Understanding Financial Regulations

A Case Study of European Regulations

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by

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-En fallstudie av Europeiska Regelverk

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Abstract
Risk can be defined as a state of uncertainty where some possible outcomes can have an undesired effect or significant loss, where it is impossible to exactly describe the existing state or a future outcome. One way of quantifying uncertainty is by trading derivatives.

OTC derivatives, and with this uncertainty and unpredictable risk, played a major role in the global financial crises in 2007-2008. After the crises, a conclusion among participants was that firms should aggressively address the contractual, operational, and technical challenges associated with trading derivatives over-the-counter (OTC). EMIR, a European financial regulatory framework, was introduced to improve transparency and reduce risk. EMIR mainly focus on risk mitigation, clearing obligations and reporting obligations for all European entities trading OTC derivatives.

The purpose of this research is to study the introduction of EMIR, to better understand the implementation process and its successfulness. The main question is to understand how can we study the implementation process to better understand the level of regulatory successfulness, and if the process has affected the ability of the rules to achieve its purpose? We also intend to understand how market participants are reacting to the new regulations.

EMIRs key-provisions will, if successfully implemented, hopefully help the market to develop and work towards higher transparency and lower risk. Results from this research indicates that the implementation process of EMIR has just started and that the market is still adopting to the change, successfulness and final results of implementation are therefore still difficult to decide on. The ESMA Q&A, a report which has acted as one of the main data collection sources for this research, have helped the market to adopt to the new
regulations, and have also helped the industry to work more united with a common approach and understanding of different mandatory obligations and operational requirements. Results from this research also indicates high level of involvement among participants and a change in attitude on the market. Financial regulations and regulatory requirements have now become subjects with top priority.

Results from this study indicates that to put together an appropriate regulatory strategy and to better understand regulation, the process should follow a sequence of tasks that should determine regulatory content, facilitate compliance, and pursue enforcement and assessment. Robert Baldwin refers to this process as DREAM: Detect, Respond, Enforce, Assess and Modify.

**Key-words**: EMIR, Derivatives, Financial Regulations, Implementation, DREAM, Trade Reporting, Risk Mitigation
Sammanfattning
Risk kan definieras som ett osäkerhetsläge där vissa möjliga resultat kan ha en oönskad effekt eller betydande förlust, där det är omöjligt att exakt beskriva det existerande tillståndet eller ett framtida resultat. Ett sätt att kvantifiera osäkerhet är att handla derivat.


Syftet med denna forskning är att studera introduktionen av EMIR, att bättre förstå genomförandeprocessen och dess framgång. Huvudfrågan är att förstå hur vi kan studera genomförandeprocessen för att bättre förstå framgångsnivå samt om processen kring implementering har påverkat reglernas förmåga att uppnå sitt syfte? Vi har också för avsikt att förstå hur olika marknadsaktörer reagerar på de nya reglerna.

EMIRs nyckelbestämmelser kommer, om de genomförs framgångsrikt, att hjälpa marknaden att utvecklas och arbeta för bättre insyn och lägre risk. Resultat från denna forskning tyder på att implementeringen av EMIR ännu inte är färdig, att marknaden fortfarande håller på att anpassa sig till förändringen, framgången och slutresultatet av genomförandet är därför fortfarande svårt att avgöra. ESMA Q & A, en rapport som har fungerat som en av de viktigaste datainsamlingskällorna för denna forskning, har hjälpt marknaden att anpassa sig till de nya reglerna och har också hjälpt branschen att arbeta mer förenad med en gemensam
strategi och förståelse av olika krav. Resultaten från denna forskning indikerar också hög deltagande bland marknadsaktörer. Finansiella bestämmelser och lagkrav har nu blivit ämnen med högsta prioritet.


**Nyckelord:** EMIR, Derivat, Finansiella Regelverk, Implementering, DREAM, Transaktionsrapportering, Riskbegränsning
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Dictionary

EMIR: European Markets Infrastructure Regulation, a regulation designed to increase the stability of the OTC derivative markets in Europe.

ESMA: European Security and Markets Authority, a financial regulatory institution located in Paris.

ISDA: International Swaps and Derivatives Association, a trade organization of participants in the market for OTC derivatives.

Clearing: The procedure by which an entity or organization acts as a midway-entity and take responsibility for the role of a buyer and seller for transactions to reduce risk and assures financial reliability of each contract.

CCP: Central Clearing Party, an entity or organization whom take the responsibility in a clearing procedure.

TR: Trade Repository, an organization that centrally collect and maintain the records of derivatives. They play a central role in enhancing the transparency of derivative markets and reducing risks to financial stability.

Party: A legal entity, unincorporated entity or collection of entities that participates in a financial transaction.

Counterparty: The other party that participates in a financial transaction. Every transaction must have a counterparty for the transaction to go through. More specifically, on the OTC market must every buyer be paired up with a seller and vice versa.

FC: Financial Counterparty. This category of counterparties includes banks, investment managers, insurance companies and brokers

NFC: Non-Financial Counterparty. This category includes counterparties that are not categorised as financial counterparties.
1. Introduction

In this section, you will first be given a brief background of OTC derivatives and newly introduced regulations, this followed by a problem statement that this study is going to address.

“Trading a derivative” is when a buyer and a seller comes together and commit themselves to some kind of guarantee, this can be done on an established exchange market or over-the-counter (Durbin, 2011). The exchange market, known as the listed market, is where prospective buyers and sellers can make deals and not worry about finding each other, the exchange provides market markers that will act as sellers and buyers for each transaction. The second option, over-the-counter (OTC), is the market where two parties work directly with each other to formulate and execute a derivative transaction instead of going via an exchange market. The OTC market more flexible compared to the exchange market, and it gives parties and counterparties the opportunity to customize each transaction (All about derivatives, 2011, page 4). The outcome of a traded derivative is some kind of guarantee, this could for example be a guaranteed price or a guarantee for future performance. Credit derivatives for example, which are performance guarantees and not price guarantees, deals with the credit risk associated with the performance of a party fulfilling a financial obligation (Durbin, 2011).

OTC derivatives played a major role in the global financial crises in 2007-2008 (Durbin, 2011), Lehman Brothers for example, was a leading dealer in the OTC derivatives market, they were counterparty to numerous types of financial transactions and had business relationships with many types of market participants. When Lehman Brothers collapsed in 2009, they were party to over 900,000 derivative contracts (PwC, 2009). After the crises, a conclusion among participants was that firms should aggressively address the contractual, operational and technical challenges for OTC derivatives (PwC, 2009). The market started to talk about risk control and risk mitigation.

