources. One day, the bank thought something else: it could sell the interest of 10% and the principal to investors to get off the bank loan books and free up the capital at the same time. Bank would make money simply from regenerating and servicing the mortgages, plus some other associated fees. In order to sell the mortgage interest to investors, the bank puts together A's mortgage loan with other mortgage home loans, hundreds maybe even thousands. Then, the package of mortgages is sold to another investment bank in the form of a single bond. Investment bank divides the packages of mortgage loans according to quality and sells the sections to other investors. So, while person A makes payments to its bank, loan is actually in the hands of investors. Mortgage-backed securities are essentially a way for banks to free up capital and provide a way for investors to buy mortgages.

### ... in Italy

In Italy, **financial products** are different from financial instruments. "Financial instrument" as a notion has a precise juridical meaning that often differs from the financial one, which indicates any form of contract that leads to transfer money in space and time, or to transfer the risk of the underlying. In juridical terms, the Italian equivalent regulation of "Markets in financial instruments directive" (MiFID) is "Testo unico della Finanza" (TUF) which regulates and updates the supervisory on financial markets. **Article 1 point u)** defines financial products as financial instruments plus any other form of financial investment in financial business. Bank accounts (or postal savings) that are not represented from financial

instruments are not part of financial products<sup>24</sup>. On the other hand, payment types such as bank checks or cash money are not financial instruments, but they do are part of financial products, according to the regulation's definition<sup>25</sup>. This is because a financial product has the possibility of a given instrument to be conveyed and/or negotiated. So, what might be a financial product that is not a financial instrument? There are basically two questions to answer: firstly, should the financial product necessarily be an investment form? And secondly, should this investment form necessarily be financial? One would say a real property for investment purpose or diamonds as candidates for financial products, but we would need a connection with finance. The objective of an investment is not on the object of the underlying, but on the value of underlying. So, by holding in hand the underlying itself (the diamond), the buy-sell transaction may be an investment transaction, but not a financial one. So, diamond is not a financial product. Same logic for the property: if I buy a house in order to sell it later and get a profit, it will be an investment operation. But it is not a financial investment, because it is on a real item. The situation changes if I buy shares from a company that works on real estate market. Here the risk I'm taking depends on the real estate market, but it is a financial risk, not from real world.

With reference to diamonds' buying and selling, according to a broker data, in 2015, diamond brokers have been using Italian banks to sell high-quality investment diamonds in a business that totaled at least 300 million euros (\$334 million) in sales. Diamond sales have taken off as negative interest rates have curtailed bank revenues and rendered many other investments unattractive for clients. Banks make a one-off commission of at least 10 percent on diamond sales, in return for putting the diamond brokers in touch with their clients, between whom the contract is signed. The business usually accounts for no more than 2 percent of a lender's total fees. Italian market regulator **Consob** opened an investigation one year later into the sale of diamonds through bank branches after a TV report alleged the stones were miss told to the public. Consumer associations have also said they received complaints. In several cases, people have told Reuters<sup>26</sup> that diamonds they had bought as an investment were valued at a

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<sup>24</sup> Article 1 point u), Testo Unico della Finanza, Decreto legislativo 24 febbraio 1998, n. 58, aggiornato con le modifiche apportate dal D.Lgs. n. 107 del 10.8.2018 vigente al 29.9.2018; a cura della Divisione Tutela del Consumatore, Ufficio Relazioni con il Pubblico, Ottobre 2018.

<sup>25</sup> Giacomo Rojas Elgueta, Contribution in "Il Sole 24" magazine.

<https://www.ilsole24ore.com/art/SoleOnline4/100-parole/Diritto/S/Strumenti-finanziari.shtml>

<sup>26</sup> Exclusive: Italy police seize bank documents in diamond sales probe – sources, Valentina Za, Gianluca Semeraro, JUNE 21, 2017, <https://www.reuters.com/article/us-italy-banks-searches-diamonds-exclusi/exclusive-italy-police-seize-bank-documents-in-diamond-sales-probe-sources-idUSKBN19C2FP>

much lower price than they paid for them. Selling diamonds with the promise of a financial return was banned in Italy unless regulated in the same way as other financial products, such as mutual funds. Banks and brokers say they do not promise a financial return when selling the stones.

At the end of October 2017, Italy's antitrust authority **L'Autorita Garante della Concorrenza** e del Mercato has fined local banks and diamond brokers €15.3 million (\$17.7 million) for fraudulent commercial practices in selling diamonds through distributor banks, Reuters reported citing sources. The authority imposed a fine of €4 million on bank UniCredit S.p.A. and €3.3 million on Banco BPM S.p.A., among others. The authority also levied a fine of €2 million on diamond broker Intermarket Diamond Business S.p.A. (IDB) and €1 million on Diamond Private Investment S.p.A (DPI)<sup>27</sup>. In October 2018, Italian Antitrust authority agrees with diamond's selling in banks non-illegitimacy in particular for Ubi Banca and Diamond Love Bond (DLB). In order to avoid strong sanctions to these two firms, the Antitrust authority kept as "illegal" only the fact that they did not provide an efficient diamond relocation service to their customers. By not offering any guarantee as to resale, for the Antitrust, the purchase of the diamond was characterized "as a long-time purchase, as a purchase destined to last over time", without thereby generating any reliance on the purchaser with regard to the possibility of relocating the diamonds to the prices from published lists by the professionals. According to the Antitrust Authority, this type of offer is sufficient to clarify to the consumer that the purchase of the diamond is not an alternative to purchases of a financial nature. As I said above, the diamond for Italian legal system is not a financial product but a consumer good and therefore it is not correct to talk about returns when they are offered to the customer. Small details allowed Ubi Banca and Diamond Love Bond to "save themselves", such as to give them the chance to resume the sale of diamonds. For the future, the Antitrust authority asked the two firms to take only a written commitment to act with **greater transparency**, indicating point by point what to explain on their websites and on the pre-contractual information<sup>28</sup>.

Now, the question is: how do we trade these financial instruments on the markets?

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<sup>27</sup> Italy's antitrust authority fines banks, diamond brokers for fraudulent practices, 10/31/2017, <https://www.businessinsurance.com/article/20171031/STORY/912316888/Italys-antitrust-authority-fines-banks,-diamond-brokers-for-fraudulent-practice>

<sup>28</sup> L'Antitrust dà il via libera alla vendita dei diamanti allo sportello, Gianfranco Ursino, 27 ottobre 2018, "IlSole24ore" <https://www.ilsole24ore.com/art/risparmio/2018-10-27/l-antitrust-da-via-libera-vendita-diamanti-sportello-101206.shtml?uuid=AE7AFRSG>

## CHAPTER 2: Regulated markets

Financial instruments are traded in one of two ways: either on an **Exchange** such as NYSE or NASDAQ, or **Over-the-counter**. Exchanges are centralized regulated markets, where securities are traded in a safe standardized, fast and publicly transparent manner. Larger established companies usually choose exchanges to list and trade their securities, but many companies do not meet the listed requirements for an exchange, or do not want to pay the costs. These companies can have their securities traded over-the-counter. OTC trading happens to be decentralized dealer networks; broker/dealers negotiate directly with each-other on computer networks and by phone. This allows small companies stocks a nonstandard quantity to be traded. This also means less public transparency, since OTC prices are not disclosed publicly until after the trade is complete. Stocks which trade on exchange market are called listed stocks. Stocks not on exchange but on over-the-counter market are called unlisted stocks. However there are some stocks that trade on both exchange and OTC. OTC trades tend to be for small company stocks and debt securities. Debt securities such as bonds are generally traded by investment banks, making markets for specific issues. To save the costs of the exchange fees, brokerages often match buys and sells internally or with another brokerage. This is usually referred as **internalizing**. OTC transactions after being seen riskier and less liquid, help companies and institutions promote equity and financial instruments that wouldn't meet the requirements of the regulated established exchanges.

MIFID I (Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004) defined “regulated market” as “a multilateral system operated and/or managed by a market operator, which brings together or facilitates the bringing together of multiple third-party buying and selling interests in financial instruments – in the system and in accordance with its non-discretionary rules – in a way that results in a contract, in respect of the financial instruments admitted to trading under its rules and/or systems, and which is authorized and functions regularly and in accordance with the provisions of Title III<sup>29</sup>.”

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<sup>29</sup> “Regulated market” definition (14) 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

This Directive did not define “multilateral system”, while MIFID II does – a multilateral system means any system or facility in which multiple third-party buying and selling trading interests in financial instruments are able to interact in the system<sup>30</sup>. MIFID I recognizes two big multilateral systems, being very similar between them: regulated markets and multilateral trading facilities (MTF) which means, according to this Directive, a multilateral system, operated by an investment firm or a market operator, which brings together multiple third-party buying and selling interests in financial instruments – in the system and in accordance with non-discretionary rules – in a way that results in a contract in accordance with the provisions of Title II<sup>31</sup>. MIFID II adds a third recognized multilateral system: organised trading facility, or ‘OTF’ which means a multilateral system which is not a regulated market or an MTF and in which multiple third-party buying and selling interests in bonds, structured finance products, emission allowances or derivatives are able to interact in the system in a way that results in a contract in accordance with Title II of this Directive<sup>32</sup>.

So, regulated market is a multilateral system operated and/or managed by a market operator – by a person, a group of persons or the regulated market itself<sup>33</sup>, which puts together in the same “trading venue” a large number of buyers and sellers interested on financial instruments (these are particularly brokers and dealers) - in accordance with its non-discretionary rules – it means that the market operator working on regulated market has no discretion as to how interests may interact – in a way that results in a contract - the MIFID II definition of the 'multilateral system' does not require the conclusion of contracts under the system's rules but only that trading interest is able to interact in the system. We can say that the MIFID requirement that a contract is executed under the system's rules by means of the system's procedures is now a sufficient but not necessary condition to be a multilateral system and

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93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

<sup>30</sup> “Multilateral system” definition (19) DIRECTIVE 2014/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU

<sup>31</sup> “Multilateral trading facilities” definition (15) DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

<sup>32</sup> “Organised trading facility” definition (23) DIRECTIVE 2014/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU

<sup>33</sup> “Market operator” definition (13) DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

hence to be regulated as a trading venue. The system provides the ability for trading interests to interact with a view to dealing and allows multiple participants to see such information about trading interest in financial instruments or submit such information about trading interest in financial instruments for matching, and enables them, through technical systems or other facilities, to take steps to initiate a transaction, or just be informed of a match.

The definition of regulated market should exclude bilateral systems where an investment firm enters into every trade on own account and not as a riskless counterparty interposed between the buyer and seller<sup>34</sup>. A market which is only composed of a set of rules that governs aspects related to membership, admission of instruments to trading, trading between members, reporting and, where applicable, transparency obligations is a regulated market (or an MTF) within the meaning of this Directive and the transactions concluded under those rules are considered to be concluded under the systems of a regulated market (or an MTF).

### **Before the crisis ... Directive 2004/39/EC**

Before the crisis, when the MIFID 1 was still in act, there were simple transparency rules, like Article 19 that conducted the business obligations when providing investment services to clients. Point 3 of this article listed the “appropriate information” that shall be provided in a comprehensive form to clients or potential clients, that were:

- the investment firm and its services,
- financial instruments and proposed investment strategies; this should include appropriate guidance on and warnings of the risks associated with investments in those instruments or in respect of particular investment strategies,
- execution venues, and
- costs and associated charges.

In that way, clients were reasonably able to understand the nature and risks of the investment service and of the specific type of financial instrument that is being offered and, consequently,

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<sup>34</sup> (6) (page 2) DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

to take investment decisions on an informed basis<sup>35</sup>. This Directive also makes rules and obligations to uphold integrity of markets, report transactions, maintain records and fight against market abuse (principally market manipulation and insider dealing). Article 25 made clear that without prejudice to the allocation of responsibilities for enforcing the provisions of Directive 2003/6/EC of the European Parliament and of the Council of 28 January 2003 on insider dealing and market manipulation (market abuse) (1), Member States shall ensure that appropriate measures are in place to enable the competent authority to monitor the activities of investment firms to ensure that they act honestly, fairly and professionally and in a manner which promotes the integrity of the market<sup>36</sup>.

Before to continue with market transparency and integrity, I want to point out what is called “**market abuse**” in Directive 2003/6/EC. The two big problems of market abuse are insider dealing and market manipulation. “Inside information” means information of a precise nature which has not been made public, relating, directly or indirectly, to one or more issuers of financial instruments or to one or more financial instruments and which, if it were made public, would be likely to have a significant effect on the prices of those financial instruments or on the price of related derivative financial instruments. In relation to derivatives on commodities, ‘inside information’ shall mean information of a precise nature which has not been made public, relating, directly or indirectly, to one or more such derivatives and which users of markets on which such derivatives are traded would expect to receive in accordance with accepted market practices on those markets. For persons charged with the execution of orders concerning financial instruments, ‘inside information’ shall also mean information conveyed by a client and related to the client's pending orders, which is of a precise nature, which relates directly or indirectly to one or more issuers of financial instruments or to one or more financial instruments, and which, if it were made public, would be likely to have a significant effect on the prices of those financial instruments or on the price of related derivative financial instruments.

