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MASTER’S THESIS

CHANGES IN THE EU FINANCIAL MARKETS SINCE THE INTRODUCTION OF MIFID II

Ljubljana, July 2019 DOROTTYA IGRICZ

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LIST OF ABBREVIATIONS

AMF – L'Autorité des Marchés Financiers

APA – Approved Publication Arrangements

ARM – Approved Reporting Mechanisms

CCP – Central Counterparty

CESR – Committee of European Securities Regulators

CMU – Capital Markets Union

CSA – Commission Sharing Agreements

CTP – Consolidated Tape Provider

EC – European Commission

EEA – European Economic Area

EMIR – European Market Infrastructure Regulation

ESC – European Securities Committee

ESMA – European Markets and Securities Authority

EU – European Union

FCA – Financial Conduct Authority

FICC – Fixed-income, currency and commodities

FSAP – Financial Services Action Plan

IRP - Independent Research Provider

ISD – Investment Services Directive

LCH – London Clearing House

LSE – London Stock Exchange

MAD – Market Abuse Directive

MAR – Market Abuse Regulation

MIFID – Markets in Financial Instruments Directive

MIFIR – Markets in Financial Instruments Regulation

MTF – Multilateral Trading Facility

NCA – National Competent Authority

NYSE – New York Stock Exchange

ORM – Online Research Market Places

OTC – Over-the-counter

OTF – Organised Trading Facility

P&L – Profit and Loss Statement

REMIT – Regulation for Energy Market Integrity and Transparency

RPA – Research Payment Account

RTS – Regulatory Technical Standards

SEC – Securities and Exchange Commission

SI – Systematic Internaliser

UK – United Kingdom

US – United States

INTRODUCTION

The Markets in Financial Instruments Directive (hereinafter: MIFID) was adopted by the European Parliament and the Council in 2004 and came into force on 1 November 2007 across the European Economic Area (EEA). MIFID aimed to strengthen the regulatory environment to protect investors in a harmonised way and enable the emergence of new financial markets and services in the European Union (EU). The key goal of the Directive was to establish a competitive, transparent and integrated EU financial market by creating a single market for investment services (Degryse, 2009).

However, the recent financial crisis demonstrated that MIFID was not far reaching enough, especially regarding investor protection and transparency. After the financial crisis which emerged in 2008, the biggest concern of the EU policy makers and regulators was how to detect problems and potential bubbles at the financial market at an early stage, and especially how to restore investor confidence. Therefore, the European Commission (EC) first made its proposal to review and revise the original MIFID in 2011. The result was MIFID II (2014/65/EU), together with MIFIR (Regulation EU No 600/2014), and the related Implementing Regulation.

Compared to the original plan, MIFID II was delayed by one year, and went into effect in 3 January 2018. MIFID II is a full upgrade of its predecessor (2007–2017), both in scope and in depth, based on the lessons learnt from the crisis. The previous regulation had to be extensively amended as a response to the crisis. MIFID II aims to further extend and upgrade the stock trading regulation affecting stock, bond, commodity and derivatives markets in the EU. Ensuring investor protection and the operation of the financial markets in the most transparent way are the key objectives of the regulation. It can be perceived as the democratisation of the financial markets. Under the revised regulation, financial institutions have to make sure that their trading platform operate in a transparent way, so the clients and investors can be granted with the fairest deal possible at any time (Cox, 2018). The long list of the key areas on which MIFID II is focusing nicely demonstrates the gigantic volume of the regulation. The key areas are such as best execution, transparency, transaction reporting, cost and charges, market structure, product governance, record keeping, client reporting, research (PWC, 2018).

Many argue – such as Valiante and Assi (2011), Burke and Hung (2015) and Biedermann and Orosz (2015) –, that although the long revision of MIFID was accompanied by continuous consultation with the market participants, concerns were raised from the industry's side on several provisions of the Directive already during the drafting period, such as the unbundling of the cost of investment research or the physically-settled derivatives traded on Organised Trading Facilities (hereinafter: OTFs). Since January 2018, when MIFID II came into effect, the financial industry is constantly trying to comply with the regulation. Financial newspapers are publishing reports and articles on a weekly basis on how the financial market in general and the business operation of market players are reshaping due to the need to comply with the regulation (e.g. Stafford and Murphey from Financial Times, 2018, McDowell from The Trade, 2019). On the other hand, the regulatory side, especially ESMA (European Securities and Markets Authority) is also trying to fine-tune the provisions based on the reaction of the market, by for example continuously updating its Q&A document on MIFID II and MIFIR investor protection and intermediaries topics (2019b). However, the full alignment is far from close due to the conflicting views on both the regulatory and market player sides.

The goal of the thesis is to demonstrate how the overall EU financial market is changing due to the compliance obligations imposed by the new MIFID II regulation on the industry. The thesis will first focus on the historical aspects of the financial market integration and regulation of the EU, and present the impact of the financial crisis on the market regulation. The key elements of both the previous and revised MIFID regulation are introduced, as well. After, the thesis will analyse the most important provisions of MIFID II and present the view of the market participants and the change in their business operation as a result of compliance. The analysis part will discuss the intention of the policy makers as well: why was there a need to further extend certain provisions of MIFID I and include new ones in MIFID II, and what kind of solutions are invented by the financial market in order to meet the MIFID II obligations.

In more detail, the analysis part of the thesis is focusing on six specific issues of MIFID II. The selection of topics reflects the mostly reported and debated topics by the financial media in the recent years. These issues appear to be in the centre of continuous discussions between practitioners and regulators of the financial markets. First, the thesis discusses *investor protection* in terms of client categorisation. The industry argues that sophisticated, high net-worth retail investors will be locked out of the market due to MIFID II which requires the differentiation between professional and retail investors. The best execution requirements are also briefly discussed as being one of the most debated and challenging parts of the new regulation. The industry is currently facing immense difficulties regarding data collection and the interpretation of certain MIFID requirements related to best execution.

Second, as another major element of the pre-trade transparency requirements of MIFID II, the thesis focuses on *dark pools/dark trading and market fragmentation*. While the regulation aims to bring trading to lit venues by introducing the so-called *double volume caps*, the ultimate result might be that the financial market becomes even more fragmented and that the industry aims to apply creative solutions to overcome the regulation e.g. using periodic auctions and establishing systematic internalisers.

Third, the "no inducement" rule regarding the *cost of research* has gained a lot of attention among market participants lately. Under Article 24(9) of MIFID II brokers are required to set a price for investment research separately form the cost of execution services. This is a provision for unbundling the research costs enabling end clients of asset managers to have more transparency on the costs related to the investment. The counterargument against the regulation is that definition of research is quite broad and vaguely defined which makes its implementation difficult. Furthermore, brokers argue that establishing an adequate price separately for the research is a challenging task.

The thesis also discusses topics of political nature which affect the implementation of MIFID II, such as the late transposition of the regulation at a national level and the impact of Brexit. Brexit causes several problems in the process of MIFID implementation, especially in terms of clearing services. This is a very important aspect since the derivatives market is primarily regulated under MIFID II and the European Market Infrastructure Regulation (EMIR), however, the majority of clearing for euro-denominated over-the-counter (hereinafter: OTC) foreign exchange and interest rate swaps clearing is done in London. Also London-City is undoubtedly the heart of the European financial market, therefore, several calculations (e.g. on double volume caps) were calculated by ESMA by taking into account the significant market players in the UK. Now the question is how and to what extent the regulation should be revised if Brexit will happen in the immediate future.

1 METHODOLOGY AND THE STRUCTURE OF THE THESIS

The thesis is relying on qualitative research methods. Since the aim of the research is to present the view and the opinion of the industry on certain provisions of MIFID II since its introduction in January 2018, academic articles, policy papers and mainly articles from international financial newspapers were used as key sources of information for the thesis. In addition, reports of market players and consulting companies provide relevant information, as well. These materials are containing interviews and opinions of financial analysts, regulators and professionals from the financial markets who offer valuable insights on the actual state of implementation of MIFID II and the ongoing changes in the financial markets as a result of the changed behaviour and business operation of market participants. In order to present the content and context of the Directive, legal texts from the EU legislation were also used. The thesis uses materials published until April 2019. Given the research question of the thesis, quantitative research methods were not considered relevant.

The thesis first aims to familiarize the reader with the contextual and historical background of MIFID II, as well as briefly present the main provisions and regulatory interventions of MIFID II. Then, starting from Chapter 3, the research part follows which seeks to shed light on the opinion of the industry on the most important provisions. The goal here is to present the concerns and difficulties that the financial industry is now facing and also the counterproductive results of the regulation which became apparent since January 2018. The research part is only focusing on those selected parts of the regulation where the concerns from the industry's side have already been articulated and communicated. The research is focusing on the mostly discussed and debated provisions of the Directive, aiming the present the intention of the legislator, together with the views and practical experience of the market participants. The brief description of the chapters are as follows:

In Chapter 2 the thesis presents the evolution of the EU regulation on financial markets. Besides the historical aspects, the aim is to describe why financial integration and regulation is important in the EU by highlighting that the finance industry just like any other industry bears the possibility of market failure, and without regulation, the consequences might be devastating. The chapter continues by presenting the provisions of the MIFID I regulation and its impact on the financial markets. Then the financial crisis is discussed from a regulatory perspective and also the consequent regulatory action which was the amendment of MIFID I resulting in MIFID II. The chapter highlights the main elements and provisions of the new regime by comparing it to its predecessor and emphasising that MIFID II is a full upgrade of MIFID I, both in scope and in depth.

Chapter 3 discusses investor protection, including the issues of client categorisation, as well as the requirements for best execution.

Chapter 4 discusses the topic of the dark trading and fragmentation, especially focusing on double-volume caps, periodic auctions. Also the tick-size regime and the controversial issue of systematic internalises are explained.

Chapter 5 is briefly focusing on the commodity derivatives market where MIFID II has also introduced significant changes, especially on the position limits regime.

Chapter 6 discusses one of the mostly debated provisions of MIFID II, which is the inducement rule, in other words, a provision for unbundling the research costs.

The final two chapters are dedicated to the political aspects of MIFID II. Chapter 7 discusses the issue of late transposition of the Directive at a national level. Chapter 8 is focusing on Brexit-related issues and future challenges as well as solutions proposed by the regulator and the industry in order to overcome the difficulties of one of the biggest transition in the history of the European Union.

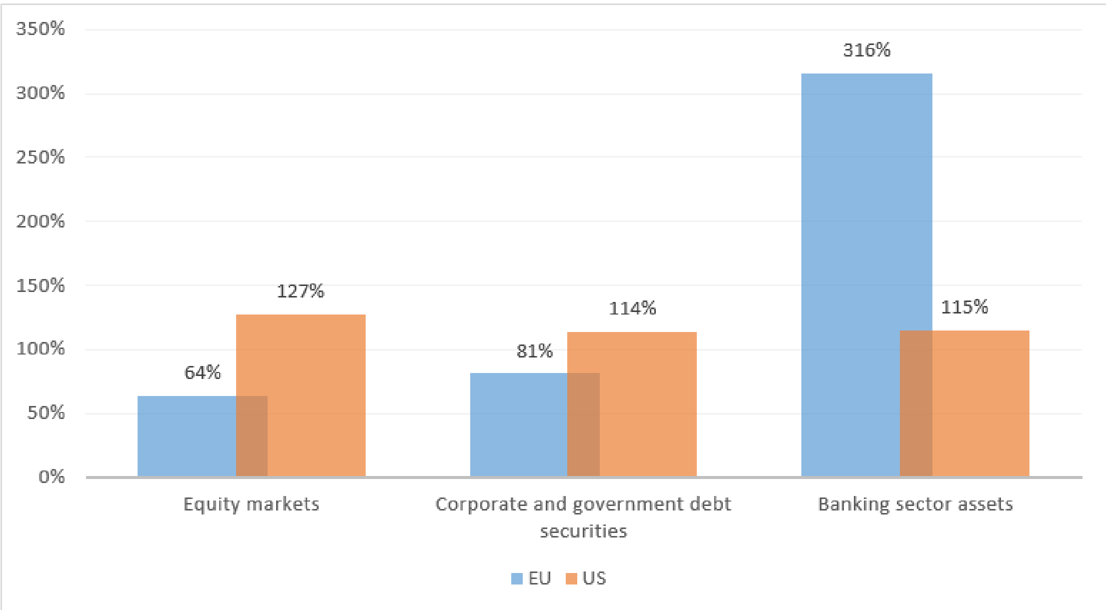
2 REGULATION OF FINANCIAL MARKETS IN THE EU

2.1 Capital markets union of the EU

As defined by Lannoo (2015, p.2) “a capital market works as a conduit for the demand and supply of debt and equity securities”. It connects investors and banks with borrowers through securities. Capital markets union (hereinafter: CMU) aims to foster the development of the stock exchanges and better integrate them in the European Union. CMU was initiated by the European Commission and aims to promote sustainable economic growth via creating more integrated capital markets. The European Commission argues that Europe needs a strong capital market union in order to tackle economic issues such as low investment rate, the strong domination of the bank financing and low level of financing through the capital markets. Also the standardisation of securitised asserts, better access to financing and increasing competition should be achieved in the capital markets. Unlocking funding for capital markets and ultimately linking investors and savers is a key goal (Barbu & Străchinaru, 2016). Creating a single market in financial services is important because it fosters the elimination of regulatory barriers and requires the Member states to approve and recognise each other's regulatory standards. Single market in financial services can be possible due to the free movement of capital which was achieved between 1960's and 1980's by the removal of capital control (Thomadakis, 2017).

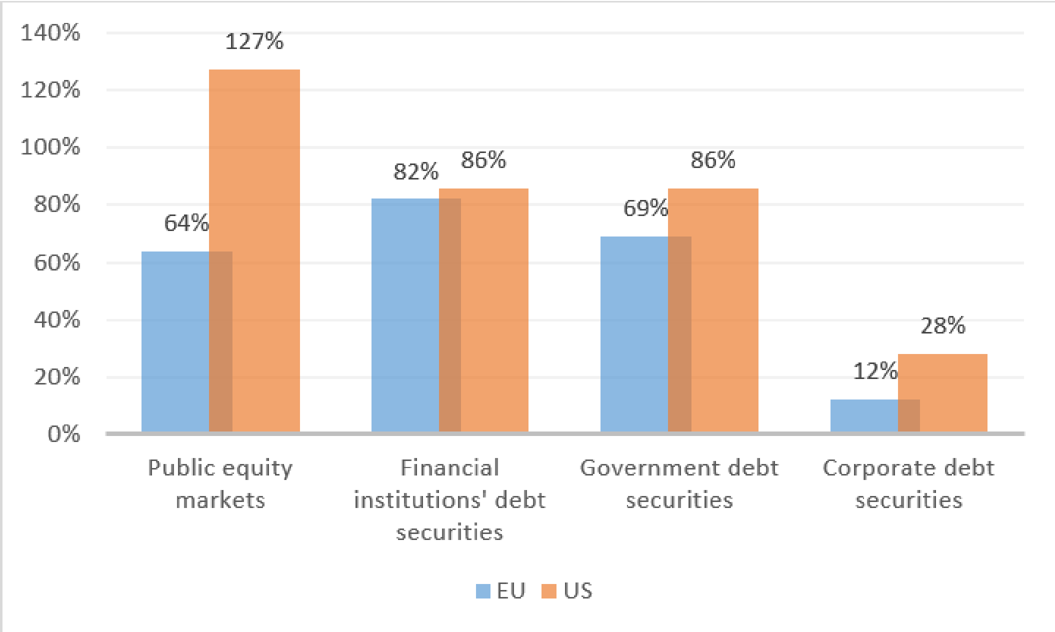
The EU's financial system is not as diversified as it is in the United States (hereinafter: US), therefore it might be more prone to financial instability. As Figure 1 and Figure 2 show below, the EU capital market activity compared to the US is less strong, it needs to be strengthen. On the other hand, the banking sector assets are three times of the EU's GDP. That is the reason why the EU regulators mainly focused on the banking sector in previous years. EU financial system is driven by universal banks. There is an overreliance on banking systems when it comes to funding. The financial crisis demonstrated that the EU economic structure needs to be reshaped and moved towards more market based finance (Thomadakis, 2017). Therefore, apart from growth and jobs development and shock absorption, the CMU aims to decrease the level of bank dependency of the EU financial system. Capital markets are naturally fragmented along national borders, thus they need to be integrated, and barriers to access to public trading platforms need to be removed.