In general, regulations are implemented to change a certain behaviour (or miss-behaviour) (OECD, 2012). A change in behaviour will ultimately leads to different changes in outcomes, and changes in outcomes, such as improvement in an underlying problem or other changes in conditions, will change the conditions of that specific market or surrounding. By finding a good balance between the different regulatory key-components, and by addressing “market failures” wisely and precise, regulators are better positioned to reach good outcomes.

To avoid a new financial crisis, and avoid a behaviour that lead to a financial crisis in 2007, European Markets Infrastructure Regulation (EMIR) was introduced by the European Securities and Market Authority
(ESMA). EMIR is an EU regulatory framework that was introduced to improve transparency and reduce the risks associated with the OTC derivatives market. The regulation came into force on 16 Aug 2012 with following key provisions (published on ESMAs website: https://www.esma.europa.eu/regulation/post-trading):

1) Reporting obligation for derivatives contracts
2) Requirements for trade repositories
3) Clearing obligation for OTC derivatives and risk mitigation techniques for non-cleared OTC derivatives including non-financial counterparties obligations
4) Requirements for clearing houses/central counterparties

Different core tasks that Robert Baldwin identifies in his “DREAM framework” can be used as a tool to better understand the implementation process of a regulatory framework (Baldwin et al. 2012). In DREAM, each core task highlights theories and strategies linked to the different stages in the implementation process: How the overall purpose of the regulations is detected, how regulators in response can develop rules and policies to facilitate compliance, how enforcement can be pursued, and how established rules can be assessed and later modified.

1.1 Problem statement

Risk can be defined as a state of uncertainty where some possible outcomes can have an undesired effect or significant loss, where it is impossible to exactly describe the existing state or a future outcome (Hubbard, 2010). One why of quantifying uncertainty is by trading derivatives, the factor of doubt and ambiguity is the main reason for the existence of derivatives (Durbin, 2011).

To make sure that any uncertainty that may occur throughout the lifecycle of an OTC derivative is kept under control, all derivative needs to be monitored. One could argue that all counterparts that enters into an OTC contract should have a bilateral obligation to keep any risk associated with that specific contract under control to avoid mistakes and unpleasant surprises, because “When things go wrong with derivatives, they tend to go wrong in a big way” (Durbin, 2011, page 214).

In 2012, EMIR was introduced. Why EMIR was introduced is not a very difficult question to answer, this was a global initiative to improve transparency and reduce and control any uncertainty associated with trading OTC derivatives (Final report, ESMA, 2012). To study the implementation process is of more interest. Has the implementation process affected the ability of the rules to achieve its purpose? How are market participants reacting and responding to the initiative? To take a fairly unregulated market and
introduce mandatory obligations and control systems will most likely affect the market and its participants. And in the same way will the market and its participants most likely affect the implementation process of the new regulatory framework.
2. Purpose, Aim and Research Contribution

In this section the purpose, aim and research questions are being presented. This followed by delimitations, limitations and contribution to future studies. An outline of following chapters is also presented.

2.1 Purpose and Aim

The general purpose of this research is to study the introduction of European Markets Infrastructure Regulation (EMIR) on the European over-the-counter (OTC) derivatives market. In particular, this research intends to study the implementation process of EMIR in to better understand the framework and its successfulness.

2.1.1 Research questions

This study aims to answer three questions. Answering these questions will not only fulfil the purpose of the study, but will also broaden the readers understanding of the research area.

1. How can we study the implementation process of EMIR to understand the level of regulatory successfulness?
2. How has the implementation process of EMIR affected the ability of the rules to achieve its purpose?
3. How are market participants reacting to EMIR?

2.2 Delimitations and Limitations

By going through delimitations of the research, the scope of the research is clarified. Limitations of the research will highlight any weakness or deficiencies.

2.2.1 Delimitations

The key provisions for EMIR includes four main areas. Some of EMIRs key provisions target a smaller number of organizations such as trade repositories and clearing houses, while some of them target the majority of market participants trading OTC derivatives in Europe. Key provision 2 and 4 affect a limited number of participants; trade repositories, clearing houses and central counterparties. This study intends to study the larger mass of participants, not focus on specific organizations or parties. The research is therefore restricted to only study key provision 1 and 3, reporting obligations and different risk mitigation techniques.
This research intends to only study the European market and how regulatory requirements for the OTC derivative market have been implemented in Europe. There have been different regulatory frameworks introduced globally for different jurisdictions, but this will not be part of the research scope.

2.2.2 Limitations

There are a high number of counterparties active on the European OTC market and the volume of OTC derivatives traded on daily basis is for that reason high (Final Report, ESMA, 2012). One important limitation that needs to be mention is the difficulty in covering all possible scenarios for all possible types of market participant, generalisations are being made.

EMIR is still a work in progress for many organisations. Firms are in this stage adjusting their internal processes and routines to have, according to EMIR, approved workflows (PwC, 2009). There is a restriction and general limitation in studying something that is not yet finalised, to try to understand something that is not fully implemented.

2.3 Research Contribution

EMIR was introduced in 2012, but OTC derivatives were something that was traded between different counterparties long before that (Durbin, 2010). There is a lot of information about the OTC market and how OTC contracts were traded in the past. There is also a lot of information about the financial crises in 2007-2008, and the impact OTC derivatives had on the crises. But there is not so much information about different adjustments that organisations have done throughout the implementation process in order to be compliant and in line with the different EMIR requirements. An also, if the new regulation has changed the OTC market, and what different challenges trading entities have been facing from 2012 up to now.

A paper like this can contribute with knowledge around the implementation process of new regulatory frameworks on different markets. It can also contribute to a broader understanding for OTC derivatives and the OTC derivative market in Europe.

2.4 Overview of Chapters

The structure of the remaining report will cover following chapters: background, methodology, theory, result, analysis and conclusion. Below is a more detailed description of each chapter.

Background – You can in this section read about the existent of the OTC derivatives market and the different stages in the lifecycle of OTC derivatives. This followed by an introduction of different regulatory reforms globally with focus on EMIR and different regulatory requirements.
Methodology – The case and the choice of research methodology is presented. This followed by selected data collection techniques. Validity and reliability for the research is also presented in this section.

Analytical Framework – Different theories around regulations will be discussed. Theorise about regulatory implementation processes will be discussed by using the five core tasks set out in Robert Baldwin’s DREAM framework: Detecting, Responding, Enforcing, Assessing and Modifying.