Meanwhile, “**market manipulation**” means:

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<sup>35</sup> Article 19 point 3 (page 17), DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

<sup>36</sup> Article 25 point 1 (page 21), DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004



- ✓ transactions or orders to trade:
  - which give, or are likely to give, false or misleading signals as to the supply of, demand for or price of financial instruments, or
  - which secure, by a person, or persons acting in collaboration, the price of one or several financial instruments at an abnormal or artificial level, unless the person who entered into the transactions or issued the orders to trade establishes that his reasons for so doing are legitimate and that these transactions or orders to trade conform to accepted market practices on the regulated market concerned;
- ✓ transactions or orders to trade which employ fictitious devices or any other form of deception or contrivance;
- ✓ dissemination of information through the media, including the Internet, or by any other means, which gives, or is likely to give, false or misleading signals as to financial instruments, including the dissemination of rumors and false or misleading news, where the person who made the dissemination knew, or ought to have known, that the information was false or misleading. In respect of journalists when they act in their professional capacity such dissemination of information is to be assessed, without prejudice to Article 11, considering the rules governing their profession, unless those persons derive, directly or indirectly, an advantage or profits from the dissemination of the information in question. In particular, the following instances are derived from the core definition given in points (a), (b) and (c) above:
  - conduct by a person, or persons acting in collaboration, to secure a dominant position over the supply of or demand for a financial instrument which has the effect of fixing, directly or indirectly, purchase or sale prices or creating other unfair trading conditions,
  - the buying or selling of financial instruments at the close of the market with the effect of misleading investors acting on the basis of closing prices,
  - taking advantage of occasional or regular access to the traditional or electronic media by voicing an opinion about a financial instrument (or indirectly about its issuer) while having previously taken positions on that financial instrument and profiting subsequently from the impact of the opinions voiced on the price of that

instrument, without having simultaneously disclosed that conflict of interest to the public in a proper and effective way<sup>37</sup>.

Back to MIFID 1's transaction records for transparency, Member States shall require investment firms to keep at the disposal of the competent authority, for at least five years, the relevant data relating to all transactions in financial instruments which they have carried out, whether on own account or on behalf of a client. In the case of transactions carried out on behalf of clients, the records shall contain all the information and details of the identity of the client, and the information required under Council Directive 91/308/EEC of 10 June 1991 on prevention of the use of the financial system for the purpose of money laundering. Member States shall also require investment firms which execute transactions in any financial instruments admitted to trading on a regulated market to report details of such transactions to the competent authority as quickly as possible, and no later than the close of the following working day. This obligation shall apply whether or not such transactions were carried out on a regulated market. The competent authorities shall establish the necessary arrangements in order to ensure that the competent authority of the most relevant market in terms of liquidity for those financial instruments also receives this information. The reports shall, in particular, include details of the names and numbers of the instruments bought or sold, the quantity, the dates and times of execution and the transaction prices and means of identifying the investment firms concerned<sup>38</sup>.

The access to regulated market by a person (physical or legal) is also well-defined: Member States shall require that investment firms from other Member States which are authorised to execute client orders or to deal on own account have the right of membership or have access to regulated markets established in their territory by means of any of the following arrangements:

- directly, by setting up branches in the host Member States;

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<sup>37</sup> Article 1 point 1 & 2 (page 5), DIRECTIVE 2003/6/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 28 January 2003 on insider dealing and market manipulation (market abuse)

<sup>38</sup> Article 25 point 2, 3 & 4 (page 21), DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

- by becoming remote members of or having remote access to the regulated market without having to be established in the home Member State of the regulated market, where the trading procedures and systems of the market in question do not require a physical presence for conclusion of transactions on the market<sup>39</sup>.

On the other hand, the admission or suspension/removal to/from regulated markets of financial instruments to trading is defined by Article 40 & 41 of MIFID: Member States shall require that regulated markets have clear and transparent rules regarding the admission of financial instruments to trading. Those rules shall ensure that any financial instruments admitted to trading in a regulated market are capable of being traded in a fair, orderly and efficient manner and, in the case of transferable securities, are freely negotiable. In the case of derivatives, the rules shall ensure in particular that the design of the derivative contract allows for its orderly pricing as well as for the existence of effective settlement conditions. A transferable security that has been admitted to trading on a regulated market can subsequently be admitted to trading on other regulated markets, even without the consent of the issuer and in compliance with the relevant provisions of Directive 2003/71/EC of the European Parliament and of the Council of... on the prospectus to be published when securities are offered to the public or admitted to trading and amending Directive 2001/34/EC (1). The issuer shall be informed by the regulated market of the fact that its securities are traded on that regulated market. The issuer shall not be subject to any obligation to provide information required under paragraph 3 directly to any regulated market which has admitted the issuer's securities to trading without its consent. In order to ensure the uniform application of these rules, the Commission shall adopt implementing measures which specify the characteristics of different classes of instruments to be considered by the regulated market when assessing whether an instrument is issued in a manner consistent with the conditions laid down in the second subparagraph of paragraph 1 for admission to trading on the different market segments which it operates<sup>40</sup>.

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<sup>39</sup> Article 33 point 1 (page 26) DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

<sup>40</sup> Article 40 points 1-6 (page 28-29) DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

If these conditions are not satisfied, the operator of the regulated market may suspend or even remove from trading a financial instrument, unless such a step would be likely to cause significant damage to the investors' interests or the orderly functioning of the market. Nonetheless the possibility for the operators of regulated markets to inform directly the operators of other regulated markets, Member States shall require that an operator of a regulated market that suspends or removes from trading a financial instrument make public this decision and communicates relevant information to the competent authority. The competent authority shall inform the competent authorities of the other Member States.

## **TRANSPARENCY**

“Member States shall require the regulated market to establish and maintain transparent and non-discriminatory rules, based on objective criteria, governing access to or membership of the regulated market.” This is what Directive 2004/39/EC of 21 April 2004 on markets in financial instruments articulated<sup>41</sup>. Those rules will specify any obligations for the members or participants arising from the constitution and administration of the regulated market, rules relating to transactions on the market, professional standards imposed on the staff of the investment firms or credit institutions that are operating on the market, the conditions established for members and participants other than investment firms and credit institutions and the rules and procedures for the clearing and settlement of transactions concluded on the regulated market.

Before trading on regulated markets, Member States shall, at least, require them to make public current bid and offer prices and the depth of trading interests at those prices which are advertised through their systems for shares admitted to trading. Member States shall require this information to be made available to the public on reasonable commercial terms and on a continuous basis during normal trading hours. Regulated markets may give access, on reasonable commercial terms and on a non-discriminatory basis, to the arrangements they

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<sup>41</sup> Article 42 point 1 (page 29) DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

employ for making public the information. In order to ensure the uniform application of this requirement, the Commission shall adopt implementing measures as regards:

- the range of bid and offers or designated market-maker quotes, and the depth of trading interest at those prices, to be made public;
- the size or type of orders for which pre-trade disclosure may be waived;
- the market model for which pre-trade disclosure may be waived, and in particular, the applicability of the obligation to trading methods operated by regulated markets which conclude transactions under their rules by reference to prices established outside the regulated market or by periodic auction<sup>42</sup>.

After trading, Member States will require regulated markets to make public over again the price, volume and time of the transactions executed in respect of shares admitted to trading. Member States shall require details of all such transactions to be made public, on a reasonable commercial basis and as close to real-time as possible. Regulated markets may give access, on reasonable commercial terms and on a non-discriminatory basis, to the arrangements they employ for making public the information<sup>43</sup>.

### **Trading derivatives in regulated markets**

Commission Regulation (EC) No 1287/2006 of 10 August 2006 implementing Directive 2004/39/EC of the European Parliament and of the Council as regards recordkeeping obligations for investment firms, transaction reporting, market transparency, admission of financial instruments to trading, and defined terms for the purposes of that Directive (otherwise called MIFIR 1) established the requirements that derivative contracts should have, in order to allow to be traded on regulated markets. When admitting to trading a financial

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<sup>42</sup> Article 44 points 1 & 3 (page 30-31) DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

<sup>43</sup> Article 45 point 1 (page 31) DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

instrument of a kind listed in points of Section C (4) to (10) of Annex I to Directive 2004/39/EC, regulated markets shall verify that the following conditions are satisfied:

- the terms of the contract establishing the financial instrument must be clear and unambiguous, and enable a correlation between the price of the financial instrument and the price or other value measure of the underlying;
- the price or other value measure of the underlying must be reliable and publicly available;
- sufficient information of a kind needed to value the derivative must be publicly available;
- the arrangements for determining the settlement price of the contract must be such that the price properly reflects the price or other value measure of the underlying;
- where the settlement of the derivative requires or provides for the possibility of the delivery of an underlying security or asset rather than cash settlement, there must be adequate arrangements to enable market participants to obtain relevant information about that underlying as well as adequate settlement and delivery procedures for the underlying.

Where the financial instruments concerned are of a kind listed in Section C (5), (6), (7) or (10) of Annex I to Directive 2004/39/EC, point (b) of paragraph 1 shall not apply if the following conditions are satisfied:

- the contract establishing that instrument must be likely to provide a means of disclosing to the market, or enabling the market to assess, the price or other value measure of the underlying, where the price or value measure is not otherwise publicly available;
- the regulated market must ensure that appropriate supervisory arrangements are in place to monitor trading and settlement in such financial instruments;
- the regulated market must ensure that settlement and delivery, whether physical delivery or by cash settlement, can be affected in accordance with the contract terms and conditions of those financial instruments<sup>44</sup>.

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<sup>44</sup> Article 37 (page 18) Commission Regulation (EC) No 1287/2006 of 10 August 2006 implementing Directive 2004/39/EC of the European Parliament and of the Council as regards recordkeeping obligations for investment firms, transaction reporting, market transparency, admission of financial instruments to trading, and defined terms for the purposes of that Directive

For the purposes of Section C (7) of Annex I to Directive 2004/39/EC, a contract which is not a spot contract shall be considered as having the characteristics of other derivative financial instruments and not being for commercial purposes if it satisfies the following conditions:

- it is traded on a third country trading facility that performs a similar function to a regulated market or an MTF;
- it is expressly stated to be traded on, or is subject to the rules of, a regulated market, an MTF or such a third country trading facility;
- it is expressly stated to be equivalent to a contract traded on a regulated market, MTF or such a third country trading facility;
- it is cleared by a clearing house or other entity carrying out the same functions as a central counterparty, or there are arrangements for the payment or provision of margin in relation to the contract;
- it is standardised so that, in particular, the price, the lot, the delivery date or other terms are determined principally by reference to regularly published prices, standard lots or standard delivery dates.

A spot contract (as I explained before on future contracts) means a contract for the sale of a commodity, asset or right, under the terms of which delivery is scheduled to be made within the longer of the following periods:

- two trading days;
- the period generally accepted in the market for that commodity, asset or right as the standard delivery period.

However, a contract is not a spot contract if, irrespective of its explicit terms, there is an understanding between the parties to the contract that delivery of the underlying is to be postponed and not to be performed within the period mentioned.

For the purposes of Section C (10) of Annex I to Directive 2004/39/EC, a derivative contract relating to an underlying shall be considered to have the characteristics of other derivative financial instruments if one of the following conditions is satisfied:

- that contract is settled in cash or may be settled in cash at the option of one or more of the parties, otherwise than by reason of a default or other termination event;
- that contract is traded on a regulated market or an MTF;

— the conditions laid down in paragraph 1 are satisfied in relation to that contract.

A contract shall be considered to be for commercial purposes for the purposes of Section C(7) of Annex I to Directive 2004/39/EC, and as not having the characteristics of other derivative financial instruments for the purposes of Sections C(7) and (10) of that Annex, if it is entered into with or by an operator or administrator of an energy transmission grid, energy balancing mechanism or pipeline network, and it is necessary to keep in balance the supplies and uses of energy at a given time<sup>45</sup>.

In addition to derivative contracts of a kind referred to in Section C (10) of Annex I to Directive 2004/39/EC, a derivative contract relating to any of the following shall fall within that Section if it meets the criteria set out in that Section and in Article 38(3):

- telecommunications bandwidth;
- commodity storage capacity;
- transmission or transportation capacity relating to commodities, whether cable, pipeline or other means;
- an allowance, credit, permit, right or similar asset which is directly linked to the supply, distribution or consumption of energy derived from renewable resources;
- a geological, environmental or other physical variable;
- any other asset or right of a fungible nature, other than a right to receive a service, that is capable of being transferred;
- an index or measure related to the price or value of, or volume of transactions in any asset, right, service or obligation<sup>46</sup>.

Talking to derivatives, Directive 2004/39/EC defined through Article 34 that “Member States shall require that investment firms from other Member States have the right of access to

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<sup>45</sup> Article 38 (page 18-19) Commission Regulation (EC) No 1287/2006 of 10 August 2006 implementing Directive 2004/39/EC of the European Parliament and of the Council as regards recordkeeping obligations for investment firms, transaction reporting, market transparency, admission of financial instruments to trading, and defined terms for the purposes of that Directive

<sup>46</sup> Article 39 (page 19) Commission Regulation (EC) No 1287/2006 of 10 August 2006 implementing Directive 2004/39/EC of the European Parliament and of the Council as regards recordkeeping obligations for investment firms, transaction reporting, market transparency, admission of financial instruments to trading, and defined terms for the purposes of that Directive



central counterparty, clearing and settlement systems in their territory for the purposes of finalising or arranging the finalisation of transactions in financial instruments<sup>47</sup>.” Member States will not prevent regulated markets from entering into appropriate arrangements with a central counterparty or clearing house and a settlement system of another Member State with a view to providing for the clearing and/or settlement of some or all trades concluded by market participants under their systems. The competent authority of a regulated market may not oppose the use of central counterparty, clearing houses and/or settlement systems in another Member State except where this is demonstrably necessary in order to maintain the orderly functioning of that regulated market and taking into account the conditions for settlement systems. In order to avoid undue duplication of control, the competent authority will take into account the oversight/supervision of the clearing and settlement system already exercised by the national central banks as overseers of clearing and settlement systems or by other supervisory authorities with competence in relation to such systems<sup>48</sup>.