Figure 1: Simplified structure of the financial sector in the EU, 2010-2014 (% GDP, average)



Source: Valiante (2016).

Figure 2: Capital market structure (value of outstanding securities, excluding derivatives, average 2010-14, % of GDP)



Source: Valiante (2016).

The corporate equity and debt securities market of the US is more than twice as big as Europe's. The most important difference between the capital markets of the EU and the US is given by the size of the two country. In the EU, the model for securities market varies across Member states. Some capital markets are well developed and able to act as a great source of financing for small and medium companies for example. In other Member states the equity markets are rather underdeveloped or emerging, and debt market aims to fulfil sovereign's needs. In order to achieve a more integrated capital market in the EU it is important to have an increased supervision over the EU securities markets, to have an in-depth knowledge on how securities market operate in each Member state and what kind of characteristic they have, to aim for more enhanced product standardisation and harmonisation across the different securities markets, and to promote more finance market based financing (Lannoo, 2015).

The idea behind the financial integration was to strengthen the EU economy significantly. Due to the comprehensive regulatory framework established by MIFID and MIFID II, the European financial markets could go through a significant improvement in efficiency and increased competition, in case the provisions seem to work efficiently. MIFID and MIFID II, apart from other legislative packages such as EMIR, can further foster the integration of the capital markets union by creating more organised trading venues, by bringing more transparency to the markets, by efficient data monitoring in order to prevent market manipulation.

2.2 Theories on integration and regulation

Well-functioning markets are important for the economy and the society because they can maximise value for consumers. Markets, however, often do not function properly without the intervention of the government (or a supranational body). Market regulation is important in order to correct the imperfections of the market for better operation. The following imperfections are the typical driving forces for the intervention of a regulatory body (Lipsky, 2016):

- Customers cannot always possess complete information about the product they intend to buy, therefore, they cannot make an informed decision. Regulation is necessary to oblige companies to offer complete information including the risks attached.
- Unregulated markets can be dominated by a monopolists or a few oligopolists, and the resulting weak competition would adversely affect the prices (price increase) and discourage smaller firms to innovate.
- Social costs are not taken into consideration in unregulated markets. Market regulation can help reduce the negative externalities of the market activities.

Market regulation and the way how the market is designed determines the degree of participation of investors in the market and its competitiveness, leading to economic growth and social welfare. The market structure also affects the behaviour and interaction of market participants and how the public and private information is incorporated into the market price (Degryse, 2009). However, the question of regulatory pressure and the potential of “overregulation” remains to be constantly assessed.

The promoters of anti-regulatory approach suggest that regulatory measurements can limit the free market activity and decrease the growth of investments and employment. First, regulatory obligations can impose additional costs on firms, which might be passed on to the end consumer eventually. Second, if there is competition in the market, companies can fail and in that case the continuity of service has to be assured, otherwise the consumers will be negatively affected. Third, if prices are kept too low by the regulation, it might discourage firms to innovate and invest. A poorly constructed regulation on consumer protection could limit also the operation of the companies and prevent them from innovating and experimenting (Warwick Commission, 2009). Any kind of regulation tends to generate distortions in the market incentives, but “where the *first-best* solution – freely functioning markets – fails, the *second-best* alternative of appropriate regulation becomes inevitable” (The Warwick Commission, 2009, p.10).

The finance industry bears the possibility of market failure, and without regulation, the consequences might be devastating. Financial markets can foster long term growth and development, but if they do not function properly, the real economy will suffer, as the last financial crisis demonstrated it: the subprime mortgage crisis started in the United States, but eventually led to a significant drop in the global GDP. Financial markets are important for the economy since they facilitate the efficient flow of savings, investments and international funds, thus, enable the accumulation of capital and the production of goods and services. Well designed and developed financial markets and financial institutions, together with a large variety of financial instruments would meet the need of the lenders and borrowers of the assets, who can enter into the best possible deals. Businesses and investors can use the financial markets to raise money to grow and further expand (Federal Reserve Bank of San Francisco, 2005).

The types of financial markets are: stock market, bond market, commodities market and derivatives market. Since borrowers and lenders have different preferences, financial markets have to fulfil the following three main functions (Baldwin & Wyplosz, 2015): financial intermediation; transforming and matching maturities; diversifying and taking risk. Financial markets can match the borrowers and lenders in an efficient way due to the scale economy present in the financial industry. Therefore, they can determine the market price of the asset correctly and lower the transaction costs associated. Financial markets can also be perceived as networks since the financial firms are able to re-lend the saver's money to each other. One of the most important functions of the financial markets is that they make the financial assets liquid (i.e. trading securities and making investments any time).

There are two main types of market failures in financial markets that require regulation: asymmetrical information and social externalities. Asymmetric information is a crucial market failure typical for the financial markets. The asymmetry exists between the seller and the buyer of the financial products: the buyer takes a long position in a product and he might discover only after the transaction that it was actually a bad or unfair deal. By that time, the buyer probably cannot do anything about it. Therefore, the main goal of the financial regulation is "to balance the interests of unsophisticated consumers of financial products and their sophisticated sellers" (The Warwick Commission, 2009, p.11). With regard to social externalities, when the financial system fails, the cost of this failure is much more than the cost of the bank, more specifically the cost of those shareholders that failed. The regulator should provide government insurance to depositors and require banks to hold reserves greater than what they would usually keep in order to prevent potential moral hazard.

2.3 The introduction of the first MIFID

The Council of the European Union and the European Parliament adopted the Markets in Financial Instruments Directive (Directive 2004/39/EC) in April 2004, which came into force in 31 January 2007. The Directive was a cornerstone in moving toward a single market in financial services in the European Union, by harmonising securities trading, creating a single market in financial services, focusing on wholesale and retail trading in securities including bonds, shares and derivatives.

The Directive was designed for the regulation of the financial markets in the EU, and it aimed to increase consumer protection and promote competitiveness, fairness and transparency in the EU's financial markets. It aimed to "improve the organisation and functioning of investment firms, facilitate cross border trading and thereby encourage the integration of EU capital markets" (European Commission's Press Release, 2007). It also aimed to cease the monopoly of big stock markets. The Directive was meant to replace the Investment Services Directive (hereinafter: ISD) adopted in 1993 and became the main achievement of the Commission's Financial Services Action Plan (hereinafter: FSAP) created in 1999. Through MIFID, national stock exchanges were impacted by both the regulator's side, pushing for more transparency (e.g. clearing and settlements of trades), and by the customers' side through creating new trading platforms to reach the lowest fees possible (Degryse, 2009).

The overall expectation from the Directive was to achieve the transformation of the securities trading in the EU, lowering the cost of capital, fostering growth and competitiveness at a global level. As an answer to the greater competition, exchanges immediately started to consider the possibility of merger. The provisions to increase transparency meant that investors would be able to subscribe to information provider services through which they would be able to overview the entire market in specific shares, and not only having visibility on the offer of the local exchange. This could lead to gaining access to the best prices in the market. It is important to note that prior to the implementation of MIFID, the difficult implementation process and the burdens for financial firms caused by the Directive across Europe were already severely discussed in the industry. The collaboration among regulators and the careful preparation of the financial firms was a crucial part in its implementation. In addition, it was obvious from the beginning that not every financial firm would benefit from the provisions. For example, middle-market financial firms could struggle to engage in price competition with large investment banks that would offer securities trading across asset classes. They feared that they have had to scale back their operations, and their exposure of losing business against competitors with lower cost would greatly increase. However, this loss would become a gain for of their customers. Practitioners also raised the issue of technological challenges. New computer softwares and systems needed to be developed costing enormous amount of money paid to IT consultants. Finally, due to the several ambiguities regarding definitions or troubling questions such as "what does execution mean for products that are traded off exchange" or "how are clients to be classified" or "why to lump bonds and specialised derivatives products in with the trading of securities", practitioners feared that the compliance costs would just further increase, significantly (The Economist, September 7, 2006).

2.3.1 The Lamfalussy process

MIFID is often referred to as "the Lamfalussy Directive". The Lamfalussy process was established by the Stockholm European Council Resolution in 2001 for the purpose of reviewing the regulatory structure of the securities markets in the EU. The process is based on a four-level regulatory approach and the overall aim was to enable the legislation on the securities market at a EU level to be more flexible, therefore, the legislative actions can be agreed on and adopted more promptly in order to keep pace with the fast moving changes in the financial markets (Commission Staff Working Document, 2004). The principle of the process was to agree on high-level principles at EU legislator level and leave the implementation process to the European Commission. It would also allow a more focused monitoring of how the Member states implement the Community law in their home country, and potential enforcement scenarios.

The process strongly focuses on creating more transparency and openness, whereby the European Commission reaches out to stakeholders ex-ante in order to collect the views of market participants and end-users via early consultations. As part of the process, two committees were established: European Securities Committee (hereinafter: ESC) and Committee of European Securities Regulators (hereinafter: CESR). In 2011 CESR was replaced by ESMA. Besides the adoption of MIFID, the Lamfalussy process was a catalyst in agreeing also on another key measure of the FSAP, the Market Abuse Directive[1] (hereinafter: MAD) adopted in 2002 (Commission Staff Working Document, 2004).

In the Lamfalussy process the adoption of the Directive was a Level 1 procedure and the related implementing processes and measures were Level 2. These two levels were translated into the national legislations in a harmonised way, with the assistance of CERS in Level 3. Level 4 ensured the adequate application and enforcement by the Commission (Degryse, 2009).

2.3.2 Key elements of MIFID

The Directive aimed to protect consumers by creating harmonised requirements for the operation and activities of financial intermediaries in the EU Member states. The Directive affects[2] various financial firms such as investments banks, asset managers, and stock brokers. Investment firms are required to give consumers adequate information, as well as gather information on the client's knowledge and financial situation before recommending financial products (Burk-Hung, 2015). There are provisions on best execution, pre-trade and post-trade transparency, as well as rules on order handling and trade reporting rules. Pre-trade transparency includes information that has to be disclosed to the investors about current trading opportunities, e.g. prices and volume. It introduced new rules for transaction reporting in equities. The level playing field allowed that different trading systems are able

[1] The Market Abuse Directive: legal framework adopted in 2002 to strengthen the financial market integrity, increase investor protection, prevent and detect market abuse, market manipulation and insider dealing (Directive 2003/6/EC of the European Parliament and of the Council). Its revised version, Market Abuse Regulation (MAR) was adopted in 2014 (Regulation (EU) No 596/2014 of the European Parliament and of the Council).

[2] Present terms are allowed to be used occasionally since these main provisions still exist in MIFID II.

to compete for executing trades, but by avoiding the deterioration of market efficiency (Davies, 2008). Regarding its implementation there were delays in many Member states, except for the UK.

Davies (2008) stresses that the key element of the legislation was the “single passport” that allowed firms, regulated by their home state, to operate in other EU host Member state, i.e. they could do business in another Member state with the approval of their domestic authority. Second, the Directive's other key feature was the elimination of the concentration rule (permitted by the ISD, prior to MIFID) which allowed trades to be executed on alternative trading systems or by investment firms, not only on the main market centre, i.e. the national stock markets. The concentration rule meant that the Member states could decide whether the retail orders submitted for financial instruments should be executed by transferring them to the stock exchanges which were primarily national back then. MIFID enabled the liberalisation of market for equity trading venues, thus, increased competition (Petrescu & Wedow, 2017). Before MIFID, large national exchanges served as the venue for equity trading in Europe, as they were the primary venue where stocks were listed. They operated almost as monopolies in each country.

Parallel to the elimination of the concentration rule, new trading platforms were established, which led to the identification of trading services. The Directive identified three categories for trading services in the following way (Directive 2004/39/EC):

1. *Regulated market* is defined 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 a way that results in a contract, in respect of the financial instruments admitted to trading under its rules and/or systems”, for example stock exchanges such as London Stock Exchange.

2. *Multilateral trading facility* (hereinafter: MTF), which replaced the Alternative Trading Systems, means “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 a way that results in a contract”. In effect, MTFs are very similar to regulated markets in terms of regulatory and transparency requirements, however, the operation of an MTF can be considered as an investment service. The key difference between regulated markets and MTFs is that MTFs need to fulfil less requirements in order to trade a financial instrument, while regulated markets have to meet strict requirements on listing process in order to make sure that only appropriate securities are admitted to trade on their venue. MTFs usually operate via electronic trading systems run by investment banks or other market operator.

3. The third category is the *Systematic Internalisers* (SI) which is defined by the Directive as “an investment firm which, on an organised, frequent and systematic basis, deals on

own account by executing client orders outside a regulated market or an MTF". SIs are typically operated by large investment banks, and the client orders are executed by matching in-house the buy and sell orders of their clients (Hogan Lovells, 2017).

These categories, and especially the introductions of MTFs, have led to greater competition and fragmentation in financial markets since the same type of securities could be listed in different trading venues. The overall aim was to boost competition in trading of shares.

2.4 Financial crisis and the need for MIFID II

The aim of this chapter is to present the impact of MIFID I on the European financial markets when the financial crisis occurred. Although the focus of the thesis is on MIFID II, it is important to dedicate a chapter to this topic in order to shed light on the achievements and failures of MIFID I, and help the reader understand why there was a need to revise the original regulation and adopt MIFID II.

Kudrna (2016) argues that the EU decision-making is usually characterised by the *joint decision trap* due to the conflicting or competing interests of national financial sectors. In short, Member states try to lead EU regulations closest to their national interest and preferences. The international organisations and global regulatory standards (e.g. G20, IMF, Financial Stability Board), however, are capable to narrow down the joint decision trap because Member states are willing to consider them as a basis for international harmonisation. Nevertheless, these standards still leave plenty of room for varying interpretations and implementations, therefore, the EU still has to improve a lot in this respect.

The EU's legislative output has almost doubled since the crisis. The European Commission made proposals for 11 legislative packages in order to cope with the financial crisis. Before the crisis, the EU legislation was mainly dominated by directives which require a formal adaption into the national law of each Member state. However, after the crisis the EU wanted to have an increased power and capacity to resolve the issues, therefore, the post-crisis legislations mainly consist of regulations which are directly applicable in all the Member states once they are adopted at an EU level.

After the financial crisis the biggest concern of policy makers and regulators was how to detect problems and potential bubbles at an early stage. It is written in the European Commission's newsletter (2018) that "restoring investor confidence following the financial crisis is one of the main aims of MIFID II". Lannoo (2017, p. 1) also outlined that MIFID was a "principles-based light touch", and now there is a need for a "single-rulebook approach". The financial crisis in 2008 demonstrated that MIFID was not far reaching enough, especially in terms of investor protection and transparency. Nevertheless, as mentioned before, due to the comprehensive regulatory framework established by MIFID, the European financial markets could go through significant improvements in efficiency and increased competition (Valiante & Assi, 2011). Also, the substantial investment in IT technologies and infrastructure was generally perceived as a positive effect of MIFID (even if the cost of this IT infrastructure was large).

Ironically, MIFID was introduced when the financial crisis emerged in 2007 which had significant repercussions on the EU's financial markets. The need for the Directive's revision was obvious for example in restricting high frequency trading and restraining the commodity speculators (Treanor, 2011). High frequency trading is considered the cause of the so-called *flash crash* (i.e. when withdrawal of orders on stock immediately causes price declines) experienced in the US in 2010. Also it was expected from MIFID to take OTC trading of derivatives to regulated markets or through clearing houses in order to reduce the riskiness of the transaction. Although MIFID was an achievement in creating competition for established stock exchanges, the financial crisis proved that that policy makers had to seek more far-reaching measurements regarding consumer protection in financial markets. There was an urgent need for protection, especially against predatory trading practices[3].