Empirical Results – Results from interviews, conference attendance and the review of ESMA Q&A are presented in this section.

Analysis & Discussion – In this section all results will be analysed. The analysis will follow similar structure as the theoretical section using the key-components in the DREAM framework.

Conclusion – An overall conclusion of the research
3. Background

Here follows a background on the subject of OTC derivatives and financial regulations. You can first read about the existent of the OTC derivatives market and the lifecycle of OTC derivatives. This followed by a section about EMIR with focus on risk mitigation and trade reporting.

3.1 OTC Derivatives

Trading is the action or activity of buying and selling goods and services. Trading derivatives is when a buyer and a seller comes together to trade a security whose price is dependent upon or derived from one or more underlying assets. Trading OTC derivatives is when two parties on the derivative market work directly with each other to formulate and execute a derivative transaction instead of going via an exchange market (Durbin, 2011).

3.1.1 The existent of the OTC derivatives market

To understand why the OTC market exists, it is important to understand the main function of derivatives. Derivatives allow users to meet the demand for cost effective protection against risks associated with movements in the prices of the underlying, derivatives are natural financial risk management tools (Chui, 2012). In other words, users of derivatives can hedge against instabilities in exchange and interest rates, equity and commodity prices, as well as credit worthiness and uncertain financial outcome. A derivative transaction includes transferring risk from entities less willing or able to manage them to entities more willing or able to do so (Durbin, 2011). There are a lot of different types of derivatives available on the market, most of them variations of different types of price guarantees. But it doesn’t matter how complex and exotic a contract is, they are all variations or combinations of four basic derivatives types; forward, futures, swap and option (Durbin, 2011). As mentioned before, derivatives are mostly used for hedging and speculation (Durbin, 2011). Hedgers use these instruments to manage financial uncertainty while speculators use derivatives to gamble on the same uncertainty. Compared with other financial instruments, OTC derivatives are especially well fitted for both hedging and speculating on risk because they can be used to create a “perfect hedge”. A firm can tailor the contracts specifications to best suit a specific risk exposure (Heckinger et al. 2014). The standardisation in contracts not traded over-the-counter, also known as exchange traded contracts, does not allow for as much flexibility to hedge and speculate on risk to the same extent as OTC contracts.

So, derivatives traded over-the-counter (OTC) exist because there is the demand for uniquely designed contract. There is a demand for non-standardisation. Flexibility and non-standardisation could for example be desired when there is a need of physical delivery of a commodity on a location or at a specific date that
is not listed at any exchange (Heckinger et al. 2014). Flexibility and non-standardisation could also be desired when there is opportunity to trade large contracts efficiently, to take on or exit out of large derivatives positions on a regular basis. The OTC derivatives markets makes it possible for these participants to trade large quantities of contracts at one price without expressively affecting the market or exposing themselves to manipulation techniques that arise when one participant places multiple orders for large quantities on a public exchange (Heckinger et al. 2014). For smaller companies, a common reason for which a stock is traded over-the-counter is usually the size of the business, smaller entities make agreements directly with their counterparties because they are unable to meet exchange listing requirements (Chui, 2012). These are just examples of good reasons for why the OTC derivative market exist, there are many more reasons out there, maybe as many reasons as there are bilateral OTC contracts agreed.

Derivatives, and with them OTC contracts, are common among a wide range of entities, including commercial banks, investment banks, insurance companies, central banks, fund managers and other non-financial corporations (Chui, 2012).

3.1.2 The lifecycle of an OTC derivative

To better understand how OTC derivatives work, we are now going to learn about the different stages in a lifecycle of an OTC derivative. There are several activities that occur throughout the lifecycle of an OTC derivatives trade, which includes pre-trade, trade, and post-trade stages (ISDA, 2012). These stages are similar across all asset classes, and can be described as shared stages with room for some flexibility depending on the product.

![Life Cycle of an OTC Derivatives Contract](image)

The first stage of the trading process would be for both parties to enter into written documentation to establish an OTC derivative trading relationship. The overall parameters of trading activities are established through a bilateral master agreement, and it is common to use a standardised master agreement designed by for example ISDA (International Swap and Derivatives Association). The agreement identifies the two
parties entering into the trading relationship; explains the terms of the arrangement, for example payment, agreed termination and events of default; and specifies all other terms of the deal. One of the benefits when using a standardised agreement is that the terms of the agreement don’t have to be re-negotiated each time that a new transaction is entered into, they will apply automatically (ISDA, 2012).

When all required documentations are agreed, the next stage in the trade life cycle is the event of execution. When trade execution takes place, both parties agree on terms via phone, fax, and/or electronic means. A frequently used method of executing trades, which is also mandatory in certain jurisdictions, is to do the execution on a registered SEF (Swap execution facility). A SEF is a trading system or platform that enables many participants to execute or trade swaps. Even if EMIR does not require all executions of OTC transaction to take place on a SEF, the method is still very commonly used since it is better for transparency and simplifies record keeping and audit trails (ISDA, 2012).

After execution both parties make sure that all trade details are captured in their internal systems for processing and risk management. Depending on how the trade was executed this will be done manually via trade tickets or electronically.

When your trade has been captured in your internal system, activities such as portfolio reconciliation, collateral management, clearing and portfolio compression takes place to reduce any unwanted risks associated with the agreement (ISDA, 2012). Different types of risk mitigation techniques will be discussed in more detail later in this paper.

Settlement date is the time for when the underlying product of the derivative should be sold. At settlement date (or sometimes even before the settlement date is reached) party and counterparty can agree to not actually buy the underlying product. Instead will both parties figure out the cash value of the derivative and exchange only the cash and not the underlying product (Dustin, 2010). This process is referred to as cash settlements. Cash settlements can be used for any derivative (Dustin, 2010).

After the settlement, the trade naturally proceeds to termination or expiry. The termination date (often called maturity date) is the date on which obligations no longer accrue for part and counterpart, the term of a transaction lasts from the effective date to the termination date. Even if the contract has a termination date included in the documents that was agreed bilateral by both counterparties before execution, it is still possible for counterparties to later on, after execution, agree on early termination of transactions prior to natural maturity (ISDA, 2012).
One way of terminating before natural maturity is to do assignment or novations on transactions (ISDA, 2012). Assignment and novation are different names for the same procedure, the process by which one counterparty agrees to transfer to a third party its obligations under an existing contract with another counterparty. All three involved parties need to agree on the transfer. Novations are usually manually drafted, and the degree of automation of the transfer process depends on each firm’s processing capabilities (Sapient, 2015).