OTC contracts are outside the market, so not listed. They constitute the greater proportion of derivatives in existence and are unregulated, so generally they have greater risk for the counterparty than do standardized derivatives. OTC is not exactly a market for two reasons:

- the prices in final terms (higher than in regulated markets)
- it exists through the internet/telephone/etc. (it is a sort of trading venue)

Not being a regulated market, Directive 2004/39/EC did NOT apply to OTC basis market. It was not the intention of this Directive to require the application of pre-trade transparency rules to transactions carried out on an OTC basis, the characteristics of which include that they are ad-hoc and irregular and are carried out with wholesale counterparties and are part of a business relationship which is itself characterised by dealings above standard market size,

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<sup>47</sup> Article 34 (page 26) DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

<sup>48</sup> Article 46 point 1 & 2 (page 31) DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

and where the deals are carried out outside the systems usually used by the firm concerned for its business as a systematic internaliser<sup>49</sup>.

### **After the crisis ... Directive 2014/65/EU**

The financial crisis has exposed weaknesses in the functioning and in the transparency of financial markets. The evolution of financial markets has exposed the need to strengthen the framework for the regulation of markets in financial instruments, including where trading in such markets takes place over-the-counter (OTC), in order to increase transparency, better protect investors, reinforce confidence, address unregulated areas, and ensure that supervisors are granted adequate powers to fulfil their tasks<sup>50</sup>. For these reasons, a new framework establishing uniform requirements for the transparency of transactions in markets for financial instruments should be put in place. The framework should establish comprehensive rules for a broad range of financial instruments. It should complement requirements for the transparency of orders and transactions in respect of shares established in Directive 2004/39/EC of the European Parliament and of the Council<sup>51</sup>. The definitions of regulated market and multilateral trading facility (MTF) should be clarified and remain closely aligned with each other to reflect the fact that they represent effectively the same organised trading functionality. The definitions, as it was before year 2008, should exclude bilateral systems where an investment firm enters into every trade on own account, even as a riskless counterparty interposed between the buyer and seller. Regulated markets and MTFs should not be allowed to execute client orders against proprietary capital. The term ‘system’ encompasses all those markets that are composed of a set of rules and a trading platform as well as those that only function on the basis of a set of rules.

In order to make Union financial markets more transparent and efficient and to level the playing field between various venues offering multilateral trading services, it is necessary to

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<sup>49</sup> Point (53) (page 6) DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments. OJ of EU, ISSN 1725-2555, L 145, Vol 47, 30 April 2004

<sup>50</sup> Point 4, Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance, OJ L 173, 12.6.2014, p. 349–496

<sup>51</sup> Point 1, Regulation (EU) No. 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 Text with EEA relevance, OJ L 173, 12.6.2014, p. 84–148

introduce a new trading venue category of **Organised Trading Facility (OTF)** for bonds, structured finance products, emissions allowances and derivatives and to ensure that it is appropriately regulated and applies non-discriminatory rules regarding access to the facility. The term ‘non-discretionary rules’ means rules that leave the regulated market or the market operator or investment firm operating an MTF with no discretion as to how interests may interact. This new category OTF will complement the existing types of trading venues. While regulated markets and MTFs have non-discretionary rules for the execution of transactions, the operator of an OTF should carry out order execution on a discretionary basis subject, where applicable, to the pre-transparency requirements and best execution obligations. Consequently, conduct of business rules, best execution and client order handling obligations should apply to the transactions concluded on an OTF operated by an investment firm or a market operator<sup>52</sup>.

For the purposes of Directive 2014/65/EU and of Regulation (EU) No 600/2014, which regulate both OTC and exchange-traded derivatives within the meaning of Regulation (EU) No 600/2014, activities that are considered to be objectively measurable as reducing risks directly relating to the commercial activity or treasury financing activity and intragroup transactions should be considered in a consistent way with Regulation (EU) No 648/2012<sup>53</sup>. The aim of Directive 2014/65/EU is to make financial markets in the European Union (EU) more robust and transparent. It creates a new legal framework that better regulates trading activities on financial markets and enhances investor protection. The new rules, called ‘MiFID 2’, revised the legislation no longer in place and is applied from January 2018. Which are the problems that MIFID 2 has to deal with?

## **LACK of transparency**

One of the main problems is the lack of transparency. Some concerns have emerged that the transparency regime set out in the MIFID is insufficient for market participants in both the

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<sup>52</sup> Points 7- 9, Regulation (EU) No. 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 Text with EEA relevance, OJ L 173, 12.6.2014, p. 84–148

<sup>53</sup> Point 21, Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance, OJ L 173, 12.6.2014, p. 349–496

equities and non-equities markets. With respect to equity markets, the growth of electronic trading has facilitated the generation of dark liquidity and the use of dark orders which market participants apply to minimize market impact costs. However, an increased use of dark pools raises regulatory concerns as it may ultimately affect the quality of the price discovery mechanism on the “lit” markets. Market participants as well as supervisors have expressed concerns about time delays in the publication of trade reports in the equities markets. For non-equities markets, transparency requirements are not covered by the MIFID and are only regulated at national level. These are not always considered sufficient. In addition, there is the issue of the quality and format of the information, as well as the cost charged for the information and the difficulty in consolidating the information. If these issues are not fully addressed, they could undermine the principal objectives of MIFID as regards transparency, competition between financial services providers and investor protection. The rules of Directive 2014/65/EU strengthen the **transparency requirements** that apply before and after financial instruments are traded, for instance when market participants have to publish information regarding the prices of financial instruments. These requirements are calibrated differently depending on the type of financial instrument. More investors have become active in the financial markets and are offered a more complex wide-ranging set of services and instruments and, in view of those developments, it is necessary to provide for a degree of harmonization to offer investors a high level of protection across the Union. When Directive 2004/39/EC was adopted, the increasing dependence of investors on personal recommendations required to include the provision of investment advice as an investment service subject to authorization and to specific conduct of business obligations. The continuous relevance of personal recommendations for clients and the increasing complexity of services and instruments require enhancing the conduct of business obligations in order to strengthen the protection of investors. On the other hand, this Directive improves the last one; for example, Article 36 of Directive 2014/65/EU defines the access to regulated market, so that Member States shall require that investment firms from other Member States which are authorised to execute client orders or to deal on own account have the right of membership or have access to regulated markets established in their territory by means of any of the following arrangements:

- ✓ directly, by setting up branches in the host Member States;
- ✓ by becoming remote members of or having remote access to the regulated market without having to be established in the home Member State of the regulated market,

where the trading procedures and systems of the market in question do not require a physical presence for conclusion of transactions on the market<sup>54</sup>,

which is the same regulation as on Directive 2004/36/EC. But, Article 50 of MIFID 2 adds a new rule: business clocks shall be synchronized: Member States shall require that all trading venues and their members or participants synchronize the business clocks they use to record the date and time of any reportable event<sup>55</sup>. Member States will also require that regulated markets have clear and transparent rules regarding the admission of financial instruments to trading.

Those rules shall ensure that any financial instruments admitted to trading on a regulated market are capable of being traded in a fair, orderly and efficient manner and, in the case of transferable securities, are freely negotiable. In the case of derivatives, the rules referred above will ensure in particular that the design of the derivative contract allows for its orderly pricing as well as for the existence of effective settlement conditions.

### **New trading technology**

Under the new rules, controls must be established for trading activities which are performed electronically at a very high speed, such as “algorithmic trading”. According to the Directive in force, “algorithmic trading” means trading in financial instruments where a computer algorithm automatically determines individual parameters of orders such as whether to initiate the order, the timing, price or quantity of the order or how to manage the order after its submission, with limited or no human intervention, and does not include any system that is only used for the purpose of routing orders to one or more trading venues or for the processing of orders involving no determination of any trading parameters or for the

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<sup>54</sup> Article 36 point 1 “Access to regulated market” p. 75, Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance, OJ L 173, 12.6.2014, p. 349–496

<sup>55</sup> Article 50 point 1 “Synchronization of business clocks” p. 87, Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance, OJ L 173, 12.6.2014, p. 349–496

confirmation of orders or the post-trade processing of executed transactions<sup>56</sup>. The implementation of MIFID combined with the effect of technological advances has dramatically changed the structure of financial markets across Europe, notably in the equity space and made the conduct of market participants evolve to reflect these developments. Rapid technological changes, in particular the growth of automated trading and high frequency trading (HFT) raise concerns about possible new risks to the orderly functioning of markets, even more so that not all High Frequency traders are subject to authorization and supervision under the MIFID's new rules. Potential risks from increased use of technology are mitigated by a combination of rules aiming to ensure these trading techniques do not create disorderly markets. The use of trading technology has evolved significantly in the past decade and is now extensively used by market participants. Many market participants now make use of algorithmic trading where a computer algorithm automatically determines aspects of an order with minimal or no human intervention. Risks arising from algorithmic trading should be regulated. However, the use of algorithms in post-trade processing of executed transactions does not constitute algorithmic trading. An investment firm that engages in algorithmic trading pursuing a market making strategy should carry out that market making continuously during a specified proportion of the trading venue's trading hours. Regulatory technical standards should clarify what constitutes specified proportion of the trading venue's trading hours by ensuring that such specified proportion is significant in comparison to the total trading hours, taking into account the liquidity, scale and nature of the specific market and the characteristics of the financial instrument traded<sup>57</sup>. Investment firms that engage in algorithmic trading pursuing a market making strategy should have in place appropriate systems and controls for that activity. Such an activity should be understood in a way specific to its context and purpose.

A specific subset of algorithmic trading is "High-Frequency Algorithmic Trading" (HFT) meaning an algorithmic trading technique characterised by: infrastructure intended to minimize network and other types of latencies, including at least one of the following facilities for algorithmic order entry: co-location, proximity hosting or high-speed direct electronic access, system-determination of order initiation, generation, routing or execution

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<sup>56</sup> Article 4 point 39 "Algorithmic trading", Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance, OJ L 173, 12.6.2014, p. 349–496

<sup>57</sup> Point 59, Directive 2014/65/EU (MIFID 2) of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance, OJ L 173, 12.6.2014, p. 349–496

without human intervention for individual trades or orders, and high message intraday rates which constitute orders, quotes or cancellations. In particular, high-frequency algorithmic trading may contain elements such as order initiation, generating, routing and execution which are determined by the system without human intervention for each individual trade or order, short time-frame for establishing and liquidating positions, high daily portfolio turnover, high order-to-trade ratio intraday and ending the trading day at or close to a flat position. High-frequency algorithmic trading is characterised, among others, by high message intra-day rates which constitute orders, quotes or cancellations. In determining what constitutes high message intra-day rates, the identity of the client ultimately behind the activity, the length of the observation period, the comparison with the overall market activity during that period and the relative concentration or fragmentation of activity should be taken into account. High-frequency algorithmic trading is typically done by the traders using their own capital to trade and rather than being a strategy in itself is usually the use of sophisticated technology to implement more traditional trading strategies such as market making or arbitrage<sup>58</sup>. Technical advances have enabled high-frequency trading and an evolution of business models. High-frequency trading is facilitated by the co-location of market participants' facilities in close physical proximity to a trading venue's matching engine. In order to ensure orderly and fair trading conditions, it is essential to require trading venues to provide such co-location services on a non-discriminatory, fair and transparent basis. The use of trading technology has increased the speed, capacity and complexity of how investors trade. It has also enabled market participants to facilitate direct electronic access by their clients to markets through the use of their trading facilities, through direct market access or sponsored access. Trading technology has provided benefits to the market and market participants generally such as wider participation in markets, increased liquidity, narrower spreads, reduced short term volatility and the means to obtain better execution of orders for clients. Yet that trading technology also gives rise to a number of potential risks such as an increased risk of the overloading of the systems of trading venues due to large volumes of orders, risks of algorithmic trading generating duplicative or erroneous orders or otherwise malfunctioning in a way that may create a disorderly market.

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<sup>58</sup> Point 61, Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance, OJ L 173, 12.6.2014, p. 349–496

Member States will require a regulated market to have in place effective systems, procedures and arrangements to ensure its trading systems (including algorithmic trading ones) are resilient, have sufficient capacity to deal with peak order and message volumes, are able to ensure orderly trading under conditions of severe market stress, are fully tested to ensure such conditions are met and are subject to effective business continuity arrangements to ensure continuity of its services if there is any failure of its trading systems. It is also required to regulated market to be able to temporarily halt or constrain trading if there is a significant price movement in a financial instrument on that market or a related market during a short period and, in exceptional cases, to be able to cancel, vary or correct any transaction. Member States shall require a regulated market to ensure that the parameters for halting trading are appropriately calibrated in a way which takes into account the liquidity of different asset classes and sub-classes, the nature of the market model and types of users and is sufficient to avoid significant disruptions to the orderliness of trading. Regulated market should have in place effective systems, procedures and arrangements, including requiring members or participants to carry out appropriate testing of algorithms and providing environments to facilitate such testing, to ensure that algorithmic trading systems cannot create or contribute to disorderly trading conditions on the market and to manage any disorderly trading conditions which do arise from such algorithmic trading systems, including systems to limit the ratio of unexecuted orders to transactions that may be entered into the system by a member or participant, to be able to slow down the flow of orders if there is a risk of its system capacity being reached and to limit and enforce the minimum tick size that may be executed on the market. Regulated market should be able to identify, by means of flagging from members or participants, orders generated by algorithmic trading, the different algorithms used for the creation of orders and the relevant persons initiating those orders. That information shall be available to competent authorities upon request<sup>59</sup>.