In 2009 Joaquín Almunia, European Commissioner for Economic and Monetary Policy, addressed the response of Europe to the global financial crisis in his speech. He argued that the stabilisation of the financial markets and saving the banking sector from collapsing were the most important responses to the crisis. The Commissioner stated that in his view two important lessons would need to be learnt from the crisis. First, confidence has a key role in the safe and efficient functioning of the financial markets, and the restoration of confidence is a prerequisite for stabilisation. Second, the interdependent nature of economies was addressed. Regarding the need for strengthening the regulation of financial markets he stated that "in the future we cannot allow any part of our financial system to operate in the shadows". Well-established financial reforms needed to be adopted in order to rebuild investor confidence, and public trust in the financial system. However, six years later, in 2015 Mark Carney, the Governor of Bank of England, said that "public trust in the industry is far from being restored". He noted that the attitude of the public toward finance is still utterly negative. Chancellor, George Osborne said: "It's going to take time and the financial services sector, and indeed the regulators and the politicians responsible, have to prove to the public that things really have changed" (Chu, 2015).

There were several criticism of MIFID I. First, it was lacking enforcement and its national implementation was not unified. Second, Assi and Valiante (2011) in their research found also issues with pre- and post-trade price transparency. Also, despite the increased competition among trading platforms, the final users did not see a significant drop in the prices (Lannoo, 2017). Reports showed (e.g. ESMA, 2015) that the best execution provisions (i.e. the most efficient execution possible and providing the best terms for the client) did not

[3] Trading that induces and/or exploits the need of other investors to reduce their positions (Brunnermeier & Pedersen, 2005)

seem satisfactory and were not implemented successfully. The same report, based on a research conducted among National Competent Authorities (hereinafter: NCAs), showed that most of the NCAs did not establish adequate criteria for safeguarding best execution provisions in their home country.

While the research methods for measuring financial stability are well-developed and commonly accepted, this is not the case when assessing the quality and the well-functioning of financial markets. Policy changes mostly happen as a reaction to events. Therefore, up to the time when the crisis had hit the European financial scene, the biggest concern of MIFID was how to achieve the opening up of competition among national exchanges and improve market efficiency. But there was less emphasis on integrity which would help restore confidence of retail investors in the EU financial markets. The crisis shed light on the fact that without market integrity the financial sector is fragile (Lannoo, 2017). According to Austin (2017) *integrity* and *fairness* are quite vague terms, however, governments and regulators are using these terms as key goals for securities regulation, therefore, there have to be a common interpretation. *Integrity* might refer to sound, unimpaired and uncorrupted market, while *fairness* refers to equitable and impartial market structure.

Regulators also need to decide whether market efficiency should be given a priority compared to market integrity, or they should equally enhance market integrity. For example, the Financial Conduct Authority (hereinafter: FCA), which is the financial regulatory body in the UK, regards market integrity as important as competition. FCA introduced its own Market Cleanliness Statistic in order to measure fairness and efficiency in the market, especially by focusing on questionable movements in equity prices prior to serious corporate announcements. The statistics showed that there was a decline in the suspicious activities since 2009, possibly due to the regulator's targeted deterrence strategy. Interestingly, ESMA decided not to create and implement similar indicators at EU level (Lannoo, 2017).

In general, in their research on MIFID implementation they first concluded that the *business conduct rules* provisioned by MIFID had been uniformly applied in the EU. Second, the survey showed that firms aimed to meet at least minimum the legal requirements when applying best executions. Third, regarding *data quality* the survey demonstrated that the quality of the received trade data was quite low. Also, the lack of standardised data format further degraded the data quality. Fourth, the survey found that the requirements for transaction reporting were applied and the records were being kept according to the regulation. Fifth, regarding trade executions, the findings were contradicting, since some highlighted that trade volume on dark books/off-order books increased, while others stated that this was just the result of MIFID shedding light on something which was cloudy and blurred before, outside of the legal frameworks. Sixth, regarding pre- and post-trade transparency the survey detected major issues in the standardisation of formats regarding post-trade data, therefore, data quality for OTC trades was perceived generally low. On the other hand, the respondents agreed that the Directive extended the range of those products which fall under transparency obligations. Finally, as organisational requirements, provisions for conflict of interest were uniformly applied by the market participants, most of them has already been using similar procedures to MIFID requirements. On the other hand, for financial authorities it might be costly, also they might use different approaches and procedures for enforcement (Valiante & Assi, 2011).

Apart from MIFID, other legislative packages had to be revised at the same time. Following the LIBOR and EURIBOR scandals in 2012, the revised Market Abuse Directive (hereinafter: MAD II or Criminal Sanctions for Market Abuse Directive) and the Market Abuse Regulation were introduced to address the abusive behaviour of market players and the abusive use of new technologies in the financial markets which can cause unreasonable harm and disadvantage to investors. As its name suggests, MAD II also enables criminal sanctions in case of proven abusive market behaviour (Lanno, 2017).

2.5 The introduction of MIFID II

This chapter is dedicated to present the main elements of MIFID II. Since there are numerous articles and other sources available describing the provision of MIFID II in detail, it is not the intention of the author to repeat them, but to provide the reader with a brief presentation of the Directive in order to understand the analysis part of the thesis focusing on key provisions of MIFID II.

2.5.1 Regulatory background

The European Commission first made its proposal in 2011 to review and revise the original MIFID. The decision was to have a primary legislation, which is Level 1, including Directive 2014/65 on markets in financial instruments (MIFID II) and the Regulation 600/2014 on markets in financial instruments (MIFIR) - both came into force in July 2014. Just as in the case of MIFID I, MIFID II was delayed by one year, and went live in 3 January 2018. By definition, the Level 2 process focuses on the details of MIFID II at operational level, including (1) Delegated acts, i.e. Delegated Directives and Delegated Regulations, drafted by the Commission according to the expert advices received from ESMA; (2) Technical standards, i.e. Regulatory (hereinafter: RTS) and Implementing (hereinafter: ITS) Technical Standards, drafted by ESMA and approved by the Commission. As Level 3 procedure, ESMA as the relevant regulatory authority has been providing further guidance on the implementation of MIFID II due to its extreme complexity and the possible inconsistency coming to the surface in the implementation process. This Level 3 guidance mostly includes several Q&A documents on different topics, published and regularly updated by ESMA based on questions received from market participants (Bush, 2017).

Bush (2017) explains that MIFID and the related Implementing Directive have been translated into national legislation in several Member states of the European Union and the European Economic Area. The MIFID Implementing Regulation has not been translated because under the European law regulations as legislative acts have direct effect, therefore, they may not be translated into the national law of the Member states. MIFID II covers a directive (MIFID II), the regulation and an excessive number of implementing measures called level 2 legislation.

2.5.2 Main elements of the new Directive

MIFID II is a full upgrade of its predecessor, both in scope and in depth, based on the lessons learnt from the crisis. Lanno (2017, p.4) stresses that "*the review of the directive is a recognition that MIFID I leaned too much towards market efficiency, but not sufficiently towards integrity*". Regulators now can gain more information on trading practices, for example phone calls made on trading activities have to be recorded and stored. However, the associated costs are significant, banks and trading firms have spent approx. 1.66bn euros in 7 years of preparation in order to meet the MIFID II obligations (Canny, 2018).

The reason why MIFID II/MIFIR is even more rigorous than MIFID I is that the financial crisis has shed light on the gaps of the MIFID I legislation, such as investor protection and the transparency of financial markets. As the European Commission stated in 2016: "The reason for the extension lies in the complex technical infrastructure that needs to be set up for the MIFID II package to work effectively. ESMA has to collect data from about 300 trading venue on about 15 million financial instruments. To achieve this result, ESMA must work closely with national competent authorities and the trading venues themselves" (EC Press release, 10 February 2016). However, neither competent authority nor trading venues were ready with the necessary systems by 3 January 2017, which was the original date for the introduction of MIFID II. The scope of products and activities of MIFID II was extended compared to its predecessor – structured deposits (a deposit with an underlying investment product), packaged retail investment products, emissions allowances, and the sale of financial instruments issued by the investment firm are also included in the regulation (Deloitte, 2014).

Based on various reports (e.g. Deloitte, 2014 and Lannoo, 2017) the extended scope and depth of the revised Directive, compared to MIFID I, are the following:

1. Extended scope of products and activities
   - Regulating trades on bond and commodity markets
   - Introducing regulation on algorithmic trading
2. Enhanced investor protection
3. Creation of a new execution venue: Organised Trading Facilities
   - Establishing a framework for the trading of sufficiently liquid standardised OTC derivatives which are eligible for clearing (they cannot trade on OTC, but on eligible platforms such as regulated markets, MTFs or OTFs)
   - Extended scope and obligations of systematic internalisers
4. Stricter governance requirements and

- Stricter policy on how financial firms have to collect and store information on their clients
- More accountability on senior management

5. Product intervention & strengthened supervision with stricter sanctions
6. Harmonised regime for third country firms
7. Extended market transparency and transaction reporting
   - Licensing of data publication management

Lannoo (2017) argues that MIFID I was lacking the price and cost transparency in the securities and derivatives markets and failed to efficiently promote investor protection (just remember the LIBOR scandal). The new Directive aims to establish provisions for the authorisation of investment firms and regulated markets, including their operating conditions. In MIFID II there is a much broader emphasis on the operational conditions of investment firms focusing more on investor protection, establishing a new trading platform (OTFs) and provisioning high frequency trading. It is also noticeable that MIFID II now includes former Level 2 provisions as Level 1. In short, customers can become much more knowledgeable on the cost of service they are offered and they can better assess the quality and the value of the service they receive.

2.5.2.1 Extended reporting obligations and licence for market data providers

MIFID I only focused on providing transparency requirements (i.e. reporting transactions to the national regulator) on equites admitted to trade at regulated markets. MIFID II now also includes non-equity asset classes in the reporting obligation of market participants. For example, there is a requirement on price transparency in bond and derivatives markets which was under discussions since MIFID I. This extension means that as of January 2018 a much larger amount of data is supposed to be reported on more traded instruments. Besides continuing reporting transactions in instruments to the NCAs, investment firms also need to provide data on when the admission to trade was requested and also on financial instruments where the underlying is a financial instrument (or an index or basket of financial instruments) traded on a trading venue. The actual prevailing price has to be recorded prior the execution, and the price and quantity have to be publically reported after the deal.

Lannoo (2017) discusses that under MIFID I the difficult assessment of best execution was due to the fact that there was not a standardised data feed available on which the assessment could have been based, while there were numerous trading venues where the trades were executed. Under MIFID I it was expected that issue with the data feeds would be resolved by the market. Bush (2017) also underlines that investments firms are also highly interested in having market information on trading at various execution places to be made public and in a standardised way, since they need to be able to compare efficiently this information in order to meet the requirements for best execution. Besides investment firms, ESMA and national regulators are also interested in having access to high quality market data which enables them to adequately monitor the financial markets.

In order to facilitate the reporting of this huge amount of data, MIFID II introduces new Data Reporting Service Providers, which are regulated entities and they need to have authorisation from the competent authority. These service providers are the Approved Reporting Mechanisms (hereinafter: ARM, providing reporting to competent authorities or to ESMA), Approved Publication Arrangements (hereinafter: APAs), and Consolidated Tape Provider (hereinafter: CTP), who, on behalf of the investment firms, are doing the reporting to NCAs or ESMA. One provider can simultaneously act as all of these three entities. Essentially, they make the data available to the market (Kvarnström, Mild & Gustafsson, 2017). As mentioned before, these data providers should be authorised by NCAs (there are certain prerequisites for management and organisation arrangements to meet in order to be able to offer these services and receive the authorisation). A provider can be an independent firm, but also an investment firm or the market operator of a trading venue can provide data reporting services under the same governing rules.

2.5.2.2 Trading venues

MIFID I categorised trading platforms as regulated markets and MTFs. MIFID II introduces a third category: Organised Trading Facilities. MIFID II defines OTFs as "a system or facility in which multiple third-party buying and selling interests in financial instruments are able to interact in the system" (Article 4(1)(19) of MIFID II). OTFs bring together multiple third parties who are interested in buying and selling interests in non-equity instruments, such as bonds, structured finance products, derivatives and also emission allowances. The Directive also states that execution of orders can be carried out on a discretionary basis on an OTF (not on other trading venues), and that the operation of an OTF is considered as an investment activity for which prior authorisation is required (Q&A On MiFID II and MiFIR market structures topics, 2019a). Lannoo (2017) argues that OTFs were created in order to reduce dark pools (see Chapter 2).

OTFs are only one of the three multilateral trading system categories, therefore, ESMA emphasises that market participants need to assess, based on their own business model, which category (OTF, MTF or regulated markets) they need to get the authorisation for (Q&A On MiFID II and MiFIR market structures topics, 2019a). Bush (2017) stresses that it is explicitly stated in MIFIR that the definitions for regulated markets and MTFs should be very close since they represent the same organised trading functionality. However, the operation of an MTF is considered an investment activity, therefore, the operating entity shall comply with the MIFID II provisions that is focusing on investment firms involved in investment activities. On the other hand, operating a regulated market is not regarded as an investment activity, therefore, the same rules do not apply.

The Directive describes that three conditions are necessary for an entity to operate an OTF:

1. *The trading is conducted in a multilateral basis.* OTFs are required to "have at least three materially active members or users, each having the opportunity to interact with all the others in respect to price formation" (Article18(7) of MIFID II). The element is that the trading interest in the system should be able to interact potentially with another, opposite trading interest.

2. The trading arrangements in place have the characteristics of a system, either automatised or non-automatised.

3. The execution of the transaction is taking place on the system or under the rules of the system. When the price, the volume and terms of the trade are agreed on through a firm, the counterparties' names are disclosed, the firm steps away from the transaction and the transaction is then legally formalised between the counterparties outside a trading venue.

Finally, it is important to mention that the Directive identifies two types of systems operated by an OTF: 1) systems that cross clients' orders or 2) systems arranging non-equities transactions where the OTF operator may facilitate negotiations between clients, meaning that bringing together at least two potentially matching trading interests in a transaction.

Both, OTFs and MTFs can be operated by investment firms in the following way:

- OTFs can trade only in non-equity instruments
- OTFs have clients, while MTFs and also regulated markets have members. Therefore, OTFs need to comply with rules such as best execution (i.e. client facing rules)
- Important exemption is that wholesale energy products, that are physically settled, do not qualify as financial instruments when traded on an OTF.

A healthy competition was achieved by MIFID I in the financial market. This opinion was underpinned by the market share captured by MTFs (in August 2009 MTF's share of equity trading in Europe was 19.57%). MIFID II continues with the same idea as MIFID I, meaning that some degree of concentration of trading is desirable in order to trigger liquidity and get correct price information, but, it should leave wide enough scope for competition among trading venues (Bush, 2017).

The client's order can be transmitted for execution by the investment firm to a regulated market, to MTF or OTF, but the order can be executed in-house as well, through the systematic internalisation of the order. In this case, the investment firm acts on one side of the transaction for the account of the client and on the other side on its own account. This type of transmission for execution is not considered as a separate investment activity, but as a mix or combination of trading on behalf of the client and also on behalf of the trading venue. If the internalisation is systemic, the investment firm is required to meet specific transparency obligations before entering into a trade. Transparency obligations also apply to systematic internalisers, but this applies in any case, regardless whether or not the internalisation is systemic. Although definition-wise there are no major, only necessary amendments regarding the systematic internalisers, an important difference compared to MIFID I is that in MIFID II the criteria for a systematic internalisers are much broader. MIFID II defines SIs as "an investment firm which, on an organised, frequent and systematic, and substantial basis, deals on its own account by executing client orders outside a RM, MTF, or OTF". The new Directive provides quantifiable definitions for 'frequent and systematic', as well as 'substantial', based on trading volumes.