Another way of terminating a transaction before natural maturity is to perform trade compression. Trade compression is a type of risk reduction procedure where two or more counterparties wholly or partially terminate some or all of their transactions submitted by those counterparties for inclusion in a trade compression. After compression terminated derivatives are replaced with another new derivative whose combined notional value is less than the combined notional value of the terminated derivatives (Final Report, ESMA, 2012). Trade compression is also going to be discussed in more detail later in this paper.

3.2 Regulatory Reforms Globally

There are currently 4 important regulatory reforms which are applicable to counterparties trading OTC derivatives: Basel 3, Dodd Frank Act, the European Markets Infrastructure Regulation (EMIR) and the Market in Financial Instruments Directives/Regulation (MiFID)/ (MiFiR) (Rajaram, 2016). Here follows a brief presentation of the Basel accords and the Dodd Frank Act. EMIR will be discussed in more detail in the section 3.3.

3.2.1 The Basel Accords

The Basel Committee was established by central bank authorities from 10 different countries at the end of 1974 in the result of serious disturbances in international currency and banking markets (BIS, 2016). Since its foundation has the Basel Committee expanded its membership from the 10 to 45 institutions from 28 different jurisdictions. The Basel Concordat was first issued in 1975. The Committee has after this introduced several international standards for bank regulation, and is best known for Basel 1, Basel 2 and Basel 3 (BIS, 2016). The Basel accords (Basel 1, 2, and 3) are international standards for capital and liquidity adequacy of banks. Basically, they seek to set common standards for measuring the risks of banks’ balance sheets. Basel 1 specified a minimum ratio of capital to risk-weighted assets for the banks. Basel 2 introduced supervisory responsibilities and capital requirements. Basel 3 promotes the need for capital and liquidity buffers and additional requirements (BIS, 2016).
The Basel accord is international standards for several countries. But one important fact to point out is that the Basel framework is voluntary, each country finds their own pace to adopt. The framework can be described as a set of reform-measures to strengthen the regulation, supervision and risk management of the banking sector with an overall aim to (BIS, 2016):

- Improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source
- Improve risk management and governance
- Strengthen banks' transparency and disclosures.

Basel 3 requirements can be grouped into two different categories:

- Capital requirements (including capital coverage, capital conservation buffer, risk coverage and risk management)
- Liquidity requirements (including liquidity coverage and risk management).

The Basel 3 framework were released in December 2010 and were scheduled to be introduced from 2013 to 2015. The implementation was then extended to 2018 and again further to 2019 due to changes introduced in 2013 (Rajaram, 2016).

3.2.1 The Dodd Frank Act

The G20 meeting in Pittsburgh 2009 resulted in several financial regulatory initiatives globally, including the Dodd Frank act in the US. The Dodd Frank act made Commodities Futures Trading Commissions (CFTC’s), which is the regulatory authority in the US, responsible to oversee the OTC derivative swap market in the US. Dodd Frank was initiated in 2009, and effected on 21st July 2010 (FSB, 2013).

When Dodd Frank was introduced, two new categories for market participants were introduced in the US: Swap Dealers and Major Swap Participants. A swap dealer is an entity which makes the market in swaps, who enters into swaps on his own account and is known in the market as a dealer or “market maker”. A major swap participant is any entity which is not a swap dealer, but maintains a significant position in swaps
and whose outstanding swaps create substantial counterparty exposure. Any entity which is not categorised as swap dealer or major swap participant is not in the scope of Dodd Frank regulations (Rajaram, 2016).

The Dodd Frank regulation can be divided into 3 main goal categories (from CFTCs website: http://www.cftc.gov/LawRegulation/DoddFrankAct/index.htm):

Regulate swap dealers and major swap participants:
- Swap Dealers will be required to meet robust business conduct standards to lower risk and promote market integrity.
- Swap dealers will be required to meet recordkeeping and reporting requirements so that regulators can police the markets.

Increase transparency and improve pricing in the derivatives market:
- Instead of trading out of sight of the public, standardized derivatives will be required to be traded on regulated exchanges or swap execution facilities.
- Transparent trading of swaps will increase competition and bring better pricing to the marketplace.

Lower risk to the American public
- Standardized derivatives will be moved into central clearinghouses to lower risk in the financial system.
- Clearinghouses act as middlemen between two parties to a transaction and take on the risk that one counterparty may default on its obligations.

3.3 EMIR - European Markets Infrastructure Regulation

3.3.1 The implementation of EMIR
Following the financial crisis in 2009, several initiatives kicked off to attempt prevention a new financial crisis. In September 2009, at the G-20 Pittsburgh Summit, the leaders of the 19 biggest economies in the world and the European Union put together, and agreed on, a declaration which stated (FSB, 2013):

“All standardized OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by end of 2012 at the latest. OTC derivative contracts should be reported to trade repositories. Non-centrally cleared contracts should be subject to higher capital requirements. We ask the FSB and its relevant members to assess regularly implementation..."
and whether it is sufficient to improve transparency in the derivatives markets, mitigate systemic risk, and protect against market abuse”

The objective of this declaration was to reduce “systemic risk” that caused the financial crisis. Each G20 country undertook to follow the declaration, which resulted in several initiatives including Dodd Frank in the US and European Marketing Infrastructure Regulation (EMIR) in Europe. The principles of the declaration were to increase transparency in the derivatives market, reduce risk and address concerns about financial instability. The new regulation was to make it safer by aiming to reduce both counterparty risk and operational risk (FSB, 2013).

Why increase transparency for just OTC derivatives? As mentioned in previous chapter about the lifecycle of an OTC derivative, the first stage of the trading process would be for both parties to enter into written documentation to establish a derivative trading relationship. OTC derivative are privately negotiated, these contracts lack transparency. Any information concerning them is usually only available to the contracting parties (Durbin, 2011). The financial crisis has demonstrated that a non-transparent market increase uncertainty and pose risk to financial stability.

EMIRs Timeline and Progress

The implementation process of EMIR went through different stages:

- In September 2009, at the G-20 Pittsburgh Summit, the leaders of the 19 biggest economies in the world and the European Union put together and agreed on a declaration (FSB, 2013).
- EMIR entered into force on 16 August 2012. Most of the obligations under EMIR needed to be specified further via regulatory technical standards and therefore take effect after the initial start date (Final report, ESMA, 2012).
- On 19 December 2012, the European Commission adopted without modifications the regulatory technical standards developed by ESMA (Final report, ESMA, 2012).
- Technical standards were published in the Official Journal on 23 February 2013 and enter into force 20 days later, on 15 March 2013 (Final report, ESMA, 2012).