### **Commodity derivatives market regulation<sup>60</sup>**

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<sup>59</sup> Article 48 “Systems resilience, circuit breakers and electronic trading”, Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance, OJ L 173, 12.6.2014, p. 349–496

<sup>60</sup> Points 5 & 6, Section C Financial Instruments Annex 1, Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance, OJ L 173, 12.6.2014, p. 349–496



Commodity derivatives, defined by (5) and (6) of Section C Financial Instruments, Annex 1, are put in attention. In commodities markets, the increased presence of financial investors, especially in some key benchmark commodity derivative markets, like oil and agricultural markets, may have led to excessive price increases and volatility. For derivatives and especially commodities derivatives there is no oversight of positions and their management that could prevent disorderly markets and investor detriment. The lack of clarity and consistency in the regulatory framework around emission allowances has negative impacts on market integrity and investor protection in the spot secondary market for emission allowances. Existing transaction reporting requirements fail to provide competent authorities with a full view of the market because their scope is too narrow (financial instruments only traded OTC are currently not reportable) and because they are too divergent. Experience, especially during the financial crisis has shown that there is a lack of powers to ban or restrict the trading or distribution of a product or service in case of adverse developments or limitations, as well as investigatory powers or sanctions<sup>61</sup>.

In order to manage and have control on position limits in commodity markets, Member States shall ensure that competent authorities, in line with the methodology for calculation determined by ESMA, establish and apply position limits on the size of a net position which a person can hold at all times in commodity derivatives traded on trading venues and economically equivalent OTC contracts (cleared contracts – I will explain later in Chapter 3). The limits shall be set on the basis of all positions held by a person and those held on its behalf at an aggregate group level in order to:

- ✓ prevent market abuse;
- ✓ support orderly pricing and settlement conditions, including preventing market distorting positions, and ensuring, in particular, convergence between prices of derivatives in the delivery month and spot prices for the underlying commodity, without prejudice to price discovery on the market for the underlying commodity.

Position limits shall not apply to positions held by or on behalf of a non-financial entity and which are objectively measurable as reducing risks directly relating to the commercial activity of that non-financial entity. Position limits shall specify clear quantitative thresholds for the maximum size of a position in a commodity derivative that persons can hold. ESMA

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<sup>61</sup> SEC(2011) 1227 final, Commission staff working paper, “Executive Summary of the impact assessment” accompanying the document {COM(2011) 656 final} and {SEC(2011) 1226 final}

(European Securities and Markets Authority) shall develop draft regulatory technical standards to determine the methodology for calculation that competent authorities are to apply in establishing the spot month position limits and other months' position limits for physically settled and cash settled commodity derivatives based on the characteristics of the relevant derivative. The methodology for **calculation** shall take into account at least the following factors:

- ✓ the maturity of the commodity derivative contracts;
- ✓ the deliverable supply in the underlying commodity;
- ✓ the overall open interest in that contract and the overall open interest in other financial instruments with the same underlying commodity;
- ✓ the volatility of the relevant markets, including substitute derivatives and the underlying commodity markets;
- ✓ the number and size of the market participants;
- ✓ the characteristics of the underlying commodity market, including patterns of production, consumption and transportation to market;
- ✓ the development of new contracts.

ESMA shall take into account experience regarding the position limits of investment firms or market operators operating a trading venue and of other jurisdictions. This competent authority shall set limits for each contract in commodity derivatives traded on trading venues based on the methodology for calculation determined by ESMA. That position limit shall include economically equivalent OTC contracts. The competent authority shall also review position limits where there is a significant change in deliverable supply or open interest or any other significant change on the market, based on its determination of deliverable supply and open interest and reset the position limit in accordance with the methodology for calculation developed by ESMA.

Competent authorities shall notify ESMA of the exact position limits they intend to set in accordance with the methodology for calculation established by ESMA. Within two months following receipt of the notification, ESMA shall issue an opinion to the competent authority concerned assessing the compatibility of position limits with the objectives and with the methodology for calculation established by ESMA. This Authority shall also publish the

opinion on its website<sup>62</sup>. The competent authority concerned shall modify the position limits in accordance with ESMA's opinion or provide ESMA with justification why the change is considered to be unnecessary. Where a competent authority imposes limits contrary to an ESMA opinion, it shall immediately publish on its website a notice fully explaining its reasons for doing so.

Where the same commodity derivative is traded in significant volumes on trading venues in more than one jurisdiction, the competent authority of the trading venue where the largest volume of trading takes place (the central competent authority) shall set the single position limit to be applied on all trading in that contract. The central competent authority shall consult the competent authorities of other trading venues on which that derivative is traded in significant volumes on the single position limit to be applied and any revisions to that single position limit. Where competent authorities do not agree, they shall state in writing the full and detailed reasons why they consider that the requirements laid down in paragraph 1 are not met. ESMA shall settle any dispute arising from a disagreement between competent authorities in accordance with its powers under Article 19 of Regulation (EU) No 1095/2010.

The competent authorities of the trading venues where the same commodity derivative is traded and the competent authorities of position holders in that commodity derivative shall put in place cooperation arrangements including exchange of relevant data with each other in order to enable the monitoring and enforcement of the single position limit. ESMA shall monitor at least once a year the way competent authorities have implemented the position limits set in accordance with the methodology for calculation established by ESMA. In doing so, ESMA shall ensure that a single position limit effectively applies to the same contract irrespective of where it is traded.

Member States shall ensure that an investment firm or a market operator operating a trading venue which trades commodity derivatives apply **position management controls**. Those controls shall include at least, the powers for the trading venue to:

- ✓ monitor the open interest positions of persons;
- ✓ access information, including all relevant documentation, from persons about the size and purpose of a position or exposure entered into, information about beneficial or

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<sup>62</sup> [www.esma.europa.eu](http://www.esma.europa.eu)

underlying owners, any concert arrangements, and any related assets or liabilities in the underlying market;

- ✓ require a person to terminate or reduce a position, on a temporary or permanent basis as the specific case may require and to unilaterally take appropriate action to ensure the termination or reduction if the person does not comply; and
- ✓ where appropriate, require a person to provide liquidity back into the market at an agreed price and volume on a temporary basis with the express intent of mitigating the effects of a large or dominant position.

The position limits and position management controls shall be transparent and non-discriminatory, specifying how they apply to persons and taking account of the nature and composition of market participants and of the use they make of the contracts submitted to trading. The investment firm or market operator operating the trading venue shall inform the competent authority of the details of position management controls. The competent authority shall communicate the same information as well as the details of the position limits it has established to ESMA, which shall publish and maintain on its website a database with summaries of the position limits and position management controls. ESMA shall develop draft regulatory technical standards to determine:

- ✓ the criteria and methods for determining whether a position qualifies as reducing risks directly relating to commercial activities;
- ✓ the methods to determine when positions of a person are to be aggregated within a group;
- ✓ the criteria for determining whether a contract is an economically equivalent OTC contract to that traded on a trading venue, in a way that facilitates the reporting of positions taken in equivalent OTC contracts to the relevant competent authority;
- ✓ the definition of what constitutes the same commodity derivative and significant volumes;
- ✓ the methodology for aggregating and netting OTC and on-venue commodity derivatives positions to establish the net position for purposes of assessing compliance with the limits. Such methodologies shall establish criteria to determine which positions may be netted against one another and shall not facilitate the build-up of positions in a manner inconsistent with the objectives;

- ✓ the procedure setting out how persons may apply for the exemption and how the relevant competent authority will approve such applications;
- ✓ the method for calculation to determine the venue where the largest volume of trading in a commodity derivative takes place and significant volumes.

Competent authorities shall not impose limits except in exceptional cases where they are objectively justified and proportionate taking into account the liquidity of the specific market and the orderly functioning of that market. Competent authorities shall publish on their website the details of the more restrictive position limits they decide to impose, which shall be valid for an initial period not exceeding six months from the date of their publication on the website. The more restrictive position limits may be renewed for further periods not exceeding six months at a time if the grounds for the restriction continue to be applicable. If not renewed after that six-month period, they shall automatically expire. Where competent authorities decide to impose more restrictive position limits, they shall notify ESMA. The notification shall include a justification for the more restrictive position limits. ESMA shall, within 24 hours, issue an opinion on whether it considers that the more restrictive position limits are necessary to address the exceptional case. The opinion shall be published on ESMA's website. Where a competent authority imposes limits contrary to an ESMA opinion, it shall immediately publish on its website a notice fully explaining its reasons for doing so. Member States shall provide that competent authorities can apply their powers to impose sanctions under this Directive for the infringements of position limits set in accordance with this Article to:

- ✓ positions held by persons situated or operating in its territory or abroad which exceed the limits on commodity derivative contracts the competent authority has set in relation to contracts on trading venues situated or operating in its territory or economically equivalent OTC contracts;
- ✓ positions held by persons situated or operating in its territory which exceed the limits on commodity derivative contracts set by competent authorities in other Member States<sup>63</sup>.

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<sup>63</sup> Article 57 "Position limits and position management controls in commodity derivatives" Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance, OJ L 173, 12.6.2014, p. 349–496

Position reporting is defined by categories of position holders. Member States shall ensure that an investment firm or a market operator operating a trading venue which trades commodity derivatives or emission allowances or derivatives thereof:

- ✓ make public a weekly report with the aggregate positions held by the different categories of persons for the different commodity derivatives or emission allowances or derivatives thereof traded on their trading venue, specifying the number of long and short positions by such categories, changes thereto since the previous report, the percentage of the total open interest represented by each category and the number of persons holding a position in each category in accordance with paragraph 4 and communicate that report to the competent authority and to ESMA; ESMA shall proceed to a centralized publication of the information included in those reports;
- ✓ provide the competent authority with a complete breakdown of the positions held by all persons, including the members or participants and the clients thereof, on that trading venue, at least on a daily basis.

The obligation laid down in point (a) shall only apply when both the number of persons and their open positions exceed minimum thresholds. Member States shall ensure that investment firms trading in commodity derivatives or emission allowances or derivatives thereof outside a trading venue provide the competent authority of the trading venue where the commodity derivatives or emission allowances or derivatives thereof are traded or the central competent authority where the commodity derivatives or emission allowances or derivatives thereof are traded in significant volumes on trading venues in more than one jurisdiction at least on a daily basis with a complete breakdown of their positions taken in commodity derivatives or emission allowances or derivatives thereof traded on a trading venue and economically equivalent OTC contracts, as well as of those of their clients and the clients of those clients until the end client is reached, in accordance with Article 26 of Regulation (EU) No 600/2014 and, where applicable, of Article 8 of Regulation (EU) No 1227/2011<sup>64</sup>.

## Competent Authorities

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<sup>64</sup> Article 58 “Position reporting by categories of position holders” Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance, OJ L 173, 12.6.2014, p. 349–496

On 23 September 2009, the Commission adopted proposals for three regulations establishing the European System of Financial Supervision, including the creation of **three European Supervisory Authorities** (ESAs) to contribute to a consistent application of Union legislation and to the establishment of high-quality common regulatory and supervisory standards and practices. The ESAs comprise the European Supervisory Authority (**European Banking Authority**) (EBA) established by Regulation (EU) No 1093/2010 of the European Parliament and of the Council<sup>65</sup>, the European Supervisory Authority (**European Insurance and Occupational Pensions Authority**) (EIOPA) established by Regulation (EU) No 1094/2010 of the European Parliament and of the Council<sup>66</sup>, and the European Supervisory Authority (**European Securities and Markets Authority**) (ESMA) established by Regulation (EU) No 1095/2010 of the European Parliament and of the Council<sup>67</sup>. The ESAs have a crucial role to play in safeguarding the stability of the financial sector. It is therefore essential to ensure continuously that the development of their work is a matter of high political priority and that they are adequately resourced.

## ESMA

ESMA is an independent EU Authority that contributes to safeguarding the stability of the European Union's financial system by enhancing the protection of investors and promoting stable and orderly financial markets. It achieves this by: assessing risks to investors, markets and financial stability, completing a single rulebook for EU financial markets, promoting supervisory convergence and directly supervising credit rating agencies and trade repositories. As well as developing supervisory convergence amongst securities regulators, it aims to do so across financial sectors by working closely with the other European Supervisory Authorities competent in the field of banking (EBA), and insurance and occupational pensions (EIOPA). Whilst ESMA is independent, there is full accountability towards the European Parliament where it appears before the Economic and Monetary Affairs Committee (ECON), at their request for formal hearings. Full accountability towards the Council of the European Union and European Commission that also exists. The Authority will therefore report on its activities

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<sup>65</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1541722831319&uri=CELEX:32010R1093>

<sup>66</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1541722882248&uri=CELEX:32010R1094>

<sup>67</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1541722945563&uri=CELEX:32010R1095>

regularly at meetings but also through an Annual Report. The big mission of this Authority is to enhance investor protection and promote stable and orderly financial market. ESMA achieves its **mission** and **objectives** through **four activities**:

1. Assessing risks to investors, markets and financial stability
2. Completing a single rulebook for EU financial markets
3. Promoting supervisory convergence
4. Directly supervising specific financial entities

The purpose of assessing risks to investors, markets and financial stability is to spot emerging trends, risks and vulnerabilities, and where possible opportunities, in a timely fashion so that they can be acted upon. ESMA uses its unique position to identify market developments that threaten financial stability, investor protection or the orderly functioning of financial markets. ESMA's risk assessments build on and complement risk assessments made by other European Supervisory Authorities (ESAs) and National Competent Authorities (NCAs) and contribute to the systemic work undertaken by the European Systemic Risk Board (ESRB), which increasingly focuses on stability risks in financial markets. Internally, the output of the risk assessment function feeds into ESMA's work on the single rulebook, supervisory convergence and the direct supervision of specific financial entities. Externally, it promotes transparency and investor protection by making information available to investors via our public registries and databases and, where needed, by issuing warnings to investors. The risk analysis function closely monitors the benefits and risks of financial innovation in EU.