2.5.2.3 Commodity derivatives and reporting

The work of G20 summit has had a major impact on the EU legislation. The EU's financial regulation directly refers to the work of the G20 on several fields, such as bank capital requirements and liquidity standards, hedge funds, OTC derivatives, credit rating agencies, and also the markets in financial instruments. MIFID II is linked to the G20 agreement back in 2009 which aimed to address excessive commodity price volatility by improving the transparency in the commodity markets. As the report states, "to meet the G20 commitments, MIFID II provides for strengthened supervisory powers and a harmonised position-limit regime for commodity derivatives to improve transparency, support orderly pricing and prevent market abuse" (The G20 and the EU: A Win-Win Game, 2016, p.8).

Under MIFID II, NCAs have to impose limits on positions for all commodity derivative contracts traded on trading venues and economically equivalent OTC contracts[4], by meeting the requirements for the methodology set by ESMA and the Commission when doing the calculations (The G20 and the EU: A Win-Win Game, 2016). The position limits need to be set for every commodity derivative contract, and must be determined on the basis of the net position that a person can hold. The position limits determine exact quantitative limits or thresholds for the maximum size of the position that a person can hold in a commodity derivative. They do not apply to those positions which are held by or on behalf of non-financial entities. At least once per year, ESMA has to monitor how the NCAs fulfilled the requirements for the position limits (Bush, 2017).

Pindoriya (2017) explains that the following instruments need to be reported:

- Energy derivatives, metal derivatives, agricultural derivatives and other food derivatives
- Intangible derivatives e.g. climate derivatives
- Flow-based delivery derivatives e.g. electricity and gas
- Both cash-settled and physically-settled derivatives

[4] Definition by ESMA: an OTC derivative shall be considered economically equivalent to a commodity derivative traded on a trading venue where it has identical contractual specifications, terms and conditions, excluding different lot size specifications, delivery dates diverging by less than one calendar day and different post trade risk management arrangements (TRAction.com)

- Derivatives for any of the other instruments covered e.g. baskets, indexes, swaps

Position limits were created in a way to be applicable for both liquid and illiquid markets. Limits need to follow a consistent approach in order to avoid arbitrage, yet, to be flexible and applicable to as many types of contracts as possible. The methodology for calculating the position limits should consider the following factors: maturity of the commodity derivative contracts; deliverable supply in the underlying commodity; overall open interest; volatility of the relevant markets; number and size of the market participants; characteristics of the underlying commodity market including patterns of production, consumption and transportation to market; development of new contracts. If there is a major change in the market, for example in the deliverable supply or open interest, it is the responsibility of the NCA to review and adjust the position limits, if necessary (Pindoriya, 2017).

Position limits are set for the spot month and all other months and they apply to both cash settled and physically settled commodity derivatives. The Directive also introduces a position reporting obligation in order to have better information on how the market is functioning and to monitor the compliance with the position limit provision. The overall goal of these provisions is to lower the systematic risk and diminish the speculative activity in the market of commodity derivatives (Pindoriya, 2017). Steven Maijoor (2015), ESMA Chair, argued that "the EU is going into new, unchartered territory by implementing the most extensive position limits regime in the world".

Publication of weekly reports are required which specify the aggregate positions held by the different categories of position holders for the different types of contracts traded on that trading venue. There is a minimum threshold for reporting in the number of position holders and their open position. This reporting obligation mainly requires investment firms that trade OTC commodity derivatives, however, due to varying national transposition of the Directive applied in different Member states, the scope can be even wider. Investment firms trading in commodity derivatives on regulated markets, MTFs and OTFs and economically equivalent OTC contracts also outside the trading venue must report minimum on a daily basis their positions and also their clients' positions until the end client (Emission-EUETS.com).

2.5.2.4 Inducement rules for unbundling

Portfolio management 'inducements' rules aim to govern the provision of research and other non-monetary benefits. MIFID II has brought a big disruption in the production and distribution of investment research services. The new regime will require brokers to set prices for investment research separately from execution services (and separately identifiable charges for other benefits), applicable for all asset classes. Prior to the new directive, brokers provided bundled research and execution services to asset managers/buy side firms (Dufresne, 2018). From 1 January 2018, asset management firms are required to have a separate research budget. This is a significant difference between the old and the new directive: MIFID I caused high cost of compliance, while MIFID II now brings the revenue – thus the business model – of asset managers at risk (Deloitte, 2014).

They also need to decide how to allocate the costs associated with the research: either by setting up a Research Payment Account (hereinafter: RPA) and this way the client should pay the pre-agreed research cost via the account (i.e. the client will bear the cost), or the asset management firm itself absorbs the cost. The aim of the new set of rules is to eliminate the potential conflict of interest between the asset managers and their clients when transacting with a broker. The overall goal is to make the market for research more transparent and competitive, and "shake up the investment industry on both the buy-side and sell-side" (CFA Institute, 2017, pp. 4).

Setting the prices for the research, establishing a research budget, and allocating cost are very complex tasks for the brokers on the sell-side, since they need to take into account several factors to get the right numbers and strategy. First, the value of the research mainly depends on the given asset class being invested in, and the type of investment strategy to follow. For example, the cost for research on fixed income securities is different from that on equities. The same applies to widely traded and less liquid securities. Second, the amount charged for research by brokers also depends on the size of the asset manager's research budget, which is determined by the size of the firm and the number and type of clients. Third, it is an important question whom the firm will charge for the research, the clients or against its own account. Fourth, the willingness and the capability of the firm to take the research cost plays an important role in the strategic decision. Larger firms with in-house research capabilities might be ready to absorb these costs, unlike small firms with less bargaining power (CFA Institute, 2017).

3 INVESTOR PROTECTION

3.1 Investor protection – Client categorisation requirement

As part of the provisions aiming at advanced investor protection, MIFID II, just like its predecessor, requires the categorisation of clients according to eligible counterparties, professional clients and retail clients. The reclassification of the clients is possible once certain qualitative, quantitative and administrative requirements are fulfilled. The qualitative requirement involves the assessment of the client's expertise and knowledge in order to make sure that he understands the instrument wishing to invest in and the risks attached to it (McCann FitzGerald, 2018).

MIFID II intends to bring more transparency to the markets. One important element is protecting those investors who are investing in complex products which they might not understand fully. This concerns mainly retail investors. Under MIFID II retail investors can still have access to very complex instruments, however, the advisers are strictly required to take all the necessary steps and precautions to protect them from taking risk which they are not aware of. Unavoidably, this requires significant amount of paperwork that increases the transaction cost of the bank. This brings the possibility of missing out high net worth retail investors because investment banks may not want to take the extra burden of doing all the paperwork required by MIFID II. As stated by Norea bankers: "*If you look at primary order books, today you have fewer lines, i.e. fewer investors, than you've had before because there's a sub-segment of the market today that is unlikely to be able to play, because it's decided by the issuer, probably in consultation with the arranger, not to facilitate that segment of investors*". The bankers further argue that that the way how the Directive differentiates between retail and professional investors does not necessarily mirror the client's level of understanding of that specific complex instrument. Even if the investor possesses the expertise and knowledge, but he is categorised as retail investor, he will not be granted access to such deals. Consequently, sophisticated retail investors will be locked out of the market when it comes to the best investment offers, especially if the thresholds become arbitrary (Schwartzkopff, 2018).

As mentioned before, MIFID II extends the pre- and post-trade transparency measures to new equity-like (such as depositary receipts, exchange traded fund and certificates) and non-equity instruments such as bonds, derivatives, emission allowances and structured finance products which usually require significant capital injections (Hogan Lowells, 2017). The advantage of the expanded pre- and post-trade transparency requirements is that they help reduce the amount of trades on dark pools significantly, therefore, more and more trade data can be made publically available, leading to more reliable price information (Bush, 2017).

The so called Volume Cap Mechanism is also introduced which aims to limit the volume of transactions which are being dealt in dark pools. Furthermore, it is an important addition that systematic internalisers and other investment firms that do trading in OTC financial instruments also have to fulfil the extended pre-and post-trade transparency requirements (Hogan Lowells, 2017).

3.2 Best execution requirements

While previously in MIFID I firms needed to take *reasonable* steps to achieve best execution outcome for the clients, MIDIF II requires them to take *sufficient* steps. The MIFID II Regulatory Technical Standards 27 and 28 are dealing with best execution and they are intended to provide clients with the possibility to constantly review and monitor the execution they receive in the market place. This applies also to non-EU firms – they need to provide information on how they have fulfilled the execution orders on behalf of their EU clients (Hogan Lowells, 2017).

MIFID II requires firms to meet new standards regarding publishing data on execution quality. By 30 April 2018, firms were obliged to disclose their top five execution venues and they needed to summarise the execution quality they achieved. In addition, firms needed to publish important information on how and where they have executed the client orders (RTS 28). RTS 27 requires execution venues, market makers and systematic internalisers to publish best execution reports on a quarterly basis. The start date for reporting such reports was 30 June 2018. Best execution does not necessarily mean the absolute lowest price that the firm needs to offer to its clients in securities transaction. It rather requires the firms to find and offer the most favourable terms and conditions in all relevant circumstances (Kerry, 2018). MIFID II clearly aims to strengthen the compliance function of the firms.

The general view of the industry is positive on the best execution requirement. They claim, such as Alex Kerry, head of Winterflood Business Services, that for funds and asset managers, best execution is not only a requirement, but also an aspiration. They always need to ask questions such as 'Do current broking processes benchmark across multiple venues?' or 'Are best execution outliers also being monitored regularly, and is that feedback being communicated by brokers?' (Kerry, 2018). Pre- and post-trade monitoring helps them assess the effectiveness of the execution. Potential issues in best execution are often due to operational factors that need to be checked regularly. In addition, it is stressed that there is a crucial need to assess whether trading desks are able to act more proactively in the future to fully facilitate illiquid stocks and also how to reach best execution in fixed income and OTC markets where there are usually no reliable benchmarks available. Kerry further argues that failing to achieve best execution bears reputational risk and fiduciary obligations for the financial firms.

4 DARK TRADING AND FRAGMENTATION

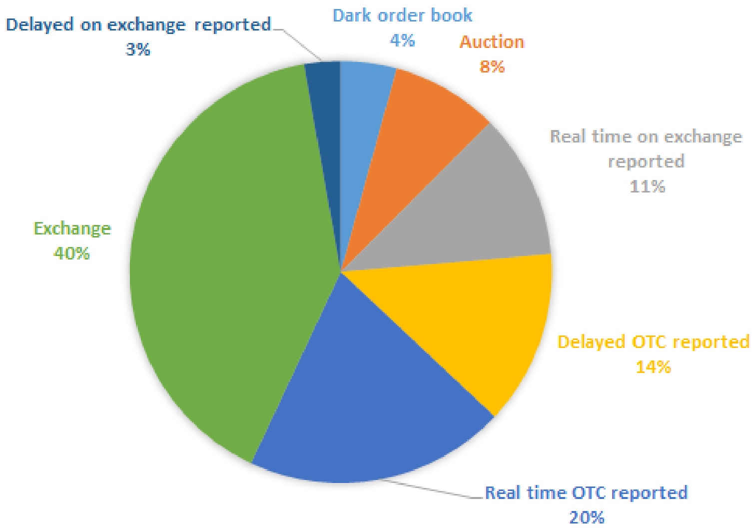
4.1 What are the dark pools?

In the 1980's the U.S. Securities and Exchange Commission (hereinafter: SEC) permitted brokers to connect many buyers and sellers and facilitate trading in large blocks in private exchanges, i.e. off the book blocks called dark pools. This way they could overcome the transparency requirements of public exchanges. Dark pools are beneficial because they can reduce volatility as massive trades traded by institutional investors can have significant impact on the market. Dark pools also operate with less transaction costs (Masch, 2019). Some classify three main types of dark pools: 1) exchange-sponsored pools (e.g. Turquoise run by LSE), 2) broker-owned dark pools like UBS, 3) independent dark pools such as Liquidnet (Pratt, 2014). Dark pools serve to trade large order of stocks or block trades without having any pre-trade transparency, since the size of buy and sell orders looking for execution are not disclosed, unlike at public trading venues. This way the order remains hidden, therefore, it will be impossible to submit a betting order against it. In high frequency trading, which is getting more and more poplar, algorithms are used to detect block orders[5]. In dark pools or dark venues, the information about the orders is hidden which otherwise makes public, transparent stock exchanges operate in an efficient manner, creating adequate prices which would reflect the real dynamics in the market.

In relation to dark pools, regulators are worried for two reasons. First, if there is too much trading on dark pools, investors and traders cannot get correct information on prices. Second, since large block trades can have significance impact on the market, they are likely to be always traded on dark pools. However, trades with reduced size should not be traded on dark pools, but on lit markets, otherwise it can also lead to distortion in price discovery (Pratt, 2014).

Before the introduction of MIFID II approx. 45% of shares traded in a day were executed away from lit exchanges, either on dark pools or via banks, as Figure 3 shows. The regulators have the clear intention to increase the volume of shares traded on lit exchanges significantly.

Figure 3: Type of trades in Europe's equity market (in %)



Source: Stafford (2018).

The share of equity trading in Europe that took place on dark pools have increased significantly in the past years. It jumped from 1% in 2009 to 8% until 2016. It is important to look back to 2007 to see why there was a significant increase in the market share of dark pools in trading in Europe. As it is pointed out in the European Central Bank's Occasional Paper Series (Petrescu & Wedow, 2017), in 2007 MIFID I introduced provisions for pre-trade transparency requirements in the EU's equity trading venues – expect for some special waivers. Market participants, who were highly concerned by the fact that the order information would become transparent before execution, could use dark pools to continue

[5] Large order placed for buying or selling large number of securities

trading *in the dark*, by using a special pricing mechanism: the mechanism matched orders at reference prices from other markets. This way, the pre-trade transparency waivers set under MIFID I could be applied for dark pools. Furthermore, in the past years more and more traders tended to heavily rely on getting and using information on existing orders for the sake of making higher profit. Trading by using algorithms allows traders to spot changes in order books in the demand and supply side as well, and by using this information they can rely on faster trading. In case of lack or limited pre-trade transparency, “dark pools reduce the risk that information about an order reaches such trades before execution” (Petrescu & Wedow, 2017, pp.4).

The market for dark pools are less concentrated than that of the public order books because in case of dark pools, “more venues are active in the stocks listed in each country, with none capturing more than 25% of the volumes traded on dark pools overall” (Petrescu & Wedow, 2017, pp.5). There is also a higher degree of horizontal differentiation when it comes to dark pools. Dark pools compete in price, quantity, order types and matching mechanisms. Interestingly, some of the biggest dark pools in Europe offer services for additional protection, which seems contradictory with the original purpose of trading *in the dark*. The reason is that these services aim to provide protection against leakage of information. In case of public exchanges, usually there is one primary exchange in each Member state which dominates the market besides a few other exchanges with large volume of trading (Petrescu & Wedow, 2017.

The general perception on dark pools varies. The FCA argues that individual users of dark trading prefer to have lower risk for having their information on orders leaked. Another survey showed however that vulnerable traders actually claim that dark venues are not always capable to provide the promised protection. What is more, they can take advantage of their clients (Aquilina, August 1, 2017). That is the main reason why the EU under MIFID II now is setting limits on dark pools, enforcing equity trading to take place in the so-called lit exchanges by applying measures such as caps on transactions. Since traders want to stay on dark venues, they would switch to a new type of market, the systematic internalisers, discussed previously. SIs will allow banks to carry out unlimited dark trading as long as they are risking their own capital. Therefore, while there are ways around the rules, it remains visible where this displaced trade seems to go. Regulators aim to monitor these activities, however, the equity market of Europe seems to become even more fragmented and complex (Bloomberg, 2017a). Dark pools reduce the efficiency of public stock exchanges in setting prices correctly because the flow of information related to large block of trades traded in dark venues remains hidden. Correct price formation has a significant economic impact on the equity market since it can lead to lower cost of capital for businesses, better asset valuation, less frequent price shocks and effective disclose of improper trading. Since market participants perceive these factors important, stock exchanges are actually competing in the quality of their price formation activities (Oxera, 2019).