After March 2013 additional requirements were added to the framework: Clearing obligations and reporting requirements for additional asset classes, initial and variation margin requirements, ongoing review and adjustment of the existing framework.
3.3.2. Regulatory Requirements

From ESMAs website, EMIR key-provisions (https://www.esma.europa.eu/regulation/post-trading):

1) Reporting obligation for derivatives contracts
2) Requirements for trade repositories
3) Clearing obligation for OTC derivatives and risk mitigation techniques for non-cleared OTC derivatives including non-financial counterparties obligations
4) Requirements for clearing houses.central counterparties

Each jurisdiction has their own way of categorising market participants, and in Europe market participants are divided into financial counterparties (FC), non-financial counterparties minus (NFC-) and non-financial counterparties plus (NFC+). EMIR clearly state that where appropriate, rules that are applicable to financial counterparties should also apply to non-financial counterparties (Questions & Answers, ESMA, 2017).

Trade Reporting

One important part of EMIR is the reporting requirements (key-provision number 1). In accordance with the Final report, detailed information on each derivatives transaction and contract traded by a financial or a non-financial party will have to be reported to a trade repositories (Final Report, ESMA, 2012 (page 55)). The idea is that the data being held in these trade repositories will then be available to regulators, giving them a much better overview of open transactions in the market. The overview will help the regulator to early spot any potential problems and be in a position where they can take action if need. Additionally, trade repositories have a requirement to publish aggregate positions and to provide market participants with a clearer view of the derivatives market (Clifford Chance et al. 2012).

The trade reporting rules were implemented to provide authorities with a complete overview of the market and for assessing systemic risk, regarding different connections between participants on the OTC derivative market. Even if EMIR came into force on 16 August 2012 were trade reporting one of the obligations under EMIR that needed to be specified further via regulatory technical standards (RTS) and they took effect after the initial start date, on 15 March 2013 instead (Questions & Answers, ESMA, 2017). Contracts settled before 16 August 2012 and which remain outstanding on that date and contracts concluded on or after 16 August 2012 must also be reported to trade repositories. In-scope entities must keep a record of any derivative contract they have settled and any modification for at least five years following the termination of the contract (Clifford Chance et al. 2012).
For European firms, all in-scope entities are required to report all transactions in reportable products to a chosen trade repositories. Firms must, regardless of which there is an EU or a non-EU branch that have entered into to the transaction, report the event to a trade repository. However, EU branches of non-EU firms are not required to comply with the EMIR reporting regime (Clifford Chance et al. 2012). There is no exemption from the reporting regime for intragroup transactions, so when two different legal entities within the same group or organisation are trading with each other these transactions need to be reported (Clifford Chance et al. 2012). The ESMA Q&A version 29, TR Question 14, confirms that transactions within the same legal entity (e.g. between two desks or two branches within an individual firm) are not subject to the reporting obligation, this is because in such a scenario there are not two separate counterparties (Questions & Answers, ESMA, 2017). The fulfil its reporting obligations, for both intragroup transactions and transactions with external counterparties, entities needs to report details of derivative contracts to a trade repository registered or recognised under EMIR no later than a working day following the conclusion, modification or termination of the contract (Clifford Chance et al. 2012).

For the reporting process, an in-scope entity can either report themselves or delegate this process to its counterparty or a third-party entity. If using delegated reporting, which means that one counterparty reports the details of a contract to a trade repository on behalf of the other, the details reported shall include the full set of details that would have been reported had the contracts been reported to the trade repository by each counterparty separately (Questions & Answers, ESMA, 2012). The reporting requirement is a very complex process to implement for many firms, especially for smaller entities with a restricted operational capacity, and many larger dealers and clearing houses are therefore offering reporting services for their clients.

There is not only the event of a new transactions that needs to be reported to a trade repository, the reporting obligation also include events such as (Questions & Answers, ESMA, 2012):

- Amendments – A change to a contract. An amendment can add, remove, or update parts of the agreement.
- Notional increases or decrease– For most transactions the notional principal remains the same throughout the life of the trade. But if there, for any reason is a change in notional, this should be reported accordingly.
- Novation – The act of replacing on of the two participating members of an agreement with another. Obligations, rights, duties, and terms are transferred onto the new party.
- Partial novation – Same as novation, but only part of the contract is transferred onto the new party.
It is of course important that all in-scope entities have a reporting process in place for all transactions and trade events. When this process is put in place it is also important that the data that is being reported is in a correct format. When EMIR came into force, EMIR required ESMA to draft Regulatory and Implementing Technical Standards (Final Report, ESMA, 2014). In the Regulatory Technical Standards (RTS) you can see that reportable information is divided into two groups, counterparty data and common data, and are main characteristics of a derivative contract. The common data is consistent across both party and counterparty and includes all details of the transaction (Final report, ESMA, 2012 (page 154)).

One of the fields that all in-scope entities are expected to provide is a ‘unique trade identifier’ (UTI) in each trade report. This identifier should be the same for all reports which relate to the same transaction, so for both party and counterparty. In-scope entities should ensure, when they enter into a reportable transaction with another in-scope entity, that the UTI is consistent across both reports. The UTI is used for the paring process and the reconciliation process (Final Report, ESMA, 2012 (page 57)). Other standardised identifiers are “unique product identifier” (UPI) and “legal entity identifier” (LEI) identifying products and entities.

**Risk Mitigation Techniques**

Another important part of EMIR (key-provisions number 3), are required risk mitigation techniques for non-cleared trades. These mandatory techniques should minimise credit, counterparty and operational risk. Risk mitigation techniques should involve portfolio reconciliation, portfolio compression, dispute resolution and timely confirmation (Final report, ESMA, 2012 (page 20)).

**Portfolio reconciliation**

A “portfolio” can be any grouping of OTC trades between two legal entities. For example, a portfolio could comprise all OTC trades between two parties documented under a 2002 ISDA Master Agreement (ISDA, 2006). “Reconciliation” refers to the process of ensuring that two sets of records are the same (ISDA, 2012). Portfolio reconciliation of OTC derivatives means the process of ensuring that two parties’ books and records remain synchronised. The obligation of reconciliations also involves that other trade events, such as novations, amendments and other activities, are correctly captured. Parties should bilaterally agree to a common process for investigating discrepancies on mismatched trades and to re-submit to its trade repository for a full match when resolved (ISDA, 2006).