The purpose of completing a single rulebook for EU financial markets is to enhance the EU Single Market by creating a level playing field for investors and issuers across the EU. ESMA contributes to strengthening the quality of the single rulebook for EU financial markets by developing Technical Standards and by providing advice to EU Institutions on legislative projects. This standard setting role was the primary task of ESMA in its development phase.

Supervisory convergence is the consistent implementation and application of the same rules using similar approaches across the 28 Member States of European union. The purpose of promoting supervisory convergence is to ensure a level playing field of high quality regulation and supervision without regulatory arbitrage or a race to the bottom between Member States. The consistent implementation and application of rules ensures the safety of the financial system, protects investors and ensures orderly markets. Supervisory



convergence implies sharing best practices and realizing efficiency gains for both the NCAs and the financial industry. This activity is performed in close cooperation with NCAs. ESMA's position in the ESFS makes it qualified to conduct peer reviews, set up EU data reporting requirements, thematic studies and common work programs, draft opinions, guidelines and Q&As; but also build a close network that can share best practices and train supervisors. ESMA's participation in supervisory colleges for **Central Counterparties (CCPs)** contributes to supervisory convergence for this specific area. ESMA actively supports international supervisory coordination.

ESMA is the direct supervisor of specific financial entities: Credit Rating Agencies (CRAs) and Trade Repositories (TRs). These entities form essential parts of the EU's market infrastructure. ESMA's four activities are closely linked. Insights gained from risk assessment feed into the work on the single rulebook, supervisory convergence and direct supervision, and vice versa. We consider supervisory convergence to be the main outcome of the implementation and application of the single rulebook. The direct supervision of CRAs and TRs benefits from and also feeds into our risk assessment and single rulebook activities<sup>68</sup>.

So, ESMA, having completed the technical standards and technical advices, has contributed to the smooth implementation of MiFID II/MIFIR by issuing Q&As, and Guidelines, which will be updated when necessary. On an ongoing basis, ESMA will have a number of duties including:

- ✓ the on-going publication of information on its website (e.g. reference data or volumes of trading executed under certain waivers for the purpose of the double volume cap mechanism),
- ✓ the production of reports in cooperation with the European Commission (e.g. on the functioning of Organised Trading Facilities or Small-Medium Enterprises growth markets),
- ✓ the registers on trading venues, data reporting service providers investment firms and systematic internaliser,
- ✓ the monitoring and publication of opinions of how certain provisions are implemented (e.g. implementation of position limits or use of pre-trade transparency waivers),
- ✓ specific product intervention powers where ESMA and national supervisors are able to temporarily prohibit or restrict the marketing, distribution or sale of a financial

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<sup>68</sup> ESMA [www.esma.europa.eu](http://www.esma.europa.eu)

instrument or a type of financial activity or practice where certain conditions are met<sup>69</sup>.

Regulation (EU) No. 1095/2010 authorizes ESMA as competent authority and this is reaffirmed from Regulation (EU) No. 600/2014 by point (51): The Commission should adopt the draft regulatory technical standards developed by ESMA regarding the precise characteristics of trade transparency requirements, regarding the monetary, foreign exchange and financial stability policy operations and the types of the certain transactions relevant under this Regulation, regarding the detailed conditions for waivers from pre-trade transparency, regarding deferred post-trade publication arrangements, regarding the obligation to make pre-trade and post-trade data available separately, regarding the criteria for the application of the pre-trade transparency obligations for systematic internaliser, regarding post-trade disclosure by investment firms, regarding the content and frequency of data requests for the provision of information for the purposes of transparency and other calculations, regarding transactions that do not contribute to the price discovery process, regarding the order data to be retained, regarding the content and specifications of transaction reports, regarding the content and specification of financial instrument reference data, regarding the types of contracts which have a direct, substantial and foreseeable effect within the Union and the cases where the trading obligation for derivatives is necessary, regarding the requirements for systems and procedures to ensure that transactions in cleared derivatives are submitted and accepted for clearing, specifying types of indirect clearing service arrangements, regarding derivatives subject to an obligation to trade on organised trading venues, regarding non-discriminatory access to a CCP and to a trading venue, regarding non-discriminatory access to and obligation to license benchmarks, and concerning the information that the applicant third-country firm should provide to ESMA in its application for registration. The Commission should adopt those draft regulatory technical standards by means of delegated acts pursuant to Article 290 TFEU and in accordance with Articles 10 to 14 of Regulation (EU) No 1093/2010<sup>70</sup>.

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<sup>69</sup> MiFID II <https://www.esma.europa.eu/policy-rules/mifid-ii-and-mifir>

<sup>70</sup> Point 51, Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance, OJ L 173, 12.6.2014, p. 349–496

## CHAPTER 3: Central Counterparties should regulate OTC Derivatives

The Over-the-counter market is a decentralized market in which unlisted securities trade. The OTC market is not a physical location, prices are negotiated, and trades are made from computer networks, phone calls and e-mails. Dealers act as market makers, and quote prices at which they buy and sell. OTC market usually have both customer market where dealers trade with corporations and institutions, and interdealer market where dealers trade with each other. Thousands of unlisted securities trades on the OTC market. They are often small companies who don't meet the requirements of being listed on exchanges such as NYSE (New York Stock Exchange). While OTC markets function well during normal times, there is an additional risk, called a **counterparty risk**, that one party in the transaction will default prior to the conclusion of the trade and/or will not make the current and future payments required of them by the contract. OTC markets are considered **riskier** than exchange-traded stocks. OTC markets are less transparent than exchange markets and subject to fewer regulations. Trades can be made quietly between two parties without others knowing the price. The OTC market lack of transparency can cause problems. During the 2008 financial crisis, mortgage backed securities (MBS) and other derivatives that traded sourly on the OTC market could not be consistently priced - as a result, buyers stopped buying, liquidity dried up and dealers withdrew. Liquidity problems went worse, resulting in the worldwide as "the credit crunch" .

Over-the-counter derivatives ("OTC derivative contracts") lack transparency as they are privately negotiated contracts and any information concerning them is usually only available to the contracting parties. They create a complex web of interdependence which can make it difficult to identify the nature and level of risks involved. The financial crisis has demonstrated that such characteristics increase uncertainty in times of market stress and, accordingly, pose risks to financial stability<sup>71</sup>. The 2010 Global financial crisis highlighted the importance of controlling risk in Over-the-Counter derivatives to maintain global financial

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<sup>71</sup> Point 4, p. 2, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1-59

stability. While OTC derivatives did not cause the global financial crisis (it came from the credit crisis caused by the 2007 US housing crisis), they likely contributed to amplifying various problems and provided channels for **systemic risk** to propagate. Historically, most OTC risk mitigants focused on reducing the possibility of the initial incentive. Reducing the default risk of large, important market participants is an obvious route. Capital requirements, regulation and prudential supervision can contribute to this but there is a balance between reduction of default risk and encouraging financial firms to grow and prosper. A derivative trade is a contractual relationship that may be in force from a few days to several decades. During the lifetime of the contract, the two counterparties have claims against each other such as in the form of cashflows that evolve as a function of underlying assets and market conditions. Derivative transactions create counterparty risk due to the risk that the counterparty to a transaction defaults before the final settlement of the transaction's cash flows<sup>72</sup> (insolvency of one party). This counterparty risk in turn creates systemic risk due to derivatives trading volume being dominated by a relatively small number of large derivatives counterparties – dealers – that are then key nodes of the financial system. Counterparty risk refers to the possibility that a counterparty may not meet its contractual requirements under the contract when they become owed. Counterparty risk is managed over time through **clearing**. This can be performed **bilaterally**, where each counterparty manages the risk of the other, or **centrally** through a **central counterparty (CCP)**. Centrally cleared OTC derivatives were apparently much safer than their bilateral equivalents, during the instability period. Unfortunately, bilateral clearing is far more leading for OTC derivatives. **Bilateral OTC derivatives** are essentially private contracts that may be illiquid and have non-standard or exotic features<sup>73</sup>. One particular problem in relation to counterparty risk in OTC derivatives is the close-out process. When a party to a contract defaults, their counterparties typically need to terminate and replace the underlying trades. In the aftermath of a large default, the OTC derivative replacement process can be associated with market illiquidity and large volatility of prices on markets.

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<sup>72</sup> Article 2, (11), p. 15, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

<sup>73</sup> GREGORY Jon, *Central Counterparties: Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives*, John Wiley & Sons Inc, Wiley Finance Series, 2014, ISBN 978-1-118-89151-3 (page 3)

At the 26 September 2009 summit in Pittsburgh, G20 leaders agreed that ALL standardized OTC derivatives would, in the future, need to be cleared through CCPs<sup>74</sup>. This was done with the belief that a CCP can reduce systemic risk, operational risks, market manipulation and fraud, and contribute to overall market stability. In June 2010, G20 leaders in Toronto reaffirmed their commitment and also committed to accelerate the implementation of strong measures to improve transparency and regulatory oversight of OTC derivative contracts in an internationally consistent and non-discriminatory way. Some of the objectives in order to achieve market stability and transparency were:

- ✓ the prices of derivatives must better reflect risk and the cost of the future market infrastructure must be carried by market participants alone and not by taxpayers;
- ✓ CCPs and their risk management systems must not be financed by users or be rivals;
- ✓ reporting standards must be laid down for all derivatives so as to ensure that they are communicated to central trade repositories;
- ✓ in particular for SMEs, exemptions and lower capital requirements must be allowed for bilateral derivatives;
- ✓ CDS derivatives must be subject to independent central clearing; and if necessary, where cumulative risks are involved, it must be possible to restrict them or, on a case-by-case basis, prohibit them;
- ✓ national regulatory authorities must be given access to trade repositories;
- ✓ responsibility for authorizing CCPs in the European Union and third states should be given to the European Securities and Markets Authority (ESMA)<sup>75</sup>.

2009 is obviously not the starting point of clearing in OTC derivative markets. From the late 1990s, several major CCPs began to provide clearing and settlement services for OTC derivatives and other non-exchange-traded products. This was to help market participants to reduce counterparty risk and benefit from the fungibility that central clearing creates. These OTC transactions are still negotiated privately and off-exchange but are then novated into a CCP on a post-trade basis. In 1999, LCH.Clearnet set up two OTC CCPs to clear and settle

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<sup>74</sup> The European Council, in its Conclusions of 2 December 2009, agreed that there was a need to substantially improve the mitigation of counterparty credit risk and that it was important to improve transparency, efficiency and integrity for derivative transactions. The European Parliament Resolution of 15 June 2010 on "Derivatives markets: future policy actions" called for mandatory clearing and reporting of OTC derivative contracts.

<sup>75</sup> Conclusions from the Commission proposals – REPORT on derivatives markets: future policy actions (2010/2008(INI)) Committee on Economic and Monetary Affairs, Rapporteur: Werner Langen, 7 June 2010, PE 438.493v02-00; A7-0187/2010

repurchase agreements (RepoClear) and plain vanilla interest rate swaps (SwapClear). Commercial interest in OTC-cleared derivatives grew substantially in the energy derivatives market following the bankruptcy of Enron in late 2001. Inter Continental Exchange (ICE) responded to this demand by offering cleared OTC energy derivatives solutions beginning in 2002. ICE now offers OTC clearing for credit default swaps (CDSs) also. Although CCP clearing and settlement of OTC derivatives did develop in the years prior to the GFC, this has been confined to certain products and markets. This suggests that there are both positives and negatives associated with using CCPs and, in some market situations, the positives may not outweigh the negatives<sup>76</sup>.

In derivative markets, many contracts are exchange-traded. An exchange is a central financial center where parties can trade standardized contracts such as futures and options at a specified price. An exchange promotes market efficiency and enhances liquidity by centralizing trading in a single place. The process by which a financial contract becomes exchange-traded can be thought of as a long journey where a critical trading volume, standardization and liquidity must first develop. In addition to their functions, exchanges have also provided methods for improving “clearing” and therefore mitigating counterparty risk. Clearing is the term that describes the reconciling and resolving of contracts between counterparties and takes place between trade execution and trade settlement (when all legal obligations have been made). A buyer or seller suffering a large loss on a contract may be unable or unwilling to settle the underlying position and two methods have developed for reducing this risk, namely margining and netting. **Margining** involves exchange members receiving and paying cash or other assets against gains and losses in their positions (variation margins) and providing extra coverage against losses in case they default (initial margin). **Netting** involves the offsetting of contracts, which is useful to reduce the exposure of counterparties and the underlying network to which they are exposed.

## The ISDA Master Agreement

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<sup>76</sup> Clearing in OTC derivatives markets (page 25) GREGORY Jon, Central Counterparties: Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives, John Wiley & Sons Inc, Wiley Finance Series, 2014, ISBN 978-1-118-89151-3

**The International Swaps and Derivatives Association (ISDA)** is a trade organization for OTC derivative practitioners. This association helps to improve the private negotiated derivatives market by identifying and reducing risks in the market. ISDA was created to make the world of privately negotiated derivatives safer and more efficient. The ISDA fulfills this role by providing templates for counterparties in derivatives contracts to use in negotiation and by providing a platform for the institutions that deal in the market to network and raise common concerns and issues. The ISDA identifies its three key work areas as:

- ✓ Reducing counterparty credit risk
- ✓ Increasing transparency
- ✓ Improving the operational infrastructure of the derivatives industry<sup>77</sup>

**The ISDA Master Agreement** is the standard document that is regularly used to govern over-the-counter derivatives transactions. The Agreement, which is published by the International Swaps and Derivatives Association (ISDA), outlines the terms to be applied to a derivatives transaction between two parties, typically a derivatives dealer and a counterparty. The Master Agreement itself is standard, but it is accompanied by a customized schedule and sometimes a credit support annex, both of which are signed by the two parties in a given transaction<sup>78</sup>. It is designed to eliminate legal uncertainties and to provide mechanisms for mitigating counterparty risk. It specifies the general terms of the agreement between parties with respect to general aspects such as netting, margin (clearing procedures that are explained later), definition of default and other termination events. Multiple transactions can be covered under a general Master Agreement, which essentially forms a single legal contract of indefinite term, covering many of all of the transactions traded. Individual transactions are incorporated by reference in the trade confirmation to the relevant Master Agreement. Trading then tends to occur without the need to update or change any aspect of the relevant ISDA Agreement<sup>79</sup>.