Dark pool operators have a less critical approach to dark pools. Rebecca Healey, head of EMEA market structure and strategy stated that "*there's a risk of over-simplification that lit trading is good, dark trading bad. It really depends on what order you have and what you need to do to deliver value to the end investor*" (Reid, 2018b).

4.2 Changes in the market structure

When setting regulatory measurements it is important to analyse the competition between trading venues in order to understand the dynamics of the market and the intention of the investors. Petrescu and Wedow (2017) argue that there are two contrasting factors which drive competition between equity trading venues. On one hand, externalities and economies of scale would suggest that it is beneficial for traders to have a trading venue where liquidity is concentrated (available volume and order size). This way, there is a higher probability for matching order, lower spread for execution, and lower search cost. On the other hand, the authors claim that it is unlikely that one trading venue is able to serve the interest of all the investors using their venue, as they have different interest in the size, type and frequency of orders. Therefore, there is a horizontal differentiation between venues regarding the services they offer and the clients they wish to reach.

Dark markets are characterised by the lack of pre-trade transparency. In dark markets the trades are negotiated via phone, executed via broker-dealers or in broker-dealer crossing networks and dark pools. Mainly institutional investors are using dark markets to trade in order to obscure their substantial trading interest. On the other hand, regulated markets such as LSE (hereinafter: London Stock Exchange) or NYSE (hereinafter: New York Stock Exchange) are characterised by having an opening and closing auction, and continuous trading via the limit order book. Multilateral trading facilities such as Nasdaq OMX and Turquoise are different compared to regulated markets regarding the promptness of execution, the number of traded securities and how the trading fees are structured. Both, regulated markets and MTSs allow applying hidden or iceberg orders (Degryse, Jong & Kervel, 2014).

New trading venues have been established in the recent years. As opposed to the traditional exchanges, some of the newly established trading systems are characterised by publicly displayed limit order books, for example, the already mentioned MTFs established by MIFID I. On the other hand, other trading systems "operate in the dark" (Petrescu & Wedow, 2017, pp. 1587), such as the dark pools and OTC trades. This large number of trading venues with different characteristics have led to the fragmentation of the marketplaces. Changes in this market structure are in line with the changes in the regulation of the market.

Degryse et al. (2014) posed the question of how the several different types of venues affect market quality. Since liquidity is a crucial part of market quality, the important question is how and to what extent market fragmentation has an impact on liquidity. The results showed that the relation between fragmentation and liquidity mainly depends on where the fragmentation is coming from, i.e. visible or dark market. The results demonstrate that pre-trade transparency plays a pivotal role (publishing quotes for liquid instruments). Pre-trade transparency is defined as publicly displayed limit order book by the authors. Dark trades include trades done at dark pools, internalised trades and OTC trades. The authors found through their research that in case of visible fragmentation, competition for order flow enables the improvement of liquidity, but it is the opposite in case of dark trading. This positive relationship can be attributed to the competition between liquidity suppliers. Theoretical studies show that if there is a developed competition between liquidity suppliers, fragmentation can have a positive effect on the competition between liquidity suppliers since it can boost the number of liquidity providers. The negative effect can be explained by the cream-skimming effect, meaning that the dark markets tend to draw uninformed order flow that can escalate the adverse selection cost on the visible markets. In short, "results imply that the type of trading venue determines the overall costs and benefits of competition between trading venues" (p. 1619).

4.3 Double-volume caps

The so-called *double volume caps* introduced by MIFID II aim to prohibit certain type of dark trading. Dark pools are obliged to cease trading in equity and equity-like instruments for which, on rolling average, more than 8 percent of daily trading was transacted in the dark over the past 12 months (more specifically 8% cap for all trading venues and 4% cap for individual trading venues, but large-in-scale block trades are excluded from these limits). It is ESMA's responsibility to publish data including the trading volume and calculations on which stocks would be affected by being limited to trade in dark pools. ESMA explains that the double volume cap limits the amount of dark trading under the reference price waiver[6] and the negotiated transaction waiver. It concerns many blue-chip stocks – based on ESMA's data it is 80% of the most largely traded shares such as HSBC, Unilever and Nestle – which would end up in lit public exchanges such as LSE or Deutsche Boerse (ESMA, 2018a).

The caps were supposed to be introduced in January 2018, however, ESMA was delayed with the introduction due to insufficient data. Michael Werner, exchanges-analyst at UBS, said: *"As dark volume caps will be implemented (...), we expect market shares at dark venues will decline by about 350 basis points, with most of the gains accruing to the regulated exchanges"* (Jones, 2018). Eventually, dark pool caps were introduced in March 2018 and are applicable to more than 900 stocks, most of them are counted as European and FTSE100 components (Reid, 2018b). In August 2018, ESMA published 308 breaches: 246 equities for the 8% cap and 62 equities for the 4% cap. In case of detected breach, the trading must be

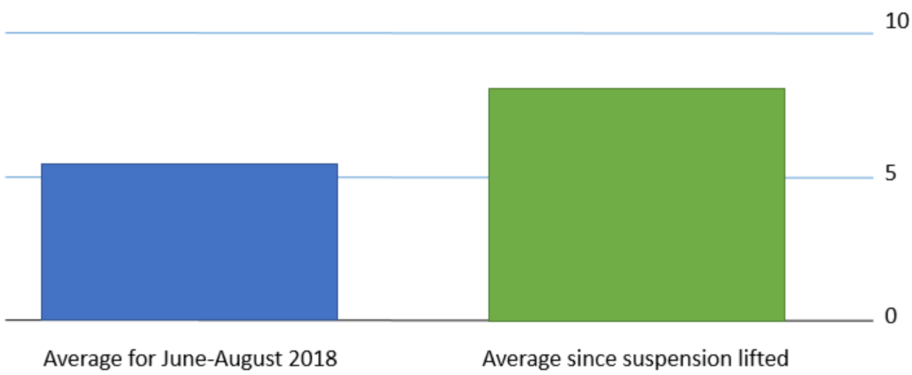
[6] The reference price waiver (RPW) allows dark pools to match an order at the mid-point of the best bid and offer on the primary exchange; the negotiated price waiver (NPW) allows orders to be negotiated at the volume-weighted average price (Bloomberg, December 19, 2013).

suspended within two working days by the national competent authority for a 6-month period (ESMA, 2018c).

Large blocks of shares are under exemptions from the caps, mostly because many market participants argue that less transparent strategies are more able to provide proper service for large investors. These investors aim to avoid price movements against their positions when executing big trades, therefore, they do not want to show signals of their intention to the wider market. The numbers also show that investors tend to turn to non-lit venues when trading in large blocks: in 2017 the share of large block trading in the dark was between 10 and 20%, however, in January-February 2018 it jumped almost to 30%, and above 50% in May. With exact numbers, the average size of dark trade was almost twice as much in May (23,190 euros) than in January (12,488 euros) (Reid, 2018a).

As mentioned earlier exceeding the caps are regarded as a breach which means 6-months suspension. On 11 September 2018 the suspension on more than 600 stock were abolished, and interestingly this ease immediately triggered a huge jump in volumes of trades on dark pools as showed by the Tabb Group market research firm (Agini, 2018). This shows the still existing large demand in buying and selling shares on dark venues. In general, the appetite for trading in dark pools was not dulled as it was intended by the new regulation. As the first trading bans now are lifted under MIFID II, in 16 October 2018 equities started to trade again in dark pools in Europe. After the suspensions are over, four weeks after approximately 8% of all equities trading was taking place again on dark trades, as it is showed on Figure 4. According to industry analysts, dark venues kept their attractiveness despite the tightening rules of MIFID II. Christian Voigt, senior regulatory adviser at Fidessa stated that *"MiFID II is overly complicated without actually achieving a lot, and this is the perfect example. Politicians didn't like so much trading in the dark, but instead of changing the economic incentives they just slapped it with a ban"* (Vaghela & Brush, 2018).

Figure 4: Equity trading in on dark venues after suspension were lifted (2018) (in %)



Source: Vaghela & Brush (2018).

Some traders often raise the argument that it is actually the provision of MIFID II regulation (i.e. executing trades by providing the most favourable terms for clients) which partially forces traders to use dark pools in order to meet these requirements. Former director at Barclays Plc, Mark Montgomery, says that it is the characteristic of the investor behaviour that the investor tries to use a certain type of trading whenever it offers better price, lower cost and reduced market impact. In this case reduced market impact means the often mentioned characteristic of dark trading, i.e. orders placed in dark pools are visible only for the operator of the venue, but not for the wider market (Vaghela & Brush, 2018).

4.4 Periodic auctions

Periodic auctions are considered as 'semi-dark' venues since they are required to be made public only after having reached certain volume threshold (making pre-trade information available later than in continuous systems where the information is public once the order is entered). Periodic auctions, unlike the normal stock trading, stop and restart the trading throughout the day. Orders are submitted by fund managers to the auctions in the same way as it is in a normal stock exchange, however, they are practically hidden up until the start of the auction. For the auction to begin, there needs to be enough submitted orders in order to trigger the auction. Since the orders are hidden, they cannot effect the share prices to move against the investor until the trade has been concluded. Orders are matched periodically by algorithms. Periodic auctions differ from traditional auctions because at periodic auctions the auction can be triggered by the market participants and not the venue (Hadfield & Vaghela, 2018).

Periodic auctions are also under the governance of MIFID II. MIFID II requires to publish information on the buying and selling interest during the period of the auction call, but while trading in central limit order books (used by most of the exchanges) is required to publish order information at every price level, periodic auctions have to publish indicative uncrossing price[7] and volume for the auction (FCA, 2018). In October 2018, ESMA stated that there would be soon a decision on whether the rules on periodic auctions should be further tightened. The reason is that market players might use periodic auctions in order to circumvent the MIFID II regulations on double volume caps. In order to make a well-grounded decision, ESMA is planning to conduct a fact-finding exercise soon on periodic auction systems. ESMA is aware of the tendency that as MIFID II's double-volume caps are introduced, trading flow is now redirected to other venues such as periodic auctions (McDowell, 2018a).

However, the research done by FCA (2018) shows that there is just a barely visible increase in trading at periodic auctions. Periodic auctions do not seem to occupy a large part in the trading infrastructure; and as it is stated by the FCA, "this particular trading technique has grown from being tiny to being very small".

[7] The 'uncrossing' price maximises the amount of business which can be executed at the same uncrossing price. It is determined by the auction platform (FCA, July 28, 2018)

As a response from the industry's side, Rob Boardman, European CEO of equities broker ITG, stated that "to date, periodic auction functionality is providing valuable execution quality – exhibiting very low toxicity of liquidity. Moving forward, we anticipate an even greater focus from our clients on sourcing high-quality liquidity, particularly in block size" (McDowell, 2018a). In another interview, Broadman also stated that "[they] were never believers in the idea that it will all move on to exchanges, periodic auctions had been relatively small and they were a bit of a solution looking for a problem" (Hadfield & Vaghela, 2018).

Four months after the introduction of MIFID II it seemed clear that trading venues and banks – as being competitors of stock exchanges who had been lobbying for caps introduced on dark pools – became innovative. First Goldman Sachs has set up its service for periodic auctions on 21 March 2018. Previously this practice was typical for exchanges to use. David Shrimpton, a managing director at Goldman Sachs, stated that the periodic auctions "will enable their clients to trade in a fair, multilateral and transparent environment" (Hadfield & Vaghela, 2018).

In summary, although the use of periodic auctions did not increase dramatically, still, they have become in the focus of investment banks. It does not necessarily mean – or yet cannot be proved by the data – that periodic auctions are used to circumvent the double-volume caps. Rather it is currently an alternative to comply with the regulation, delivering only low impact on the trading landscape. On the other hand, as it is reported by Reuters (Reid, 2018a) surveys show that buy-side traders would like to see more scrutiny of the periodic auctions, even if they find them useful.

4.5 Systematic internalisers and the tick size regime

The status of systematic internalisers permits institutions to trade shares away from the market if they are making transactions of their customers' deal on their own account. Worries have emerged early on the lawmakers and market operators' side such as Nasdaq Inc., fearing that the changes brought by MIFID II would simply shift dark trading to alternative dark trading venues such as SIs. Market players argue that the creation of systematic internalisers under MIFID I back in 2007 – with the intention to create harmonised rules for stock trading – might bring unwanted consequences in the light of MIFID II regulation. The main concern raised by the exchanges is that SIs will be regulated differently from them, for example not having requirements for a minimum tick size. Lee Hodgkinson, head of markets and sales at Euronext NV said, "it's inconsistent with the spirit of MIFID" (Hadfield & Brush, 2017).

Under MIFID I the establishment of SIs intended to set rules for banks on handling their clients' buy and sell orders (the SI status was limited to equities transactions in MIFID I, but the new regulation has extended its scope). However, financial newspapers argue that banks rather tended to use the less strictly regulated pools run by banks, called broker crossing networks[8], which is now prohibited under MIFID II. This provision is now prompting banks to seek alternative venues. Some initial analyst forecasts predicted that three-quarter of investment firms expected to trade through SIs. Analysts regard SIs as having an unfair advantage since banks and high-speed traders are given the opportunity to trade without limit via their SIs. Since these trades are not counted toward the rigorous limits on dark pools set by MIFID II, these institutions are incentivised to trade via SIs (Hadfield & Brush, 2017).

The "unfair advantage" refers to the fact that SIs are required to display the order size before the trade. In addition, they are allowed to do trading of shares in different price increments than lit markets, meaning that there is an option to set tick sizes and overcome some transparency requirements. The asymmetry arises because public exchanges and dark pools are not granted with the same flexibility, therefore, exchanges fear that even a small pricing edge will shift trades from their venue to SIs (Hadfield & Brush, 2017). Nasdaq is arguing that "the ability of SIs to improve prices without respecting tick sizes means SIs will be allowed to offer marginally better prices to clients, (…) in conjunction with best execution requirements, this means SIs are extremely likely to capture significant trading flows. (…) control over the timing of trade publication on SIs (up to 1 min) will give SIs a considerable advantage over market makers on public markets" (Bakie, 2017a).

The European Commission was impelled to take strong actions to limit their operation of SIs, and in a revised delegated regulation prohibited them to network together (as some rumours reported similar behaviours) which would have allowed them to function like kind of a broker crossing network. Still, investment banks rather prefer to become SIs than MTFs which have more regulatory burdens to take (Bakie, 2017a). Regarding the provisions on broker crossing networks, practitioners argue that for buy-side it is crucial to have access to a trading venue which is liquid and has the right combination of market participants. Buy-siders often underline that they wish to trade with other large scale asset managers, however the question is: "Where should the liquidity come from then? You do need brokers to interact and provide some liquidity" (Bankingtech, 2015).

However, it seems that not all exchanges are on the same side. For example, London Stock Exchange Group (hereinafter: LSEG) is not part of that lobbying group which raises concern against SIs. Martin Koder, senior manager at LSEG said at a conference in 2017: *"We are pro-competition. There will be a different treatment of SIs but we do not foresee an apocalypse"* (Basar, 2017). Scott Bradley, head of sales and marketing also from LSEG stated that they "understand that SIs can contribute to a deeper market and tighter spreads, and (…) are supportive of their participation" (Hadfield & Brush, 2017).

[8] Alternative trading system which matches the buy and sell order OTC, i.e. without routing the order to an exchange. Example: Goldman Sachs's SIGMA X (Capital.com)

In June 2018, Robert Ophèle, chairman of the Autorité des Marchés Financiers, reported that six months after the introduction of the MIFID II regime, the off-exchange trading is booming in France. The regulator expressed its concerns about the increasing popularity of the systematic internalisers. This legal status was less often applied before the introduction of MIFID II. Most of the giant investment banks such as JPMorgan and Morgan Stanley have all adopted this legal status. Mr Ophèle said in the interview: *"It could be that it normalises rapidly but . . . I have been surprised by the magnitude of the increase in systematic internalisers in the market. It's now between 30 and 40 per cent of total market share [based on AMF data on the French market] and it was not significant before"*. Mr Ophele stipulated that tick sizes might be the reason for the big jump in the market share of systematic internalisers. Several European regulators have expressed their concerns regarding the systematic internalisers since exchanges and other trading venues might be affected disadvantageously because they cannot quote in the same tick sizes and the SIs (Keohane & Stafford, 2018).