According to the new regulations, a portfolio reconciliation shall be performed by the counterparties to the OTC derivative contracts with each other, or by a qualified third party duly mandated to this effect by a counterparty (Final Report, ESMA 2012 (page 22)). European Financial and Non-Financial counterparts above a certain clearing threshold must reconcile daily their portfolios with more than 500 trades, weekly their portfolios with 51-499 trades, and quarterly their portfolios with less than 50 trades. The portfolio
reconciliation shall also cover key trade terms that identify each particular OTC derivative contract and shall include at least the valuation attributed to each contract (Levitt et al. 2012).

**Portfolio compression**
Portfolio compression is a risk reduction process in which two or more parties wholly or partially terminate some or all the derivatives between each other. The terminated derivatives are usually replaced with another derivative whose combined notional value is less than the combined notional value of the terminated derivatives (ISDA, 2006).

EMIR specifies that financial counterparties and non-financial counterparties with 500 or more OTC derivative contracts outstanding with a counterparty which are not centrally cleared shall have procedures to regularly, and at least twice a year, analyse the possibility to conduct a portfolio compression exercise to reduce their counterparty credit risk and engage in such a portfolio compression exercise (Levitt et al. 2012). Financial counterparties and non-financial counterparties shall ensure that they are able to provide a reasonable and valid explanation to the relevant competent authority for concluding that a portfolio compression exercise is not appropriate in specific cases (Final Report, ESMA, 2012 (page 23)).

**Dispute resolution**
According to the regulations, when concluding OTC derivative contracts with each other, financial counterparties and non-financial counterparties shall have agreed detailed procedures and processes in relation to i) the identification, recording, and monitoring of disputes, and ii) the resolution of disputes in a timely manner with a specific process for those disputes that are not resolved within five business days. Disputes outstanding for more than 15 business days and exceeding 15 million EUR needs to be reported by the financial counterparty to a chosen, competent authority (Final Report, ESMA, 2012 (page 24)).

**Timely confirmation**
EMIR specifies that an OTC derivative contract established between financial counterparties or non-financial counterparties and which is not cleared by a CCP shall be confirmed, depending on the asset class, by the end of the second or third business day following the date of execution of the contract (Final Report, ESMA, 2012 (page 21)). ESMA also considered that financial counterparts should report monthly to the competent authority the number of unconfirmed OTC derivative transactions that have been outstanding for more than five business days.

### 3.4 Summary

**Trading over-the-counter (OTC) derivatives** is when two parties on the derivative market work directly with each other to formulate and execute a transaction instead of going via an exchange market. OTC derivatives are mostly used for hedging and speculation. Hedgers use these instruments to manage financial
uncertainty while speculators use derivatives to gamble on the same uncertainty. OTC derivatives mainly exist because there is the demand for uniquely designed contract and non-standardization. Compared to exchange traded contracts, OTC contracts can be tailored to suit very explicit specifications and needs.

**Throughout a lifecycle**, an OTC derivative goes through three different stages:

- **Pre-Trade**: Both parties will enter into written documentation to establish a trading relationship
- **Trade**: Trade execution takes place.
- **Post-Trade**: Trade details are captured in internal systems, activities such as portfolio reconciliation, collateral management, clearing and portfolio compression take place to reduce any unwanted risks. After some time comes the settlement date, the time for when the underlying product are being sold. When settlement passes, the trade naturally proceeds to termination or expiry. Ways of terminating before natural maturity is for example trade novation and portfolio compression.

**Basel 3 and the Dodd Frank Act** are 2 newly introduced and important regulatory reforms, applicable to counterparties trading OTC derivatives.

- **Dodd Frank** is a regulatory framework for the OTC derivative swap market in the US, initiated in 2009 and effected on 21st July 2010. Its main objectives are to 1) regulate swap dealers and major swap participants in the US, 2) increase transparency and improve pricing in the derivatives market, and 3) lower the overall risk to the American public.
- **The Basel accords** are voluntary, international standards released in December 2010. They were scheduled to be introduced from 2013 to 2015, but the implementation was extended to 2018 and again further to 2019. Basel 3 requirements can be grouped into two main categories: Capital requirements (including capital coverage, capital conservation buffer, risk coverage and risk management) and Liquidity requirements (including liquidity coverage and risk management).

**European Markets Infrastructure Regulation (EMIR)**, the focus for this case study, is a European regulatory framework for the OTC derivative market introduced in 2012 to improve transparency and reduce risk. EMIR has 4 key-provisions:

1) Reporting obligation for derivatives contracts
2) Requirements for trade repositories
3) Clearing obligation for OTC derivatives and risk mitigation techniques for non-cleared OTC derivatives including non-financial counterparties obligations
4) Requirements for clearing houses/central counterparties
EMIR reporting requirement is mandatory for all OTC transactions, traded by any in-scope entity in Europe. Transactions must be reported to a registered repository in a standardised format including standardised identifiers such as UTI, UPI and LEI.

EMIR risk mitigation activities involve portfolio reconciliation, portfolio compression, dispute resolution and timely confirmations. Activities needs to be performed within a pre-defined frequency which depends on your portfolio size and exposure.
4. Methodology

In this section, the case study will be presented as well as the choice of research methodology. This followed by reasoning around selected data collection techniques including both primary and secondary data collected. Lastly the validity and reliability for the research is presented.

4.1 A Case Study of Implementing European Regulations

European Market Infrastructure Regulation (EMIR) is a newly introduced regulatory framework for the European OTC derivatives market, introduced in 2012 and with an aim to improve transparency and reduce risk associated with trading OTC derivatives. The purpose of this case study was to study the introduction and the implementation process, to better understand the new framework and its level of successfulness and efficiency.

For this case study, EMIR was studied by going through the five different stages that Robert Baldwin’s identify in his DREAM framework: Detecting, Reacting, Enforcing, Assessing and Modifying. DREAM is used as a tool, and will guide us through different theories, both from Baldwin himself as well as other writers within the research area. This will help us better understand the successfulness and efficiency of EMIR.

The study will cover findings about the implementation process from 2009 up to 2017. The start date indicates the time when global initiatives to improve transparency and reduce risk on the OTC derivatives market was first introduced during the G20 summit, this is when the work with EMIR first started. The start date of the study goes hand in hand with Baldwin’s first task in his DREAM framework which is to detect the overall reason for the regulatory frameworks existence, a market failure or weakness that triggers the regulatory change.