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<sup>77</sup> International Swaps and Derivatives Association (ISDA), Investopedia <https://www.investopedia.com/terms/i/isda.asp#ixzz5Wr1jJ3Ku>

<sup>78</sup> ISDA Master Agreement Definition, Investopedia <https://www.investopedia.com/terms/i/isda-master-agreement.asp#ixzz5Wr2TyOpU>

<sup>79</sup> GREGORY Jon, Central Counterparties: Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives, John Wiley & Sons Inc, Wiley Finance Series, 2014, ISBN 978-1-118-89151-3 (page 62)

## OTC Derivatives

“OTC derivative” (or OTC derivative contract) means a derivative contract (according to MiFID 2) the execution of which does not take place on a regulated market<sup>80</sup>. Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 sets out the criteria for determining whether or not different classes of OTC derivative contracts should be subject to a clearing obligation. On the basis of draft regulatory technical standards developed by ESMA, the Commission should decide whether a class of OTC derivative contract is to be subject to a clearing obligation, and from when the clearing obligation takes effect including, where appropriate, phased-in implementation and the minimum remaining maturity of contracts entered into or novated before the date on which the clearing obligation takes effect. A phased-in implementation of the clearing obligation could be in terms of the types of market participants that must comply with the clearing obligation. In determining which classes of OTC derivative contracts are to be subject to the clearing obligation, ESMA should take into account the specific nature of OTC derivative contracts which are concluded with covered bond issuers or with cover pools of covered bonds<sup>81</sup>. ESMA should also pay due regard to other relevant considerations, most importantly the interconnectedness between counterparties using the relevant classes of OTC derivative contracts and the impact on the levels of counterparty credit risk as well as promote equal conditions of competition within the internal market<sup>82</sup>. Ensuring that the clearing obligation reduces systemic risk requires a process of identification of classes of derivatives that should be subject to that obligation. That process should take into account the fact that not all CCP-cleared OTC derivative contracts can be considered suitable for mandatory CCP clearing.

In determining which classes of OTC derivative contracts are to be subject to the clearing obligation, due account should be taken of the specific nature of the relevant classes of OTC derivative contracts. The predominant risk for transactions in some classes of OTC derivative contracts may relate to **settlement risk**, which is addressed through separate infrastructure arrangements, and may distinguish certain classes of OTC derivative contracts (such as

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<sup>80</sup> Article 2 (7), p. 15, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

<sup>81</sup> Point 16, p. 3, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

<sup>82</sup> Point 17, p. 3, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59



foreign exchange) from other classes. CCP clearing specifically addresses counterparty credit risk and may not be the optimal solution for dealing with settlement risk<sup>83</sup>. Risk arises at settlement if there are timing differences between each party performing its obligations under the contract. Generally, this settlement refers to the maturity of the contract. However, some derivatives, particularly Over-the-Counter ones, may exchange periodic cashflows which can give rise to settlement risk on discrete days prior to maturity. Usually, settlement risk is the more significant component in short-dated products whilst counterparty risk is more important for longer-dated products<sup>84</sup>.

In order to ensure a uniform and coherent application of the Regulation No 648/2012 of the European Parliament and of the Council of 4 July 2012 and a level playing field for market participants when a class of OTC derivative contract is declared subject to the clearing obligation, this obligation should also apply to all contracts pertaining to that class of OTC derivative contract entered into on or after the date of notification of a CCP authorisation for the purpose of the clearing obligation received by ESMA but before the date from which the clearing obligation takes effect. For an OTC derivative contract to be cleared, both parties to that contract must be subject to a clearing obligation or must consent. In determining whether a class of OTC derivative contract is to be subject to clearing requirements, ESMA should aim for a reduction in systemic risk. This includes taking into account in the assessment factors such as the level of contractual and operational standardisation of contracts, the volume and the liquidity of the relevant class of OTC derivative contract as well as the availability of fair, reliable and generally accepted pricing information in the relevant class of OTC derivative contract<sup>85</sup>.

It is worth noting that for regulatory purposes, it is important that a uniform derivatives **data reporting** requirement is established at Union level. Moreover, a retrospective reporting obligation is needed, to the largest possible extent, for both financial counterparties and non-financial counterparties, in order to provide comparative data, including to ESMA and the relevant competent authorities<sup>86</sup>.

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<sup>83</sup> It is not a sufficient solution, but it is a necessary one.

<sup>84</sup> GREGORY Jon, *Central Counterparties: Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives*, John Wiley & Sons Inc, Wiley Finance Series, 2014, ISBN 978-1-118-89151-3 (page 107)

<sup>85</sup> Point 21, p. 4, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

<sup>86</sup> Point 37, p. 6, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

Before I go further, I would like to specify financial and non-financial counterparties. In August 2012, the European Market Infrastructure Regulation (EMIR) came into force as binding law within the European Union, introducing new clearing and risk mitigation requirements for all derivatives counterparties. The main obligations under EMIR are: application of risk mitigation techniques for non-centrally cleared OTC derivatives including timely confirmation, portfolio reconciliation and compression, dispute resolution; reporting to trade repositories to enhance the safety of central clearing; Central Clearing for certain classes of OTC derivatives to reduce counterparty risk.

**Financial counterparty** is defined in its classification as MIFID investment firm, credit institution under the Banking Directive, insurance undertaking, assurance undertaking, reinsurance undertaking, UCITS or its management company, occupational retirement firm and alternative investment fund managed by AIFMs authorized or registered in the EU; whilst **Non-Financial counterparty** or “NFC” is a counterparty not classified as a Financial Counterparty or Exempted Counterparty<sup>87</sup>. Where appropriate, rules applicable to financial counterparties, should also apply to non-financial counterparties. It is recognised that non-financial counterparties use OTC derivative contracts in order to cover themselves against **commercial risks** directly linked to their commercial or treasury financing activities. In determining whether an OTC derivative contract reduces risks directly relating to the commercial activities and treasury activities of a non-financial counterparty, due account should be taken of that non-financial counterparty’s overall hedging and risk-mitigation strategies. In particular, consideration should be given to whether an OTC derivative contract is economically appropriate for the reduction of risks in the conduct and management of a non-financial counterparty, where the risks relate to fluctuations in interest rates, foreign exchange rates, inflation rates or commodity prices.

OTC markets work indeed very differently compared to exchange-traded one. OTC derivatives are traditionally privately negotiated and traded directly between two parties without an exchange or other intermediary involved. Prices are not firm commitments to trade and price negotiation is purely a bilateral process. OTC derivatives have traditionally been negotiated between a dealer and end user, or between two dealers. OTC market did not historically include trade reporting, which is difficult because trades can occur in private, without activity being visible on any exchange. Documentation is also bilaterally negotiated

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<sup>87</sup> EMIR Classification <https://www.business.hsbc.fr/fr-fr/emir-en>

between the two parties, although certain standards have been developed. In bilateral OTC markets, each party takes counterparty risk to the other and must manage it themselves.

Customized OTC derivatives are not without their disadvantages, of course. A customer wanting to unwind a transaction must do it with the original counterparty, who may quote unfavorable terms due to their privileged position even assigning or novating the transaction to another counterparty typically cannot be done without the permission of the original counterparty. This lack of fungibility in OTC transactions can also be problematic. This aside, there is nothing wrong with customizing derivatives to the precise needs of clients as long as this is the sole intention. However, this is not the only use of OTC derivatives: some are contracted for regulatory arbitrage or even (arguably) misleading a client. Such products are clearly not socially useful and generally fall into the (relatively small) category of exotic OTC derivatives which in turn generate much of a criticism of OTC derivatives in general<sup>88</sup>. Nevertheless, OTC derivative markets remain decentralized and more heterogeneous and are consequently **less transparent** than their exchange-traded equivalents. This leads to potentially challenging counterparty risk problems. OTC derivative markets have historically managed this counterparty risk through the use of netting agreements, margin requirements, periodic cash settlement, and other forms of bilateral credit mitigation.

## Trade repository

It is important that market participants report all details regarding derivative contracts they have entered into to trade repositories. As a result, information on the risks inherent in derivatives markets will be centrally stored and easily accessible, inter alia, to ESMA, the relevant competent authorities, the European Systemic Risk Board (ESRB) and the relevant central banks of the ESCB. Trade repositories should be required to provide access to the information held in the repository on fair, reasonable and non-discriminatory terms, subject to necessary precautions on data protection. In order to allow for a comprehensive overview of the market and for assessing systemic risk, both CCP-cleared and non-CCP-cleared derivative

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<sup>88</sup> "OTC Derivatives" (page 16) GREGORY Jon, Central Counterparties: Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives, John Wiley & Sons Inc, Wiley Finance Series, 2014, ISBN 978-1-118-89151-3

contracts should be reported to trade repositories<sup>89</sup>. Transparency of prices, fees and risk-management models associated with the services provided by CCPs, their members and trade repositories, is necessary to enable market participants to make an **informed choice**.

On the other hand, it is important and necessary to keep an efficient communication and to reinforce provisions on **exchange of information** between competent authorities, ESMA and other relevant authorities and to strengthen the duties of assistance and cooperation between them. Due to increasing cross-border activity, those authorities should provide each other with the relevant information for the exercise of their functions so as to ensure the effective enforcement of this Regulation, including in situations where infringements or suspected infringements may be of concern to authorities in two or more Member States. For the exchange of information, strict professional secrecy is needed. It is essential, due to the wide impact of OTC derivative contracts, that other relevant authorities, such as tax authorities and energy regulators, have access to information necessary to the exercise of their functions<sup>90</sup>.

Reporting is not a recommended proposal, there is a **Reporting obligation**. Counterparties and CCPs shall ensure that the details of any derivative contract they have concluded and of any modification or termination of the contract are reported to a trade repository registered. The details should be reported no later than the working day following the conclusion, modification or termination of the contract. Counterparties and CCPs shall ensure that the details of their derivative contracts are reported without duplication and keep a record of any derivative contract they have concluded and any modification for at least five years following the termination of the contract. In the case where a trade repository is not available to record the details of a derivative contract, counterparties and CCPs shall ensure that such details are reported to ESMA. The standard details are: the parties to the derivative contract and, where different, the beneficiary of the rights and obligations arising from it; and the main characteristics of the derivative contracts, including their type, underlying maturity, notional value, price and settlement date. ESMA will develop draft regulatory technical standards specifying the details and type of the reports for the different classes of derivatives. It will also develop draft implementing technical standards, in order to ensure uniformity in conditions, specifying: the format and frequency of the reports for the different classes of

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<sup>89</sup> Point 43, p. 7, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

<sup>90</sup> Point 58, p. 9, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

derivatives; and the date by which derivative contracts are to be reported, including any phase-in for contracts entered into before the reporting obligation applies<sup>91</sup>.

## What is a CCP?

By definition, from Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012, “CCP” or “**Central Counterparty**” means a legal person that interposes itself between the counterparties to the contracts traded on one or more financial markets, becoming the buyer to every seller and the seller to every buyer<sup>92</sup>. Clearing is a process that occurs after the execution of a trade in which a CCP may step in between counterparties to guarantee performance. Clearing means 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. The main function of a CCP is, therefore to interpose itself directly or indirectly between counterparties to assume their rights and obligations by acting as buyer to every seller and vice versa. CCP essentially reallocates default losses via a variety of methods including netting, margining and loss mutualization. Incentives to promote the use of CCPs have not proven to be sufficient to ensure that standardised OTC derivative contracts are in fact cleared centrally. Mandatory CCP clearing requirements for those OTC derivative contracts that can be cleared centrally are therefore **necessary**<sup>93</sup>. A uniform application of the clearing obligation in the Union is also necessary to ensure a high level of investor protection and to create a level playing field between market participants. It is important to emphasize that in the central clearing of non-OTC trades, the primary role of the CCP is to standardize and simplify operational processes. In contrast, OTC CCPs have a much more significant role to play in terms of counterparty risk mitigation due the longer maturities and relative illiquidity of OTC derivatives.

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<sup>91</sup> Article 9, p. 20, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

<sup>92</sup> Article 2 (1), p. 14, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

<sup>93</sup> Point 13, p. 3, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

## **The impact of Central Clearing in OTC markets**

It is important to make some statements in relation to OTC central clearing. A CCP is not a solution for the perceived problems in the OTC derivative markets. A CCP does not make counterparty risk disappear; what it does is centralize it and convert it into different forms of financial risk such as operational and liquidity. As with most things, for every advantage of a CCP, there are related disadvantages; for example, CCPs can reduce systemic risk (via auctions for example) but can also increase it (for example by changing margin requirements in volatile markets). CCPs provide a variety of functions, most of which can already be achieved by bilateral markets via other mechanisms; CCPs may or may not execute redundant functions more efficiently and CCP-specific functionality offers advantages and disadvantages. Central clearing may be beneficial overall for some markets but not others. There are likely to be unintended consequences of the expanded use of CCPs, which are hard to predict a priori. Like any financial institution, CCPs can fail, and indeed there are historical CCP insolvencies from which to learn. OTC derivative contracts, for example swaps, remain outstanding for potentially years or even decades before being settled. It is not completely obvious that CCPs are as effective in risk mitigation for these longer-dated, more complex and illiquid products. In addition, central clearing for non-standard or exotic OTC derivative may not be feasible. OTC markets have proved over the years that they are a good source of financial innovation and can continue to offer cost-effective and well-tailored risk reduction products.