Here, it is important to elaborate more on the above-mentioned tick size regime. As defined by Euronext, tick size is the smallest increment in price that an exchange traded instrument is allowed to move. Instruments, which are heavily traded, have smaller tick sizes, while higher prices have higher increments. Tick sizes are important because they have significant impact on market quality as limiting the prices the traders can quote. As ESMA (2018b) states the tick size regime set by MIFID II aims to establish a level-playing field among different trading venue types in the EU's financial market by setting regulation on the minimum price increments.

However, besides the issue with the systematic internalisers, tick sizes set by MIFID II have other weaknesses, as well. ESMA (2018b) recognises that the new mandatory tick size regime failed to work properly when it was applied to shares for which the main pool of liquidity was outside the EU's financial markets, i.e. "third country instruments where the most liquid trading venue is located outside the EU". The reason for this is that the minimum tick sizes applicable to shares are computed based on the average daily number of transactions on the most liquid EU market. It is a good indicator for the majority of equity instruments, but it might be based on underestimated liquidity resulting in EU trading venues subject to minimum tick sizes higher than tick sizes applicable on non-EU venues, causing competitive disadvantage. Another criticism raised by market participants is that the tick size regime under MIFID II was introduced in order to control high-frequency trading (hereinafter: HFT) activity. McDowell (2018c) states that orders of non-HFT participants have been positively impacted by the regime, while there was a decrease in market share in terms of HFT firms.

Despite the industry's concern there is not much hope that rules such as the tick-size rule are going to be amended since such major changes would require to invite all relevant institutions from the EU to express their view. There is always a possibility to review MIFID II, but it would definitely not be done overnight.

5 COMMODITY DERIVATIVES

Commodity firms are facing the biggest challenge in the light of the extended MIFID regulation due to its extended scope. Under MIFID I, clauses referring to exemptions such as ‘dealing on own account’ or ‘ancillary trading services’ have disappeared or further restricted. The range of commodity products which are considered to be financial instruments has been extended by including physically settled derivatives, emission allowances and financial derivatives regardless how and where they are settled and traded. Consequently, many more commodity firms, which were previously outside the scope of MIFID I, now happen to fall under MIFID II. For some firms this means enormous undertakings since previously they did not have to comply with any of the obligations requested by MIFID I (PA Consulting).

The market for commodity derivatives and the number of players using these markets has grown significantly since the introduction of MIFID I. The financial crisis has prompted the EU legislators to widen the scope of the regulation of the financial markets in general. MIFID II aims to capture more players on the commodity market by requiring them for authorisation as investment firm. Commodity market participants will be required to comply with regulatory obligations similar to financial markets. Regulatory reforms – such as MIFID II, the introduction of European Markets Infrastructure Regulation (hereinafter: EMIR), changes in the Market Abuse Regulation for commodity markets and the introduction of Regulation for Energy Market Integrity and Transparency (hereinafter: REMIT) – all of these bring the commodity market players under more scrutiny. The aim of the provision is to limit the speculative activity of the market players and reduce the systematic risk in the commodity derivatives. In addition, the regulation gives ESMA more power to intervene if necessary.

Companies have raised several concerns regarding how to meet the MIFID II requirements and other issues such as the rigorous attitude of the European regulators, high costs and the lack of introductory period. For example, under MIFID II the position limits for commodity derivatives are extended across the *group*. This is a similar measure than the Dodd-Frank Act in the United States. However, ESMA decided to use the definition of *group* as defined by the *Accounting Directive* that defines it as “a parent undertaking and all its subsidiary undertakings”. Firms raised their concerns by claiming that their current system is not capable of aggregating position limits throughout the group if it is defined such way (PA Consulting).

The technological changes to meet the requirements will be difficult and expensive to implement. The position limit requirement involves demanding internal procedures and reporting line. Firms falling under the reporting regime need to monitor aggregated position for all subsidiaries and "net any economically equivalent positions in real time" (Reuters, 2015). It is important to highlight that position limits do not only apply at the end of the trading day, but also during the day, therefore this is a crucial factor to bear in mind when it comes to OTC commodity derivatives which are traded outside of the normal trading hours of an organised trading venue. There are exemptions, however. For example positions which are held by or on behalf of non-financials and which are measurable, are not subject to the position limits depending on the decision and approval of the competent regulatory authority. The reason is that the risk attached to this commercial activity is limited here (PA Consulting, 2018).

The position limits are set by national regulators in order to prevent price distortion, and as mentioned above they also have the right to make exemptions. The reason for the exemption is to protect commercial users and commodity producers who do not trigger any systematic risk or do not have adverse influence on investors. The competent authorities have to notify ESMA about the position limits they want to impose (ACAPM Report).

Energy exchange companies have been complaining about the stricter rules, especially because of the reporting requirements as customers are now facing challenges. Reportedly, the share of oil futures business of Intercontinental Exchange (hereinafter: ICE), a US company, has even dropped since the introduction of the new rules. However, UK's Financial Conduct Authority is trying to make the necessary exemptions as having processed more than 1000 hedge applications. Here it is important to mention that the wholesale energy market is greatly affected by the regulation. Since MIFID II imposes limits on trading positions in order to avoid for a trader or entity to have a too large position, the regulation can prevent that one market player could have significant influence on the energy futures market (Meyer & Stafford, 2018).

For demonstration, ICE which operates global financial and commodity markets went through a diversification into new businesses, but commodity market is still an important segment for its operation. As the numbers show, in 2017 ICE earned more than half of its $2.1 billion net revenue through trading and clearing energy, agricultural and metals futures and options. Since the introduction of the new rules ICE experienced the migration of its customers to CME Group, a US-based competitor, mainly because of the position limits set under the EU regulation. Ben Jackson, ICE President said: "*The reality is this move is primarily about responding to our customers that trade our North American energy contracts*". Furthermore, in its annual report, ICE commented on the position limit regulation in the EU and US by noting that it "may cause ICE to move products from one jurisdiction to another as a result of business risks and competitive challenges". ICE stated in January 2018 that it would remove significant number of oil contracts from its London-based exchange venue. As an alternative, the contracts would be relisted in the US where there is a less rigorous position limit regulation than MIFID II. Since many other energy trading companies are concerned by these issues in the UK, FCA for example already in January granted thousands of hedge exemption whenever there was a reasonable ground for that (Meyer & Stafford, 2018).

As ICE's case shows, although the regulation aims to limit the occurrence of market speculation on the commodity markets, the industry fears the potential side effect which causes the trading moving away from Europe to the US or Asia.

6 UNBUNDLING THE COST OF RESEARCH

6.1 Who will pay the costs?

MIFID II introduces a *no inducement rule,* a provision for unbundling the research costs, which aims to enable end-clients to have more transparency on what they are paying for. The unbundling rule now enables independent research providers to compete with brokers with equal opportunities, since it allows investment firms to choose research providers according to their research offer separately from other services. Money managers might prefer to make a deal on transactions with brokers who are providing the best advice and access, and not with those who offer the lowest commission for executing trades (Dufresne, 2018). According to Article 24(9) of the new Directive:

Member states shall ensure that investment firms are regarded as not fulfilling their obligations under Article 23 or under paragraph 1 of this Article where they pay or are paid any fee or commission, or provide or are provided with any non-monetary benefit in connection with the provision of an investment service or an ancillary service, to or by any party except the client or a person on behalf of the client, other than where the payment or benefit: (a) is designed to enhance the quality of the relevant service to the client; and (b) does not impair compliance with the investment firm's duty to act honestly, fairly and professionally in accordance with the best interest of its clients.

Although regulators allow collecting research charges together with the transaction commissions, the commissions should not be linked to transaction value or volume. and Elliot, Mahmud and Williams (2017) argue that if payments from research are separated, market participants expect the competition in equity, fixed-income, currency and commodities (hereinafter: FICCs) to rise. Fund managers may also decide to move research in-house. Due to the new regime, new pricing model will be necessary, different from the previously used simple commission-sharing regime due to the rigorous conditions set by the regulation.

However, some argue that the regulation leaves some gaps behind when it comes to interpretation and application. First, the definition of research is quite broad and vaguely defined. Therefore, ESMA in its Q&A document (updated in March 2019) aims to provide better interpretation of the definition. Materials provided on the investments should be considered either research – which should be paid for -, or a *minor non-monetary benefit* without the need to pay for it and it can be shared freely. The MIFID II Delegated Directive states that minor non-monetary benefit is a "non-substantive material or services consisting of short term market commentary on the latest economic statistics or company results". For example, ESMA does not consider arranging meeting with corporate executives as research, and the same applies to macro-economic analysis which are open to the public (no conditions or barriers for the access) and general enough so it can be considered non-monetary benefit. Because of these classifications, brokers are forced to create different packages, starting from basic package to readable materials and to analyst and corporate access, as well as roundtables and conferences (Dufresne, 2018).

In addition, market participants argue that establishing a price for the research is also a challenging task. Many of the research providers are forced to significantly cut prices in order to gain market share. Banks might make their research material partially or fully available to the public, thus, it cannot be regarded as inducement. On the buy side, investment firms have to be careful as they cannot receive any research free of charge. In its Q&A document (2019a), ESMA has brought up several examples of what kind of "reasonable steps" an investment firm has to take to avoid receiving research for free which was requested previously, for example "by automatically blocking or filtering certain senders/materials where practicable, and/or requesting a provider to stop providing research" (p.57). However, very low prices can also be regarded as inducement by the regulator, therefore, firms find themselves in a troubling situation when they need to negotiate over the contract of the research.

As explained previously, there are several factors which determine how much brokers charge for research. The main question is who will absorb the cost for the research: the clients or the asset managers. Some argue that so far execution fees did not decrease which would otherwise offset the additional research costs. Therefore, buy-side firms are now forced to accept this new charge, or they need to downgrade their research consumption. Preliminary surveys showed that the majority of investment firms will carry the costs out of their Profit & Loss Statement (hereinafter: P&L). This solution will require an easier implementation and it is more transparent toward the clients, as well. However, it has clearly an impact on the profitability of the investment firm. Those firms who decide to pass the research costs to the clients – in doing so risking to lose their market share –, can decide to choose the transactional method or the accounting method. The former charges the clients with the research fee together with each transaction through the Research Payment Account. The latter – also called as the Swedish model – requires an additional special research fee which needs to be agreed on with each client. MIFID II went into effect in January 2018, surveys found so far that 63 percent of 113 hedge fund managers, participated in the survey, were passing on the cost to clients. On the other hand, traditional asset managers tend to absorb the cost, partially in order to escape the operational complexity when charging the client and also to avoid the need to provide justification for the higher fees than competitors (Dufresne, 2018).

Another issue was pointed out by Mild (2018), arguing that “the regulatory changes will result in decreased research and less analyst coverage of Small and Medium Sized companies (hereinafter: SMEs) likely to affect their market visibility, and thus hurt their opportunities to attract investors and to raise funding”. The CFA Institue’s (2019) actually proved that fear since 47% of the answers form the buy side and 53% of sell-side respondents said that there is a decrease in coverage of small- and mid-cap stocks.

6.2 Fixed income versus equity research

It is more difficult to comply with the MIFID II unbundling rules regarding the fixed income[9] research because due to the lack of historically established practices there is no experience which would allow paying for it separately from the commission (McDowell, 2018b). The author also argues that “the traditionally incremental nature of FICC research has seen a major research pricing war among major financial institutions”. Some of the biggest investment banks in the word have different approaches on how to distribute the economic and fixed income research. Banks such as Credit Suisse, ING and NatWet are tending to distribute some or all of their fixed income research free of charge, while for the analyst research the fund managers need to pay directly. On the other hand, other large banks, mainly US banks, consider the free distribution of research risky and commercially less worthy (Noonan, Martin & Murphy, 2017).

Those banks that would take the “free-to-all” approach were given impetus by ESMA as well, since the regulator also stated that fixed income research can be distributed for fee if it does not suggest recommendation or if it is not necessarily valuable in the investment process. ESMA highlighted that operation-wise it might be difficult for banks to provide fixed income research for money “because they make their money from the difference between the prices they buy inventory at and sell it on to clients”. Therefore, it is harder to introduce a research charge in fixed income research than in equities. In equities, banks are being paid commission for trades and are able to allocate some portion of the commission to research analysis. Here, it is interesting to demonstrate some examples how banks decided to adjust to the new regime. For example NatWest decided that its “written desk strategy” would be available for free on its website. Credit Suisse, Credit Agricole and ING will offer some research for free (Noonan, Martin & Murphy, 2017).

Based on some industry hearsays, Deutsche Bank has also decided to cut half the price of its fixed income and macro research. With concrete numbers based on Bloomberg (2017c):

[9] Type of investment with a fixed return paid by the borrower or issuer at a fixed schedule

- Barclays plans to charge $455,000 for its *gold* equity research
- JPMorgan may charge $10,000 for equity research
- Goldman Sachs proposes to charge $30,000 for up to 10 staff to access basic research

Some banks believe that free of charge research is an unwise strategy. For example, Terence Sinclair, Citi's global franchise director for research said that "clients know that the rules mean that if fixed income research has anything of value it cannot be free, let alone part of trading spreads". He also added that quarterly payments on invoice will be the paying mechanism at Citi for FICCs. Another US bank stated that due to their working guidance which is based on legal and compliance requirements, they have to charge for the research, and they will not risk to deviate from it. They also added: "We would also be giving our competitors free access at the same time, which may not make commercial sense" (Noonan, Martin & Murphy, 2017).

However, there are experts who would argue the opposite way. Mark Holman, chief executive of TwentyFour Asset Management, stated that it was a *perfectly logical step* for some fixed income research to be free because bid/offer spreads had *nothing to do* with research (Noonan, Martin & Murphy, 2017). In its Q&A document, ESMA warned that detailed documentation for the pricing of FICC will be necessary when it comes to subscription based agreements. The regulator clearly stated in its Q&A document that in some cases there are reasonable arguments for written FICC research being priced and paid for through a subscription agreement. However, in such cases firms are required to document stepwise how they decided on and constructed their pricing structures and they need to ensure that there is no inducements risk in that move (ESMA Q&A document, 2019a). One bank stated that based on ESMA's approach the price of fixed income, currencies and commodities research are expected to *gravitate towards zero* in the future (Noonan, Martin & Murphy, 2017).

6.3 Pricing for research

Blair Livingstone, CEO and founder of Street Contxt, said that "there are two major factors when it comes to research pricing, how you get the content and the type of content you receive. Distribution is one area where costs are likely to fall because in the past a lot of that was done by humans, but in the future this may become far more automated, but clients will have to pay more for that human touch" (Bakie, 2017b).

Since January 2018, any firm that is offering research on financial securities needs to establish a pricing structure. Speculation about the pricing structure of certain large banks started already in the summer of 2017. For example, market rumours were spreading around Barclays which reportedly intends to charge up to £350,000 per year for its most exclusive research package, including field trips, one to one meeting, etc. Specialist said that the industry's yearly spending on equity research is around $20 billion, therefore, this amount would not be considered necessarily unreasonable. Those clients who need only basic access to research analysis and reports, will be charged £23,000 (Martin, 2017).

As in Barclays' example, the most exclusive research packages or subscriptions to researches of investment banks would not only include immediate access to range of reports once they are published, but also it would grant direct access to the analyst in order to receive further insights and consultation on particular securities. Actually, it is predicted to have a splitting line between the written research and analyst access due to the unbundling rule. Direct and immediate access to analyst might become one of the major differentiators and it would count as a premium service, followed by higher pricing. The price paid for the written research might be relatively low, but the price to talk to a highly qualified analyst may be way more expensive. What is more, an immediate access to an analyst, e.g. within an hour of the earnings call could be priced also as an extra premium service (Bakie, 2017b). It is difficult to measure the value of the research by a simple quantitative measure. One can price the research based on the number of calls, but what if there is only one call per year but that call was extremely important? Also, the interpretation of research service is varying. Burchett (2018) pointed out that for example the attendance of conferences are treated differently. Some include these in their offer for research packages, some charge for it if the managers consider it as inducement according to MIFID II.