The process of implementing EMIR is not yet finalized, EMIR is still a work in progress and the market is still adjusting to the change. But even if the implementation process is on-going, we can for this case study still go through each stage in the DREAM framework, identify and asses work that has been done for the implementation up to now. For the last task in the DREAM framework, “Modifying”, we intend to focus on improvements and modifications that the already implemented framework has gone through so far.

The target group for this research is European entities trading OTC derivatives. By carrying out a more broad-spectrum research, without focus on a specific target group categorized by for example region, entity type or product volumes, the research can get a better overview of the implementation process and a more
general understanding for its successfulness. Specific cases will not be identified, but the general assumption will be captured instead.

4.1.1 Ongoing Regulatory Change

Before describing the methodology of the research, we intend to highlight the fact that EMIR is still a work in progress and that many affected firms are at this stage still adjusting their internal processes and routines to have approved workflows to fulfil different regulatory requirements. This is important from a methodology point of view since it entails potential restrictions and limitations that needs to be taken into consideration throughout the case study.

Firstly, there is a restriction in available information and reference within the specific research area. This will impact the design of the research in the way that the writer will not have a clear picture of what the research intends to study and what information that will be available at all time, and will therefore have to adjust the process and approach throughout the time of the study when data are being collected and the theoretical framework is being prepared.

Secondly, the target of the study is moving, EMIR is currently being implemented, which means a demand for flexibility throughout the process.

Thirdly, the study will end without a final answer about EMIRs implementation. It is therefore extra important that the overall aim of the study and its different research questions are designed in a way that doesn’t necessarily requires a final implementation result of EMIR. Some questions might have to be redesigned along the way due to EMIR “being late” or market participants not reacting “fast enough” or not in the way they were “supposed” to.

4.2 Choice of Research Methodology

The table below from Höst, Regnell and Runesson’s book “Att genomföra examensarbete” is used to describe the choice of research methodology (Höst et al. 2006). To add to this table is the dimension of abductive, inductive or deductive research study, which is discussed in Collins and Hussey book “Business Research” (Collins & Hussey, 2009) as well as in Dubois and Gaddes article “Systematic combining: an abductive approach to case research” (Dubois et al. 2002).
4.2.1 Case Study

According to Lundahl and Skärvad a decision on type of method should primarily be driven by the overall purpose and problem statement of a study (Lundahl et al. 1999).

A case study is often used in a research where the main purpose is to describe a phenomenon or object, something that is a bit more difficult to distinguish from their surroundings (Höst et al. 2006). The purpose of this study is to investigate the introduction of EMIR, the research will be of an exploratory nature. This goes very well with “case study” and Höst, Regnell and Runessons table for choice of research methodology.

In addition to this, the primary data collected during the study will mostly be qualitative data (case study - second check), and the design of the research is best described as flexible research design (case study - third check).

Results from a case study does not necessarily have to be generalizable to other cases (Höst et al. 2006). However, Höst, Regnell and Runesson argue in their book that if you have a very similar case, the chance of getting same or very similar result is highly expected. For example, if the introduction of new financial regulations in different jurisdiction were to be studied this would most likely give similar or same result on many levels.

4.2.2 Exploratory Purpose

Exploratory research is typically conducted into a research problem or issue when there are very few or no earlier studies to which you can refer for information about the problem or situation (Collins & Hussey, 2009). One of the limitations of this research, the fact that EMIR is still a work in progress for many organisations and that firms are in current stage adjusting their internal processes and routines, is what mainly defines the research purpose as “exploratory”, there are not many previous studies to compare with.

Also, when using an exploratory purpose, the purpose is usually not hundred percent decided and formulated until the end of the research when all data is collected (Collins & Hussey, 2009).
One should also keep in mind that if the same study on EMIR and European regulations would be carried out in 10-15 years from now with more available data to use, the research purpose and design would most likely be more descriptive and fixed.

4.2.3 Qualitative Data Collection

Leading from the exploratory purpose of this study, qualitative methods for data collection have been chosen. The techniques chosen for the study is in line with what Höst, Regnell and Runesson list as typical techniques for a case study; interviews and study of existing material (Höst et al. 2006). Qualitative data is normally very precise, captured in various points of times and contexts, and are associated with a positivist methodology that usually results in findings with strong reliability (Collins & Hussey, 2009). One of the more important factors when a study is carried out using qualitative data collection techniques, is that the person preforming the study should be aware of the limitation in generalising the results (Höst et al. 2006).

A quantitative statistical analysis is not applicable for this case. A quantitative research is most commonly used to quantify a problem by generating numerical data or data that can be transformed into useable statistics, while this thesis assumes a more descriptive nature with the intention of describing the relationship between newly introduced regulation and market participants’ behaviour and reaction (Collins & Hussey, 2009). Collecting quantitative data for this study would be more difficult taken into account that the subject being studied is a newly introduced subject which reduces the already existing data available. Collect information from all participants on the market would make the scope of the research enormous and highly research driven, and is therefore not applicable for this specific study.

There are some consequences of performance that the writer should take into consideration since a more qualitative research approach have been chosen for data collection. Firstly, as mentioned in earlier section, the purpose of the thesis cannot be fully finalised until all data is collected (Collins & Hussey, 2009). Secondly, the writer needs to keep a neutral standpoint when presenting all data collected and when presenting a conclusion of the study, conclusions should be drawn from a reality that is assumed to be objective. It is important that a fair accounting of data is kept and that opposite or alternative aspects are not left out (Collins & Hussey, 2009).

4.2.4 Flexible Research Design

A flexible research design is used for this study, meaning that the design of the research can be changed during the research period. Details in the study might have to be changed or excluded during the study. This is a normal case for a research that is driven by a case study with exploratory purpose and qualitative data collection (Höst et al. 2006). Based on the data collected and the theory written, the writer might decide to
change the overall purpose or change some or all the research questions to better reflect findings and facts collected.

After the data collection and theoretical part, the writer has left room for modifications if needed before proceeding with results, analysis and an overall conclusion of the study.

4.2.5 Research Approach
A deductive research describes a study in which theoretical structure is developed and then tested by empirical observations, logical conclusions are drawn based on the theoretical assumptions (Collins & Hussey, 2009). In a deductive research, the empirical data is processed by implying that logical connections can be drawn from the theoretical implications and previous research.

In Dubois and Gadde article “Systematic combining: an abductive approach to case research” a third research approach is discussed. With this approach, the research will in parallel to the data collection continue to the search for complementary theories to build further on the theoretical framework. The approach known as abductive research approach is describe by Dubios and Gadde as a “constantly going ‘back and forth’ from one type of research activity to another and between empirical observations and theory” to create understanding for the theory and for the data collected in parallel (Dubois et al. 2002).