In CCP markets, whilst trades are still executed bilaterally, there are many differences that are required by central clearing, such as the need for standardization, margining practices and the use of mutualized default funds to cover losses. Exchange-traded markets are similar to CCP ones except that in the former case the trade is executed on the exchange rather than beginning life as a bilateral trade.

### **Benefits of CCPs**

Central counterparties provide a number of benefits. One is that they allow netting of all trades executed through them. For example, in a bilateral market, an institution being long a

contract with counterparty A and short the same contract with counterparty B has counterparty risk. However, if both contracts are centrally cleared then the netted position has no risk. CCPs also manage margin requirements from their members to reduce the risk associated with the movement in the value of their underlying portfolio. CCPs also allow loss mutualisation: one counterparty's losses are dispersed throughout the market rather than being transmitted directly to a small number of counterparties with potential adverse consequences. Moreover, CCPs can facilitate orderly close out by auctioning off the defaulter's contractual obligations with netting reducing the total positions that need to be replaced, which reduces price impact. CCPs can also facilitate the orderly transfer of client positions from financially troubled intermediaries. The margins and other financial resources they hold protects against losses arising from this auction process.

A Central Counterparty sets certain standards for its clearing members and takes responsibility for closing out all the positions of a defaulting clearing member. In order to support that, the CCP maintains financial resources to cover losses in the event of a clearing member default: variation margin to closely track market movements, initial margin to cover worst-case liquidation or close out above the variation margin, a default fund to mutualise losses in the event of a severe default; the CCP also has a documented plan for the very extreme situation when all their financial resources (initial margin and the default fund) are exhausted. For example: additional calls to the default fund, variation margin gains haircutting, or selective tear-up of positions<sup>94</sup>.

CCPs offer many advantages and potentially offer a more transparent, safer market where contracts are more fungible, and liquidity is enhanced. The most important one is the **transparency**, a CCP is in a unique position to understand the positions of market participants. This may disperse panic that might otherwise be present in bilateral markets due to a lack of knowledge of the exposure faced by institutions. If a member has a particularly extreme exposure, the CCP is in a position to act on this and limit trading. **Offsetting** is another important advantage. As explained above, contracts transacted between different counterparties but traded through a CCP can be offset. This increases the flexibility to enter new transactions and terminate existing ones and reduce costs. **Loss mutualisation**, even when a default creates losses that exceed the financial commitments from the defaulter, these

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<sup>94</sup> GREGORY Jon, *Central Counterparties: Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives*, John Wiley & Sons Inc, Wiley Finance Series, 2014, ISBN 978-1-118-89151-3 (page 6)

losses are distributed throughout the CCP members, reducing their impact on any one member. Thus, a counterparty's losses are dispersed partially throughout the market, making their impact less dramatic and reducing the possibility of systemic problems. Central counterparties have **legal and operational efficiency**. The margining, netting and settlement functions undertaken by a CCP potentially increase operational efficiency and reduce costs. CCPs may also reduce legal risks in providing a centralization of rules and mechanisms. A CCP may improve market **liquidity** through the ability of market participants to trade easily and benefit from multilateral netting. Market entry may be enhanced through the ability to trade anonymously and through the mitigation of counterparty risk. Daily margining may lead to a more transparent valuation of products. Default management – a well-managed central auction may result in smaller price disruptions than the uncoordinated replacement of positions during a crisis period associated with default of a clearing member.

### **Disadvantages of CCPs**

A CCP, by its very nature, represents a membership organization, which therefore results in the pooling of member resources to some degree. This means that any losses due to the default of a CCP member may to some extent be shared amongst the surviving members, and this lies at the heart of some potential problems. Moral hazard and adverse selection are two “viruses” of financial economics. **Moral hazard** is a well-known problem in the insurance industry. Moral hazard has the effect of disincentivizing good counterparty risk management practice by CCP members (since all the risk is passed to the CCP). Institutions have little incentive to monitor each other's credit quality and act appropriately because a third party is taking most of the risk. CCPs are also vulnerable to **adverse selection**, which occurs if members trading OTC derivatives know more about the risks than the CCP themselves. In such a situation, firms may selectively pass these riskier products to CCPs that underprice the risks. Obviously, firms such as large banks specialize in OTC derivatives and may have superior information and knowledge on pricing and risk than a CCP.

**Bifurcations** – the requirement to clear standard products may create unfortunate bifurcations between cleared and non-cleared trades. This can result in highly volatile cashflows for customers, and mismatches of margin requirements for seemingly hedged



positions. And **procyclicality** – it refers to a positive dependence with the state of the economy. CCPs may create procyclicality effects by, for example, increasing margins in volatile markets or crisis period. The greater frequency and liquidity of margin requirements under a CCP, compared with less uniform and more flexible margin practices in bilateral OTC markets, could also aggravate procyclicality.

## **CCP authorisation requirements**

Authorisation of a CCP should be conditional on a minimum amount of initial capital. Capital, including retained earnings and reserves of a CCP, should be proportionate to the risk stemming from the activities of the CCP at all times in order to ensure that it is adequately capitalized against credit, counterparty, market, operational, legal and business risks which are not already covered by specific financial resources and that it is able to conduct an orderly winding-up or restructuring of its operations if necessary. It is essential to ensure that those CCPs are safe and sound and comply at all times with the stringent organisational, business conduct, and prudential requirements established.

## **Clearing obligation**

Regulation (EU) No 648/2012 lays down the criteria according to which classes of OTC derivatives should be subject to the clearing obligation. It prevents competitive distortions by requiring **non-discriminatory access** to CCPs offering clearing of OTC derivatives to trading venues and non-discriminatory access to the trade feeds of trading venues to CCPs offering clearing of OTC derivatives. As OTC derivatives are defined as derivative contracts whose execution does not take place on a regulated market, there is a need to introduce similar requirements for regulated markets (derivatives traded on regulated markets should also be centrally cleared)<sup>95</sup>. The introduction of a clearing obligation along with a process to establish which CCPs can be used for the purpose of this obligation may lead to unintended

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<sup>95</sup> Point 37, Regulation (EU) No. 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012, OJ L 173, 12.6.2014, p. 84–148

competitive distortions of the OTC derivatives market. For example, a CCP could refuse to clear transactions executed on certain trading venues because the CCP is owned by a competing trading venue. In order to avoid such discriminatory practices, CCPs should agree to clear transactions executed in different trading venues, to the extent that those trading venues comply with the operational and technical requirements established by the CCP, without reference to the contractual documents on the basis of which the parties concluded the relevant OTC derivative transaction, provided that those documents are consistent with market standards. Trading venues should provide the CCPs with trade feeds on a transparent and non-discriminatory basis. The right of access of a CCP to a trading venue should allow for arrangements whereby multiple CCPs use trade feeds of the same trading venue. However, this should not lead to interoperability for derivatives clearing or create liquidity fragmentation<sup>96</sup>.

CCP should accept to clear financial instruments on a **non-discriminatory** and **transparent** basis, including as regards collateral requirements and fees relating to access, regardless of the trading venue on which a transaction is executed. No Member State or group of Member States should be discriminated against, directly or indirectly, as a venue for clearing services. Nothing should attempt to restrict or eliminate a CCP in one jurisdiction from clearing a product denominated in the currency of another Member State or in the currency of a third country<sup>97</sup>.

Counterparties shall clear all OTC derivative contracts pertaining to a class of OTC derivatives that has been declared subject to the clearing obligation, if those contracts have been concluded in one of the following ways:

- ✓ between two financial counterparties;
- ✓ between a financial counterparty and a non-financial counterparty;
- ✓ between two non-financial counterparties;
- ✓ between a financial counterparty or a non-financial counterparty and an entity established in a third country that would be subject to the clearing obligation if it were established in the Union; or

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<sup>96</sup> Point 34, p. 6, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

<sup>97</sup> Point 47, p. 8, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

- ✓ between two entities established in one or more third countries that would be subject to the clearing obligation if they were established in the Union, provided that the contract has a direct, substantial and foreseeable effect within the Union or where such an obligation is necessary or appropriate to prevent the evasion of any provisions of this Regulation; and

Also, if these contracts are entered into or novated either:

- ✓ on or after the date from which the clearing obligation takes effect; or
- ✓ on or after notification, but before the date from which the clearing obligation takes effect if the contracts have a remaining maturity higher than the minimum remaining maturity determined by the Commission

... they shall be cleared by Central counterparties. The OTC derivative contracts that are subject to the clearing obligation, shall be cleared in a CCP authorised and recognised by Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 to clear that class of OTC derivatives and listed in the register. For that purpose, a counterparty shall become a clearing member, a client, or shall establish **indirect clearing arrangements** with a clearing member, provided that those arrangements do not increase counterparty risk and ensure that the assets and positions of the counterparty benefit from protection with equivalent effect. Indirect clearing arrangements with regard to exchange-traded derivatives are permissible provided that those arrangements do not increase counterparty risk and ensure that the assets and positions of the counterparty benefit from protection with equivalent effect. ESMA shall develop draft regulatory technical standards to specify the types of indirect clearing service arrangements, where established, ensuring consistency with provisions established for OTC derivatives.

## **Clearing obligation procedure**

Where a competent authority authorises a CCP to clear a class of OTC derivatives, it shall immediately notify ESMA of that authorisation. In order to ensure consistent application of this Article, ESMA shall develop draft regulatory technical standards specifying the details to be included in the notifications. Within six months of receiving notification in accordance

with paragraph 1 or accomplishing a procedure for recognition, ESMA shall, after conducting a public consultation and after consulting the ESRB (The Entertainment Software Rating Board) and, where appropriate, the competent authorities of third countries, develop and submit to the Commission for endorsement draft regulatory technical standards specifying the following:

- ✓ the class of OTC derivatives that should be subject to the clearing obligation;
- ✓ the date or dates from which the clearing obligation takes effect, including any phase in and the categories of counterparties to which the obligation applies; and
- ✓ the minimum remaining maturity of the OTC derivative contracts

ESMA shall, on its own initiative, after conducting a public consultation and after consulting the ESRB and, where appropriate, the competent authorities of third countries, identify and notify to the Commission the classes of derivatives that should be subject to the clearing obligation, but for which no CCP has yet received authorisation. Following the notification, ESMA shall publish a call for a development of proposals for the clearing of those classes of derivatives. With the overarching aim of reducing systemic risk, the draft regulatory technical standards by ESMA shall take into consideration the following criteria:

- ✓ the degree of standardisation of the contractual terms and operational processes of the relevant class of OTC derivatives;
- ✓ the volume and liquidity of the relevant class of OTC derivatives;
- ✓ the availability of fair, reliable and generally accepted pricing information in the relevant class of OTC derivatives.

In preparing those draft regulatory technical standards, ESMA may take into consideration the interconnectedness between counterparties using the relevant classes of OTC derivatives, the anticipated impact on the levels of counterparty credit risk between counterparties as well as the impact on competition across the Union. The draft regulatory technical standards shall take into consideration the following criteria:

- ✓ the expected volume of the relevant class of OTC derivatives;
- ✓ whether more than one CCP already clear the same class of OTC derivatives;
- ✓ the ability of the relevant CCPs to handle the expected volume and to manage the risk arising from the clearing of the relevant class of OTC derivatives;

- ✓ the type and number of counterparties active, and expected to be active within the market for the relevant class of OTC derivatives;
- ✓ the period of time a counterparty subject to the clearing obligation needs in order to put in place arrangements to clear its OTC derivative contracts through a CCP;
- ✓ the risk management and the legal and operational capacity of the range of counterparties that are active in the market for the relevant class of OTC derivatives and that would be captured by the clearing obligation.

If a class of OTC derivative contracts no longer has a CCP which is authorised or recognised to clear those contracts under Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012, it shall cease to be subject to the clearing obligation<sup>98</sup>. So, what happens to these OTC derivative contracts? This Regulation defines some **risk-mitigation techniques** for OTC derivative contracts that are **not cleared by a CCP** under Article 11<sup>99</sup>. According to it, financial counterparties and non-financial counterparties that enter into an OTC derivative contract not cleared by a CCP, shall ensure, exercising due diligence, that appropriate procedures and arrangements are in place to measure, monitor and mitigate **operational risk** and **counterparty credit risk**, including at least:

- ✓ the timely confirmation, where available, by electronic means, of the terms of the relevant OTC derivative contract;
- ✓ formalised processes which are robust, resilient and auditable in order to reconcile portfolios, to manage the associated risk and to identify disputes between parties early and resolve them, and to monitor the value of outstanding contracts.