Negotiations over research prices started already in 2016. As expected by analysts, the outcome might be that banks would tend to leave plenty of room for the buy-side to negotiate down the package-deal prices, especially for the important clients. Based on the preliminary information, the buy-side tends to pass on using commission sharing agreements (hereinafter: CSAs) and research payment accounts, and prefer to use their own accounts instead to pay for the research. But if they choose to pay for it themselves, it might suggest that the research is not as expensive as thought, and firms can pay for it from their P&L. An expert from RSRCHXchange's stated: *"Most firms aren't expecting a major change in their research costs, but it will vary depending on the type of firm. Smaller managers have historically underpaid and may find their costs rise under unbundling, but larger firms will probably see their research bill fall"* (Bakie, 2017b).

6.4 Market developments since the unbundling rule

As mentioned above, it will take some time while the real effect of the research unbundling will be apparent, however, some increased activities in the financial markets are already visible. It is expected that there will be an increase in the number of independent research providers (hereinafter: IRPs). IRPs compared to brokers are able to provide researches of higher value at a more competitive price. As a result, the best research analysts tend to leave the large brokerages and join or establish themselves IRPs. The problem with the brokerages is that the top brokers issue approx. 40,000 research notes per week, managers however only have a look at less than 1% of that material (Bloomberg, April 02, 2018). A recently conducted survey showed that fund houses that pass on the cost of research to their clients, spend on research up to 7.5 times more on average compared to those that cover these costs themselves. If fund managers decide to pass the cost to the clients, they have to account for that cost. In that case they are obliged by the new regulation to show the added value of that research. It is especially difficult if managers have several funds with different sizes which use the same research, because they need to assign the added value of the research to each fund (Burchett, 2018).

The latest EU wide survey of the CFA Institute (2019) on research budget also revealed that according to investment professionals the research market became much more competitive and research budgets are cut back since the introduction of MIFID II. They also reported a decrease in analyst jobs due to the reduced sourcing of researches from investment banks. Another important observations was that the majority of firms, who participated in the survey pay for the research against their P&L. One of the reasons for that is to avoid additional administrative costs (i.e. establishing the research payment account), the other reason is the competitive pressure.

Moreover, there is a clear increase in merger and acquisition activities. Researchers are exploring the possibility to merge with competitors in order to expand their sector coverage and get access to new markets. Also, this way they might be able to hire the most wanted analysts and increase the scale of their activities. As mentioned earlier, building in-house activities are also important options to consider to reach cost-efficiency, for which M&A is an attractive step to take. Another reaction from the market side is that research providers are aiming to offer corporate sponsored researches. This way they can gain capital on the increased demand. Also, research companies are aiming at specialising and getting more expertise and knowledge on certain sectors in order to be a standalone research house on that specific field. Furthermore, research companies are competing by adding data analytics tools, and other functionalities in order to better position and differentiate themselves, also it helps in client engagement (Latham & Watkins LLP, 2018).

In addition, Bloomberg (April 2, 2018) predicts that "technology is a potential game changer". The article claims that the online research market places (hereinafter: ORMs) are in a better position to fulfil the needs of the buy side compared to brokers. ORMs operate in a way that they are able to aggregate reports from independent analysts. Bloomberg predicts that ORMs can obtain 30% of the total research wallet by 2025 by using this 'outsourced research' model as an alternative. Another important tendency is that research unbundling is becoming global due the regulation as discussed by Flood (2018). Many asset managers decide to implement the European standards required by MIFID II on their global research procurement policies and operation.

EU securities regulators are not on the same page regarding the impact of the unbundling rule. The French securities regulator L'Autorité des Marchés Financiers (hereinafter: AMF) has been criticising MIFID II's research unbundling provision since the beginning when it was first proposed by the UK. AMF President Robert Ophèle stated in an interview that especially stocks of firms with middle size market capitalisation (mid-cap stocks) can suffer as a result of the new regulation, because the research capacity is reduced for many smaller companies. AMF together with large French trade associations initiated to monitor the impact of the research unbundling rule, with the intention to propose regulatory reforms. The results of the monitoring showed that research coverage for French stocks mainly with market capitalisation between 150 million and 1 billion euros declined. In addition, it pointed out that 40 percent of small and medium caps are not covered at all, or only by one analyst (Bragg, 2018). Fixed income and macro research is also negatively affected in France. However, in February 2019 Andrew Bailey, CEO of the UK regulator FCA, said that "data for the 2015 to 2018 period show that analyst coverage levels on the (London Stock Exchange's) main market and on the (LSE's Alternative Investment Market) have remained broadly consistent”. Regarding the potential harmful impact of the unbundling rule on the research coverage of smaller companies and independent research providers, he said that there is no conclusive evidence to prove that. Furthermore, FCA estimates that the unbundling rule will save GBP 1 billion for the investors in the next five years (Pielichata, 2019).

7 ISSUE OF LATE TRANSPOSITION AT NATIONAL LEVEL

Six months after the introduction of MIFID II, two Member states are already facing trouble regarding the level of compliance with the new regime. In September 2017, the European Commission sent formal request to the EU Member states to transpose MIFID II and the related Delegated Directive (EU 2017/59) into their national legislation. On 19 July 2018, the Commission has referred Spain and Slovenia to the Court of Justice of the EU for not fully implementing MIFID II and the Delegated Directive (McDowell, 2018d). The Commission argues that the inadequate enacting of the rules exposes the functioning of the EU securities markets and the operation of the EU single market to risk. Therefore, Member states shall make their best effort in order to transpose the rules, otherwise, investors will not be able to benefit from the important provisions of MIFID II aiming at better investor protection. The reasoning further goes as stating that “cross-border passporting of various investment services and activities might not operate as smoothly as between Member States that have fully transposed the MIFID II rulebook” (European Commission Press Release, 19 July 2018). Full transposition of the new regime is crucial for investment firms and market operators in order to avoid disruption in their business activities.

Bloomberg reported that the Spanish government is trying to apply two instruments to transpose MIFID II into their national law: a bill that is being discussed by the Parliament, and a secondary legislation that is to be presented *as soon as possible* pledged by the Economy Ministry. Slovenia reportedly did not notify the Commission yet about any measures taken in order to comply with the new regime (Duarte, 2018).

The original deadline for the process was 3 July 2017 and the warning signs about late transpositions were already apparent after the deadline, making investment firms worry about the continuation of their operation. In December 2017 ESMA has stated in its Q&A document on MIFID II and MIFIR investor protection that “if a Member state fails to transpose MIFID II by 3 January 2018, competent authorities in a host Member state should not be obliged to accept new passport notifications by firms authorised in the late transposing Member state” (pp. 99, 2019a). Also, a Member state that failed to transpose MIFID II, cannot refuse to accept the notification of a home competent authority of an incoming firm or prevent it from conducting business in its territory. At the end of 2017, 17 EU Member states did not reach full transposition of MIFID II into their national legislation. Besides Spain and Slovenia, for example Finland, the Netherlands, as well as Portugal were still struggling with the implementation of the new rules (Weber, 2017). At that time, there was already an immense pressure on the regulators from the industry side to show some tolerance. Rob Moulton, a London-based partner in financial regulation at Latham & Watkins law firm said: “All countries have an industry asking their regulator for unofficial leniency (…) and that is getting unofficially supportive feedback” (Bloomberg, 2017b).

In the second half of 2017, some regulators already stated that they would not act harsh on firms which would not be able to meet all the requirements by the deadline. The statement of Mark Steward, Director of Enforcement and Market Oversight at the FCA, delivered in September 2017, mirrors the regulators’ attitude towards the state of MIFID implementation of that time: “As always, we intend to act proportionately. In this context, this means we will not take a strict liability approach especially given the size, complexity and magnitude of the changes that are required to be in place. We are very aware of how much work many firms have been engaged in for a very long time now in re-tooling and preparing for next year. This means we have no intention of taking enforcement action against firms for not meeting all requirements straight away where there is evidence they have taken sufficient steps to meet the new obligations by the start-date, 3 January 2018” (Binham, 2017). The Dutch Authority for the Financial Markets also said in October 2017 that *“where significant regulatory uncertainties are not a factor, we expect market parties to comply with MIFID II as of Jan. 3”* (Bloomberg, 2017b).

The delays are partially explained by the fact that when it comes to implementing EU directives, Member states have some discretion on how they achieve the result. Consequently, extra rounds in lobbying take place from the industry side which usually further increases the delay.

Based on ESMA’s standpoint it was clear from at the end of 2017 that some investment firms would not be able to provide services across the borders – temporarily at least. Since the introduction of MIFID I, the passports have been essential for cross-border businesses. ESMA and the national competent authorities apply less strict rules for those firms that were authorised and obtained a valid passport under MIFID I, meaning that they can continue providing their investment services even, if their home country is delayed with the transposition. Meanwhile a stricter approach is applied in case of firms without MIFID I rights (ESMA Q&A, 2019a).

8 THE POTENTIAL IMPACTS OF BREXIT ON MIFID II

In 2017 the financial and insurance sector generated £119.1 billion which contributed to the 6.5% of the economy of the UK. As a comparison, in 2016 this number was 4% in Germany, while in the UK it was 7%. Its interconnectedness with the EU is demonstrated by the following numbers: UK's exports of financial services to the EU amounted to £27 billion which made up 44% of all UK financial service exports in total. Furthermore, imports from the EU valued £4 billion, making up 39% of UK imports of financial services (Rhodes, 2018).

The impact of the United Kingdom leaving the European Union, especially on financial markets, cannot be properly assessed. Given the secondary markets, approx. 40 percent of the equity trading issued in EU Member states is taking place in the UK. Based on the speech of Steven Maijoor, Chair of ESMA, delivered on 3 October 2018, ESMA is preparing for Brexit in the following ways:

1. *Ensuring the consistent application of regulatory and supervisory standards to the relocation of activities, entities and functions from the UK to the EU27*

ESMA argues that there should be a common approach on this at an EU level since numerous trading venues, investments firms and asset managers are aiming to receive authorisation in the EU27 in order to have access granted to their market. The authorisation must be granted in line with the EU law. A Supervisory Coordination Network was also set up by ESMA. EU supervisors can use this network in order to report on and discuss certain cases of UK market participants who are relocating.

2. *Improving the third-country arrangements in securities markets legislation in the context of Brexit*

Currently, there is a third-country arrangement in MIFID II, but the case of UK should be treated differently given the size of its financial market and interconnectedness with the financial market of the remaining EU27. Since MIFID II leaves plenty of room for national discretion, a harmonised EU regime for third-country trading venues would be essential in order to level the playing field between EU and non-EU venues, granting investor protection and stability.

3. *Preparing for the risk of UK's departure without a deal*

In case of a “no deal Brexit”, UK market participants would loose their authorisation to access and do business with the EU 27 market. Therefore, it is strongly recommended to UK market participants to submit the previously mentioned authorisation request on time to ensure the business continuity in the UE27 in case of lack of agreement. EMSA also stresses that several calculations such as the double volume caps and assessments on transparency requirements for equity and non-equity instruments might be in need for recalibration if the significant UK market leaves. There is no doubt that the recalibrations would have significant effects on the regulation and the remaining EU27 market. Also, the previously mentioned issue experienced early this year with the tick size regime in case of third-country instruments implies that these issues might be present again once a no deal Brexit will be the case.

The biggest risk, however, is the clearing of derivatives in case there will be no agreement, which can lead to stability risk. ESMA explains that currently it does not have the legal base, as not granted by EMIR, to recognise Central Counterparties (hereinafter: CCPs) based in the UK as third-country CCPs as long as it is the member of the European Union. As of the withdrawal date, CCPs based in the UK will be regarded as third-country CCPs, therefore, they need to be recognised by ESMA under EMIR for being able to act as a clearing house in the EU27 market. For stability, EU clearing members and trading venues need to be granted with access to CCPs based in the UK. That is why the currently drafted EMIR 2.2., proposed by the European Commission in June 2017, would permit ESMA to classify third-country-based CCPs according to their level of systematic importance. Systematically important and non-systematically important CCPs from third countries would be able to provide services in the Union after meeting certain conditions.

This is a very important aspect since the derivatives market is primarily regulated under MIFID II and EMIR. Currently, the majority of clearing for euro-denominated OTC foreign exchange and interest rate swaps is done in London. Also, the major clearing house of Europe, called London Clearing House (hereinafter: LCH), is located in London. Macchiarelli and Monti (2018) argue that the ecosystem of market players who are clustered around large financial centres, plays a crucial role in the OTC derivatives business. Currently, there is no similar large central clearinghouse like LCH in continental Europe. In the euro-area the biggest clearing service provider is Eurex Clearing in Germany. However, “an excessively protectionist reaction” might trigger many firms to move their businesses overseas, mainly to the United States, thus, damaging the EU.

Once, the UK leaves the EU, one of the biggest challenges will be that the UK would need to comply with the strong regulatory regime in terms of trading and clearing of the EU in order to continue the business operations (as it is now the case for example with the United States). In case the UK would fail to comply with the equivalence status, that would result in a situation when European firms would need to accept the higher capital charges for such transactions which are cleared and settled in the UK due to the limited efficiencies. In addition, EU regulators are unlikely to allow that such a large volume of euro-denominated transactions occurs and is concluded in a non-EU country, i.e. outside of its jurisdiction. As a result, the overall network effects would be lower and the cost for euro-derivatives transactions would be significantly higher. Ultimately, this would result in the reconsideration of the location of business operation (Macchiarelli & Monti, 2018).

The above section presented the approach of the EU regulatory side toward Brexit. Nevertheless, another important aspect is how the UK market thinks about leaving the EU's financial market and its regulatory regime. The Institute of Economic Affairs reported (Lomax, 2018) in its paper 'Plan A+: Creating a prosperous post-Brexit UK' that Brexit can be considered an opportunity for the UK to escape the burdensome regulation, especially given that it did not improve liquidity significantly, therefore, those elements which reduce liquidity should be left out. The report claims that without having significant affect, the regulation has only put a requirement for collecting tremendous transaction data so far. As stated, MIFID II necessitates 65 data points for every transaction by both sides, buyer and seller, however, the regulators are not able to scrutiny this amount of information in a meaningful way. Under MIFID I, only 24 data points were required which was already an excessive undertaking for many market participants.

The report further argues that the EU regulation is way more occupied by the riskiness of short-selling. The nine-year-long bull market has prompted the notion that short selling is riskier than buying, in a bear market the other way around would apply. For example "in the futures market, both long and short transactions may be uncovered by the underlying physical commodity and yet the futures market functions well, with margins required from both sides". The report also suggests that after Brexit the double volume caps regime should be also modified. As it was already suggested to ESMA by the FCA. The FCA claims that the caps should be dismissed or at least they should be increased to 11 and 17 percent because the heavily traded UK market with many large investors, counted as a comparative advantage, is especially adversely affected by the limitation. These limitations might have less impact on smaller EU markets with lower volumes.

As a solution to Brexit, some expect that a multilateral memorandum of understanding will be agreed on between the FCA and the EU27 national regulators which would grant access mutually to each other's financial markets. Basar (2018) brings the example that national regulators exchange approx. 500 million transaction reports each month, but 72% of these transactions are sent the UK by the EU27. This will all stop after Brexit. Therefore, there needs to be a solution for that.

CONCLUSION

The introduction of MIFID II has brought significant challenges to firms operating on the financial markets. The new Directive aims to bring transparency, fairness and operational efficiency to the financial markets, however, it has also caused numerous unintended consequences. The main goal of the thesis was to present the achievements of MIFID II together with these unintended consequences. The overall aim was to understand how the new Directive is reshaping the operation of the financial markets including the operations of the buy-side and sell-side firms as a result of their effort to comply with the regulation. The summary of views of the regulators and the market participants on the MIFID II provisions reviewed by the thesis is available in Appendix 2.