Financial counterparties shall have risk-management procedures that require the timely, accurate and appropriately segregated exchange of **collateral** with respect to OTC derivative contracts that are entered into on or after 16 August 2012. Non-financial counterparties though shall have risk-management procedures that require the timely, accurate and appropriately segregated exchange of collateral with respect to OTC derivative contracts that are entered into on or after the clearing threshold is exceeded. Financial counterparties shall hold an appropriate and proportionate amount of capital to manage the risk not covered by

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<sup>98</sup> Article 5 “Clearing obligation procedure”, p. 18, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

<sup>99</sup> Article 11 “Risk-mitigation techniques for OTC derivative contracts NOT cleared by a CCP”, p. 22, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

appropriate exchange of collateral. ESMA shall regularly monitor the activity in derivatives not eligible for clearing in order to identify cases where a particular class of derivatives may pose systemic risk and to prevent regulatory arbitrage between cleared and non-cleared derivative transactions. In particular, ESMA shall, after consulting the ESRB, take action or review the regulatory technical standards on margin requirements. In order to ensure consistent application, ESMA shall draft regulatory technical standards specifying:

- ✓ the **procedures** and arrangements referred above;
- ✓ the market conditions that prevent **marking-to-market** and the criteria for using **marking-to-model**;
- ✓ the details of the exempted **intragroup transactions** to be included in the notification (an intragroup transaction is a transaction between two undertakings which are included in the same consolidation on a full basis and are subject to appropriate centralised risk evaluation, measurement and control procedures. They are part of the same institutional protection scheme as referred to in Article 80(8) of Directive 2006/48/EC or, in the case of credit institutions affiliated to the same central body, as referred to in Article 3(1) of that Directive, both are credit institutions, or one is a credit institution and the other is a central body. OTC derivative contracts may be recognised within non-financial or financial groups, as well as within groups composed of both financial and non-financial undertakings, and if such a contract is considered an intragroup transaction in respect of one counterparty, then it should also be considered an intragroup transaction in respect of the other counterparty to that contract. It is recognised that intragroup transactions may be necessary for aggregating risks within a group structure and that intragroup risks are therefore specific<sup>100</sup>);
- ✓ the details of the information on exempted intragroup transactions;
- ✓ the contracts that are considered to have a direct, substantial and foreseeable effect within the Union or the cases where it is necessary or appropriate to prevent the evasion of any provision.

In order to ensure consistent application of this Article, the ESAs shall develop common draft regulatory technical standards specifying:

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<sup>100</sup> Point 38, p. 6, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

- ✓ the risk-management procedures, including the levels and type of collateral and segregation arrangements;
- ✓ the level of capital;
- ✓ the procedures for the counterparties and the relevant competent authorities to be followed;
- ✓ the applicable criteria, including in particular what should be considered as practical or legal impediment to the prompt transfer of own funds and repayment of liabilities between the counterparties.

## Transparency

A CCP and its clearing members shall publicly **disclose** the prices and fees associated with the services provided. They shall disclose the prices and fees of each service provided separately, including discounts and rebates and the conditions to benefit from those reductions. A CCP shall allow its clearing members and, where relevant, their clients separate access to the specific services provided. It shall account separately for costs and revenues of the services provided and shall disclose that information to the competent authority. A CCP shall disclose to clearing members and clients the risks associated with the services provided. A CCP shall disclose to its clearing members and to its competent authority the price information used to calculate its end-of-day exposures to its clearing members. A CCP shall publicly disclose the volumes of the cleared transactions for each class of instruments cleared by the CCP on an aggregated basis. A CCP shall publicly disclose the operational and technical requirements relating to the communication protocols covering content and message formats it uses to interact with third parties, including the operational and technical requirements. A CCP shall publicly disclose any breaches by clearing members of the criteria and the requirements above explained, except where the competent authority, after consulting ESMA, considers that such disclosure would constitute a **threat** to financial stability or to

market confidence or would seriously jeopardise the financial markets or cause disproportionate damage to the parties involved<sup>101</sup>.

## Differences between the UC and Europe

Dodd-Frank Act (US financial regulation<sup>102</sup>) and EMIR (European Market Infrastructure Regulation) are broadly similar in requiring clearing of all standardized OTC derivatives between most large users. Differences are important to characterize, not least because they raise the spectre of “transatlantic arbitrage”. Under EMIR, the scope of clearing is slightly more relaxed for end users, with non-financial counterparties only obliged to clear if their positions exceed a specified clearing threshold (with certain hedges excluded from contributing to this threshold). In the US, the clearing obligation is absolute except for the narrow exemptions for non-financial entities entering into certain hedging transactions. It could be questioned as to how easy it may be to identify hedging transactions. Another contentious area in Europe has been pension funds, which may use derivatives to hedge interest rate, inflation and longevity risks. Under EMIR, most pension funds will be allowed a three-year exemption from the central clearing requirements. This is intended to avoid dramatic shifts that could force major changes in asset allocation and gives CCPs more time to develop models for the main pension scheme products, namely interest rate and particularly inflation derivatives.

Other differences that will exist between the US and Europe relate to client clearing. In Europe, client clearing follows a principal-to-principal model where the CCP has a bilateral relationship with each clearing member, who in turn has a bilateral relationship with clients for whom they clear. In contrast, the US model is an extension of the way that US futures markets have traditionally operated, where a Futures Commission Merchant (FCM) acts as an agent to introduce a client to the CCP and guarantees the client's margin and other obligations to the CCP. Related to clearing, the US regime requires the execution of OTC derivatives subject to the clearing obligation on a Swap Execution Facility (SEF) and requires real time

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<sup>101</sup> Article 38 “Transparency”, p. 35, Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, OJ L 201, 27.7.2012, p. 1–59

<sup>102</sup> [www.sec.gov/about/laws/wallstreetreform-cpa.pdf](http://www.sec.gov/about/laws/wallstreetreform-cpa.pdf)



post-trade transparency. In the EU, these issues are being addressed separately as part of the legislative proposals as part of the Markets in the Financial Instruments Directive (MiFID). Both the Dodd-Frank Act and the proposed EU regulation seek to allow cross-border clearing by permitting the recognition or exemption of non-domestic CCPs. Under both sets of regulation, backloading (transactions entered into before the regulations are in effect) is optional. However, frontloading where a trade is deemed clearable during its lifetime may be a problem. Finally, both the EU and US regimes envisage that there will be mandatory margin rules for non-standard OTC derivatives that are not centrally clearable.

## **Principal derivatives in OTC market**

OTC derivatives include the following five broad classes of derivative securities: **interest rate derivatives, foreign exchange derivatives, equity derivatives, commodity derivatives** and **credit derivatives**. Interest rate products contribute the majority of the outstanding notional, with foreign exchange and credit default swaps (CDS) seemingly less important. However, this gives a somewhat misleading view of the importance of the counterparty risk in other asset classes, especially foreign exchange and credit default swaps. Whilst most foreign exchange products are short-dated, the long-dated nature and exchange of notional in cross-currency swaps means they carry a lot of counterparty risk. Credit default swaps not only have a large volatility component but also constitute significant “wrong-way risk”. Therefore, whilst interest rate products make up a significant proportion of the counterparty risk in the market, one must not underestimate the other important (and sometimes more subtle) contributions from other product.

A key aspect of derivative products is that their exposure is substantially smaller than that of an equivalent loan or bond. Consider an interest rate swap (IRS) as an example: this contract involves the exchange of floating against fixed coupons and has no principal risk because only cashflows are exchanged. Furthermore, even the coupons are not fully at risk because, at coupon dates, only the difference in fixed and floating coupons or net payment will be exchanged. If a counterparty fails to perform then an institution will have no obligation to continue to make coupon payments. Instead, the swap will be unwound based on, for example, independent quotations as to its current market value. If the swap has a negative

value for an institution, then they may stand to lose nothing if their counterparty defaults (assuming the swap can be replaced without any additional cost). For this reason, when we compare the actual total market of derivatives against their total notional amount outstanding, we see a massive reduction.

The first credit derivative product was the single name credit default swap (CDS). One of the ways that an individual, company, pension or financial institution can make money is by issuing loans or credit. Sometimes this can be done by purchasing bonds. Each of these bond purchases carry some risk of default. A **credit default swap (CDS)** shifts this risk onto an insurance company or other CDS seller in exchange for a certain premium. There are three parties of a credit default swap: the CDS buyer, the bond issuer which is the individual or the company that wishes to borrow money from bond buyers in exchange for interest and the CDS seller, a business that guarantees the underlying debt between the bond issuer and buyer<sup>103</sup>. A credit default swap is, in effect, insurance against non-payment. Through a CDS, the buyer can mitigate the risk of their investment by shifting all or a portion of that risk onto an insurance company or other CDS seller in exchange for a periodic fee. In this way, the buyer of a credit default swap receives credit protection, whereas the seller of the swap guarantees the credit worthiness of the debt security. For example, the buyer of a credit default swap will be entitled to the par value of the contract by the seller of the swap, should the issuer default on payments. If the debt issuer does not default and if all goes well the CDS buyer will end up losing some money, but the buyer stands to lose a much greater proportion of their investment if the issuer defaults and if they have not bought a CDS. As such, the more the holder of a security thinks its issuer is likely to default, the more desirable a CDS is and the more the premium is worth it. The CDS represents an unusual challenge since its mark-to-market is driven by credit spread changes whilst its payoffs is linked solely to one or more credit events. The so-called “wrong-way risk” in CDS, for example when buying protection on a bank from another bank, meant that the credit quality of the counterparty became even more important than it would be for other OTC derivatives. Beyond single name credit default swaps, senior tranches of structured finance CDOs had even more wrong-way risk and created an even stronger need for a “default remote entity”.

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<sup>103</sup> Credit Default Swap (CDS) <https://www.investopedia.com/terms/c/creditdefaultswap.asp>

## Conclusions

It is right to admit that the world financial system needs a kind of financial market that accepts trading of unlisted companies and/or those who do not meet regulated markets' requirements. But the global financial crisis started in 2007 has had a major negative impact on financial markets and the economy in general. The global financial crisis was blamed partly on OTC derivatives and their counterparty risks and opacity, neither of which was well controlled due to the historic light regulation of this market. The most obvious way to make OTC derivative markets safer is to force banks to hold much larger amounts of capital against the counterparty risks they face. This alone should make OTC derivatives safer and prevent banks from taking the kind of risks they did leading up to the global financial crisis where many OTC derivative risks were backed by only very thin capital holdings. Higher capital charges may have been the only major change to OTC derivatives were it not for another interesting feature of the GFC that had not gone unnoticed.

In the aftermath of financial crisis in 2008, central counterparties (CCPs) had functioned well, especially in comparison to the bilateral OTC markets, which struggled to guarantee trade performance. They have strict rules such as the posting of initial margins to which members must comply. They also have a centralized auction process for dealing with a member default, and it was this mechanism, together with the security offered by initial margins, that seemed to be relatively effective in the aftermath of Lehman default. This led to the obvious conclusion that CCPs could standardize the OTC derivatives market by **reducing counterparty risk** and **increasing transparency**.

The recognition that CCPs could reduce risk in the OTC derivative market led to the clearing mandate. Policymakers and regulators agreed that all standardized OTC derivatives should be cleared by CCPs with a progressive timescale. The treatment of only standardized products was necessary because the model of a CCP requires standardization for a product to be cleared. The clearing mandate would be significant because previously CCPs had mainly cleared trades only in the smaller and simpler exchange-traded derivative market. OTC clearing would represent a major step into the unknown. A primary impact of the clearing mandate would be the requirement of OTC counterparties to post initial margin. Although margin agreements in bilateral OTC markets between sophisticated counterparties were

common, they only usually required variation margin that covered the current value of a position. Initial margin is an extra amount to cover additional costs that may occur in a default scenario. These initial margins required by CCPs would likely represent a significant cost for the OTC derivative market. Given the hurdles to clearing, most notably the cost of initial margin, counterparties may prefer traditional bilateral markets. Since the clearing mandate could only apply to standardized OTC products, this would lead to an obvious regulatory arbitrage involving trading non-standard products to avoid the clearing mandate. In order to counter this, mandatory bilateral margin requirements were also introduced. Since variation margin was already relatively common in bilateral markets, the most significant impact of this would be initial margin requirements. This meant that cleared or bilateral OTC derivatives would be subject to initial margins as a defense against counterparty risk.

CCPs have been proven historically to be beneficial in reducing risk in derivative products. However, they are no panacea and the question of whether they really make OTC markets safer will not be known, at least until there is another major disturbance within these markets. CCPs also create risks such as moral hazard that need to be controlled to avoid an increase in systemic risk. Another important consideration is the privileged position of CCPs with respect to aspects such as margin calculations and bankruptcy rules that aid the default management process. It remains to be seen what detrimental effect this privileged position could have on market prices and the availability of cash and assets for margin purposes. CCPs have the right to set and change the rules for valuations, margin requirements and the treatment of a default. This may not provide the best treatment for clearing members, their clients and other creditors in a large default scenario. A CCP could survive a large default but by doing so may induce a negative impact on other market participants that otherwise would not have been the case.

Perhaps the question of whether CCPs are beneficial for OTC derivatives loses sight of the main problem. Financial risk does not disappear, it is merely converted into different forms. CCPs may make OTC markets safer through mechanisms such as netting and margining. This will, however, increase risk in other parts of the market due to the privileged position of CCPs and the reaction of market participants to aspects such as stricter margin requirements. There is then the question of whether regulation is focusing on the OTC derivatives market too much. Since it has been the source of previous financial disturbances, this is hardly

surprising<sup>104</sup>. The fourth quarter of year 2018 is planned to be the effective date for clearing of derivatives by non-financials and the proposed Regulation amending the European Market Infrastructure Regulation (EMIR, Regulation (EU) No 648/2012) is expected to be finalized<sup>105</sup>.

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<sup>104</sup> Gregory Jon, *Central Counterparties: Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives*, John Wiley & Sons Inc, Wiley Finance Series, 2014, ISBN 978-1-118-89151-3, page 283-285

<sup>105</sup> According to ISDA OTC Derivatives Compliance Calendar, updated: 31th August 2018 <https://www.isda.org/a/23pEE/OTC-Derivatives-Compliance-Calendar-2018-9-1.pdf>

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