In terms of investor protection, MIFID II requires firms to collect and analyse enormous amount of data in order to meet the stricter pre- and post-trade transparency requirements (compared to MIFID I), as well as the best execution requirement. Although experts and market players agree that the requirements on best execution are actually helping them stay competitive and improve their services, still, the data collection and analysis requirements are one of the biggest challenges brought by MIFID II. Another important observation is that due to the best execution requirements traders on the buy-side need to be able to demonstrate why they have chosen a certain venue for execution, but, in order to do so, they need to understand the even further scattered landscape of trading venues as a result of MIDIF II. The stricter pre- and post-trade transparency requirements make the reporting of OTC trades extremely difficult, which will probably further move the trading in general toward electronic venues where the reporting and time stamp recording is automatic.

MIFID II aimed at bringing more trading to the lit markets. However, as the thesis presented, when the suspension on more than 600 stocks were abolished, the volume of trades in dark pools jumped immediately. This shows that the general appetite for trading in dark pools was not dulled despite the intention of the regulation. In general, it can be stated that months later after the introduction of MIFID II, the share of trading on the lit market did not rise significantly. Having compared the same time period in 2017 and 2018, Rosenblatt Securities has published that lit exchanges and alternative trading venues reached 50.85 percent share in 2018's equity trading while this number was 50.28 in 2017 (Reid, 2018b). However, it is an achievement that price swings experienced on lit exchanges decreased, as well as the trading volumes in dark pools. Practitioners argue that if policymakers want to increase the trading activity on lit markets significantly, they should rather change the economic incentives, instead of introducing a ban.

The picture of trading venues has shaped in a way that broker crossing networks had to disappear, and were replaced by systematic internalisers. As a response to the new regime, periodic auctions and block trading are getting more and more popular. All these changes happened in a very short period of time, and the market became even more fragmented as it was before. The thesis suggests that before continuing with further regulations and changes, the regulators, mainly ESMA and the European Commission, should conduct a thorough assessment of the changes brought by MIFID II in the market and the behaviour of the market players. This suggestion is in line with experts' statement, for example Alan Miller's, chief investment officer of SCM Direct, who said in October 2018: "*Here, we are, in October, a vast majority of firms are not complying with MIFID II, (...) handful of firms have been looked at by the FCA*". At the moment fines are established for the period prior to MIFID II. In March 2019, FCA announced fines for Goldman Sachs International. The investment bank received a fine of GBP 34.3 million for failing to provide accurate and timely reporting relating to 220.2 million transaction reports between November 2007 and March 2017. In the same month, UBS was also UBS fined GBP 27.6 million because it failed to provide complete and accurate information between November 2007 and May 2017, all together 136 million errors were discovered in its transaction reporting in the examined period (Turton, 2019).

Liquidity has also been affected by MIFID II. This aspect relates to both best execution and trading venues. Traders now have to be careful about identifying where they can find liquidity in the market in order to be able to offer best execution to their clients. In terms of trading venues, dark pools, besides all the transparency issues, played an important role in providing liquidity to the market. Now greater liquidity is available at systematic internalisers and periodic auctions, meaning that there was no significant shift in liquidity towards the lit markets.

Regarding the unbundling of investment research and trade execution, the most critical criticism is the impact of the new regime on smaller research firms. While the overall aim of and rational behind the rules are clear, it is seriously hurting smaller research firms.

Some rumours emerged soon after the introduction of MIFID II that MIFID III is on the way. Regulators have admitted that currently it should not be under discussion, especially that MIFID II is still a burdensome challenge in terms of compliance and there are some inconsistences which need to be removed first. Also, firms have to align the MIFID requirements with other regulations such as the GDPR, especially from the perspective of the data retention requirements. Brexit is also on the way and there are still issues with the late transposition of MIFID II into the national legislations. In short, these issues all suggest that there is a plenty of room for improvement and gaps to fill in before policy makers would think of further expending the scope of MIFID II. On the other hand, if European Commission and the UK will not be able to conclude a harmonised agreement on financial services in case of Brexit, that might lead to a need to an updated regulation.

For the financial industry the period of 2018 and also the years before were definitely about constant effort to comply with the MIFID II regulation. However, the coming years will possibly be more about how to harvest the opportunities given by MIFID II and how to circumvent certain provision in a profitable way.

As a limitation of the thesis it is important to mention that the available sources were limited to the United Kingdom. Since London-City area is the most important centre for the EU's financial markets and securities trading, the interviewees quoted in most of the financial media are practitioners from the UK market. Due to the language barriers as well as unavailability of the sources, the thesis fails to fully present the views of market players from all EU Member states. From the regulatory side, ESMA is the responsible body for supervising the implementation of the Directive, however it would have been useful to present the views of the individual competent regulatory authorities. Besides presenting the view of the FCA, the UK financial authority, the thesis could not elaborate on the views of the other EU 27 regulators.

Another limitation is the lack of personal in-depth interviews with practitioners and financial regulators which could have provided even better understanding of the certain issues. However, due to accessibility and language issues the researcher was not in the position to conduct such interviews.

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APPENDICES

Appendix 1: Summary in Slovene Language (Povzetek)

Spremembe na finančnih trgih eu po uvedbi direktive MIFID II

Evropski parlament in Svet Evrope sta sprejela Direktivo o trgih finančnih inštrumentov leta 2004, v veljavo pa je stopila 1. Novembra 2007 po vsem Evropskem gospodarskem prostoru (EGP). MIFID stremi k okrepitvi regulacijskega okolja, da harmonično zaščiti vlagatelje in omogoči pojav novih finančnih trgov in storitev v Evropski uniji (EU). Glavni cilj Direktive je bil vzpostavitev konkurenčnih, preglednih in povezanih finančnih trgov s tem, da so ustanovili enotni finančni trg za investicije. Vendar je zadnja finančna kriza pokazala, da MIFID še zdaleč ni segel dovolj daleč, še posebno pri zaščiti investitorja in preglednosti. Po finančni krizi iz leta 2008 je bila glavna skrb EU politike in regulatorjev, kako zaznati težave in morebitne mehurčke v finančnih trgih dovolj zgodaj in kako obnoviti zaupanje investitorjev. Zato je Evropska komisija prevetrila originalni MIFID v letu 2011 in rezultat je bil MIFID II (2014/65/EU), skupaj z MIFIR (Regulativa EU Št. 600/2014).

Cilj te naloge je pokazati, kako se celotni finančni trg EU spreminja zaradi upoštevanja smernic, ki jih MIFID II zahteva od industrije. Naloga se osredotoča na zgodovinski aspekt integracije finančnih trgov in regulacije EU in predstavi vpliv finančne krize na regulacijo trga. Analitični del predstavlja šest primerov MIFID II o katerih se je med uporabniki in regulatorji največ razpravljalo.

Za zaščito investitorjev MIFID zahteva od podjetij zbiranje in analizo velikih količin podatkov, da zadostijo zahtevam za preglednost pred in po trgovanju prav tako kot zahteve za najboljše izvršitve. Čeprav se strokovnjaki in udeleženci na trgih strinjajo, da zahteve za najboljše izvršitve pomagajo pri konkurenčnosti in izboljšajo njihove storitve, so zbirke podatkov in zahteve za njihovo analizo velik izziv, ki ga prinaša MIFID II. Še en pomemben pogled, ki zadeva najboljše izvršitve, je na strani kupcev potreba, da zmorejo dokazati, zakaj so izbrali določeno izvršitev in zato morajo še bolje razumeti, mehanizme trgovanj, ki so rezultat MIFID II.

Cilj MIFID II je, da se prenese več trgovanja na regulirane trge (lit markets). Vendar kot je v nalogi predstavljeno, ko so odpravili zadržanje 600 delnic, je trgovanje na sivem trgu (dark pool) poskočilo. To kaže, da apetit po trgovanju na sivem trgu ni omejen kljub regulaciji. Na splošno lahko ugotovimo, da se delež trgovanja na regulirnih trgih po uveljavitvi MFID II v naslednjih mesecih ni bistveno povečal. Delež borznega trgovanja v primerjavi z alternativnim trgovanjem je znašal v letu 2018 50,85 %, v letu 2017 pa 50,28 %. Uporabniki ugotavljajo, da bi morali regulatorji , če bi želeli povečati trgovanje na borznih (lit) trgih uvesti spodbude in ne prepovedi.

Mesta trgovanja so se preoblikovala tako, da broker crossing networks izginjajo in se jih nadomesti s sistematičnimi internalizatorji. Kot odgovor na spremembo načina so periodične dražbe in blokiranje trgovanja vedno bolj priljubljene. Vse te spremembe so se zgodile v zelo kratkem času in zato je trg še bolj razdeljen kot je bil prej. V nalogi predlagam, da bi morali regulatorji, kot je ESMA in Evropska komisija natančno oceniti spremembe, ki jih je prinesel MIFID II na trg in med uporabnike trga. Zaenkrat so kazni predvidene le za obdobje prede MIFID II. V marcu 2019 je FCA objavil kazen za Goldman Sachs International. Investicijska banka je dobila kazen v znesku 34,3 milijonov GBP, ker niso podali natančnega in pravočasnega poročila o transakcijah v znesku 220,2 milijona GBP med novembrom 2007 in marcem 2017.

MIFID II je vplival tudi na likvidnost tako pri najboljših izvršitvah kot mestih trgovanja. Posredniki morajo biti pozorni, da ocenijo, kje lahko najdejo likvidne trge, da lahko svojim strankam ponudijo najboljše izvršitve. Kar se tiče mest trgovanja, sivi trg (dark pool) poleg transparentnosti, igra veliko vlogo tudi pri likvidnosti. Zdaj je večja likvidnost prisotna pri sistematičnih internalizatorjih in periodičnih dražbah kar pomeni, da ni večjih sprememb v prid reguliranih trgov.

Največja kritika vpliva novega režima je vpliv na manjše raziskovalne firme. Medtem ko nam je cilj pri vzpostavljanju novih pravil jasen, ta pravila škodujejo predvsem majhnim raziskovalnim podjetjem. V nalogi razpravljam tudi o vplivu politike na vpeljavo MIFID II, kot je pozna vpeljava nacionalnih pravil in vpliv Brexita. Brexit povzroča mnogo težav pri procesu vpeljave MIFID II še posebno pri klirinških poslih. London-City je brez dvoma srce evropskih finančnih trgov, zato je ESMA naredila precej kalkulacij pri upoštevanju Velike Britanije kot enega ključnih igralcev na evropskem finančnem trgu. Veliko vprašanje je torej kako in do kakšne mere je treba prilagoditi pravila, če bo do Brexita prišlo v bližnji prihodnosti.

Appendix 2: Summary of views on the MIFID II provisions

Investor protection

1. Client categorisation requirement

Regulator	Market participants
Categorisation of clients according to eligible counterparties: **professional clients vs. retail clients** (assessment of knowledge and expertise)	• The assessment is burdensome and costly • The way how the Directive differentiates between retail and professional investors does not necessarily mirror the client's level of understanding of that specific complex instrument
AIM: to protect those investors who are investing in complex products	OUTCOME: • possibility of missing out high net worth retail investors

2. Best execution

Regulator	Market participants
Requiring to take **sufficient steps** to achieve best execution (MIFID I said reasonable steps), to meet new standards on data publication	• The positive impact of the provision is acknowledged • It enables the firm to assess the effectiveness of the execution • It helps the firm avoid reputational and fiduciary risks
AIM: to enable clients to constantly review and monitor the execution they receive	OUTCOME: the provision has met the expectations so far, best execution is not a requirement but an aspiration by the firms

Dark trading

1. Double Volume Caps

Regulator	Market participants
Dark pools are obliged **to cease trading in equity** and equity-like instruments for which, on rolling average, more than 8 percent of daily trading was transacted in the dark over the past 12 months (ESMA's calculation) In case of **detected breach**, the trading must be suspended within two working days by the national competent authority for a 6-month period.	• When the caps were abolished, it immediately triggered a huge jump in volumes of trades on dark pools • MIFID II provisions partially force MPs to use dark pools: investors try to use a certain type of trading whenever it offers better price, lower cost and reduced market impact
AIM: to move more trading to lit markets (large block of shares are exempted from the caps)	OUTCOME: • Caps do not seem to reduce the appetite for trading in the dark • The economic incentives should be changed • Equity trading might move to SIs (unlimited dark trading as long as the bank's own capital is at risk) • Regulators have to monitor where the displaced trades go

2. Periodic Auctions

Regulator	Market participants
MIFID II requires to publish information on the buying and selling interest during the period of the auction call. They have to publish indicative uncrossing price and volume for the auction, unlike trading in central limit order books.	• Market players might use periodic auction in order to circumvent the MIFID II regulations on double volume caps • Trading flow is now redirected to other venues such as periodic auctions • To date, periodic auction functionality is providing valuable execution quality
AIM: to achieve more transparency	OUTCOME: • So far there is just a barely visible increase in trading at periodic auctions, but it is a solution • Periodic auctions do not seem to occupy a large part in the trading infrastructure

Commodity derivatives

Regulator	Market participants
• A range of commodity products which are considered to be financial instruments has been extended by including physically settled derivatives, emission allowances and financial derivatives regardless how and where they are settled and traded • Authorisation as an **investment firm** • Introduction of **position limits** (reporting obligation) • Exemptions are possible	• Many commodity firms which previously were out the scope of MIFID I, now fall under MIFID II • Difficult and costly compliance • Lack of introductory period • The position limits for commodity derivatives are extended **across the *group*** *(aggregated position limits)* and they net any economically equivalent positions in real time (OTC commodity derivatives which are traded outside of the normal trading hours…)
AIM: • to achieve more transparency • to reduce systematic risk and speculation • to capture more players on the commodity market	OUTCOME: • The regulatory change may cause commodity firms to move products from one jurisdiction to another as a result of business risks and competitive challenges • The number of exemptions made by NCAs may increase

Unbundling the research cost

Regulator	Market participants
• Requiring brokers to set prices for investment research **separately** from execution services • Applicable for all asset classes • Asset management firms are required to have a separate research budget	• The definition of research is too vague • Setting the **prices for the research**, establishing **research budget** and **pricing structure** are very complex tasks • How to allocate the costs • Fixed income securities vs equities • What is the research budget of the asset manager? • Setting up RPA vs the asset manager absorbs the cost
AIM: • To eliminate the potential conflict of interest between the asset managers and their clients when transacting with a broker • To make the market for research more transparent and competitive (IRPS)	OUTCOME: • Competition in equity and FICC research will rise • Buy side firms need the accept the new charge or downgrade the research consumption • Fund managers may decide to move research in-house • Brokers are forced to create different packages • Increase in M&A activities among research providers • Research providers are forced to significantly cut prices in order to gain market share, analyst jobs are cut • Decreased research and less analyst coverage of stocks of SMEs • Number of IRPs will increase, specialisation

Late transpostition and BREXIT

Late transposition	BREXIT
• MIFID II has to be translated into the national legislation of each Member State • Inadequate enacting of the rules exposes the functioning of the EU securities markets and the **operation of the EU single market to risk** • **Cross-border passporting** of various investment services and activities might not operate smoothly	• Approx. **40% of the equity trading issued in EU Member states is taking place in the UK** • Ensuring the consistent application of regulatory and supervisory standards to the relocation of activities, entities and functions from the UK to the EU27 • Improving the **third-country arrangements in securities markets** legislation in the context of Brexit • The double volume caps should be modified
• Immense pressure on the regulators from the industry side to show some **tolerance** • Directive vs Regulation • Extra rounds in lobbying creates delays • NCAs plan to act proportionately	• **Clearing of euro-denominated OTC derivatives** (foreign exchange and interest rate swaps) • LCH is the biggest clearing house in Europe • Risk of higher capital charges • Negative network effects • Relocation of businesses