This study is driven by details in the regulations and about general difficulties and theories when implementing and understanding new financial regulations. Primary data have been collected to better understand how the regulatory framework was welcomed and understood by the market and its participants. Prior to the research, when studying the classical inductive and deductive research approaches (Collins & Hussey, 2009), this research was intended to follow a deductive research approach. But throughout the process, the research has followed a more abductive approach. The theoretical part has been updated and changed depending on the information received through data collection. And at the same time have the way of data collection changed depending on available theoretical sources. The “constantly going ‘back and forth” most certainly applies, and the approach have improved both the research and also the outcome and findings.

4.3 Data Collection Techniques
4.3.1 Primary Data
Primary data were collected through two qualitative interviews. The two interviews that were held were of a semi structured / unstructured type, both with professionals within the field of financial services and post trade risk mitigation. Both interviewees are kept anonymous as per their request. A few questions and topics
were prepared for each interview, all was of an “open question” character which typically gives room for the interviewee to talk more openly without being kept within certain area of answers. According to Collin and Hussey interviews with open questions will give you openings to explore and gather broad information from the interviewee, which felt right for the exploratory purpose of the study (Collins & Hussey, 2009). A few of the questions were comparison questions which should, according to Collin and Hussey, explore certain needs and values in the answer. Each interview lasted for about an hour.

Part of the primary data collection was also an attendance at a small conference where the introduction of EMIR was discussed. The conference was held in London, arranged by International Swaps and Derivatives Association (ISDA), and the subject of the conference was “Global Reporting Requirements – Implementation in the EU and internationally”. Following topics were discussed:

- EU Reporting (EMIR and MiFID/MiFIR)
- International developments around transaction reporting
- Improving regulatory transparency of global derivatives market
- Global data harmonisation and aggregation
- Standard identifiers (LEI, UTI, UPI and Taxonomy)

Each topic was led by a person or a panel, and questions were asked and discussed with all attendees. For this study, the conference attendance is treated as data collection through observation. Höst, Regnell and Runesson argues that observations are also a primary data collection technique when studying a group of people’s behaviours or discussions (Höst et al. 2006). When collecting data through an observation, you can decide if you want to be a participating observer or a non-participating observer, so questions asked by someone other than the writer can also be used in the result.

By attending a conference, qualitative primary data can be collected in a very efficient way. It will also give the researcher several advantages compared to only arrange more traditional interviews:

- An opportunity to collect data throughout a full day with multiple individuals instead of being restricted to a selected number of interviewees.
- Topics and questions is not restricted to what the researcher highlights as important which creates objectivity and openness. Collected data comes from a wide range of individuals with different background and experience.
• When being in a group together with individuals from same or similar industry, people will take the opportunity to speak more freely compared to an interview. It can also trigger discussions that potentially can give more depth and different angles compared to an interview with one person.
• Data can be collected from top-quality individuals within the industry that most likely are difficult to schedule for individual interviews

To attend a conference with focus on reporting requirement was very well timed for this study. The conference was held in May 2015, about 2 years after the reporting requirement came into force, which would have given involved parties (both market participants and authority) time to develop knowledge, questions and concerns regarding the different requirements. Prior to the conference it was also established that both speakers and attendances were from a wide selection of different financial institutions and associations, which hopefully leads to responses and answers that represent larger segment of the market.

4.3.2 Secondary Data
As part of the data collection for this research, secondary data was collected thorough analysing the document “Questions and Answers, Implementation of the Regulation (EU) No 648/2012 on OTC derivatives, central counterparties and trade repositories (EMIR)” (ESMA Q&A). This is a document published by ESMA with the purpose to (Questions & Answers, ESMA, page 3):

“...promote common supervisory approaches and practices in the application of EMIR. It provides responses to questions posed by the general public, market participants and competent authorities in relation to the practical application of EMIR.”

The ESMA Q&A is a document that was intended to be continually edited and updated by ESMA whenever new questions regarding the regulation was received. The content of this report should therefore reflect main areas for questions and concerned among market participants trading OTC derivatives.

The ESMA Q&A can be compared with the arrangement of interviews with a high number of market participants, high number of questions are asked and answered. It is an effective way of collecting data from a larger sample group. Positive aspects of studying ESMA Q&A can be summarised as following:
• It highlights areas and topics with majority of questions.
• A high number of questions are being answered in structured and organised way.
• Answers come directly from the authority and can therefore be seen as correct and reliable.
There are also weaknesses that should be highlighted when comparing the study of the ESMA Q&A with for example arrangement of interviews with selected individuals:

- There is no room for follow-up questions or clarifications.
- The researcher will not have historical information about questions and answers. What looks like a short question or answer on paper can come from long discussions between multiple individuals over a long period of time.
- The source is anonymous, the researcher will not have information about the source of each question
- Answers for each question is already prepared, which gives the researcher certain limitations of objectiveness.

In addition to ESMA Q&A, secondary data have also been collected through academic papers and literature to mainly form the analytical tool and the theoretical part of the research.

4.4 Methodology Evaluation

Reliability and validity are two key features that characterize research findings (Collins & Hussey, 2009).

4.4.1 Reliability

Reliability refers to the absence of difference in the result if the research were repeated (Collins & Hussey, 2009). As mentioned before, qualitative data is normally very precise, captured in various points of times and contexts, and are associated with a positivist methodology that usually results in findings with strong reliability (Collins & Hussey, 2009). However, the researcher should keep in mind that when few sources for primary data collection is used, the result could vary from different sources.

By attending a conference, the researcher believes that the reliability in results for this study is strengthen. The conference gives the researcher the opportunity to collect data from a wide range of individuals with different background and experience. It also gives the researcher the opportunity to listen in to conversations and argumentations between several individuals which can lead to findings with more depth and different angles. During a conference, the topics and questions is not restricted to what the researcher necessarily highlights as important creates objectivity and openness, and could potentially lead to higher reliability.

The written sources from books and magazine, including the ESMA Q&A, are available to everyone and increases the reliability of the study.
4.4.2 Validity

Validity is the extent to which the research findings accurately reflects the phenomena under study (Collins & Hussey, 2009). And the most common way to evaluate the validity of a research is face validity, which involves ensuring that the tests and measures used by the researcher do actually measure or represent what they are supposed to measure or represent (Collins & Hussey, 2009).

By using DREAM and dividing the focus of the study into smaller sub-tasks, the researcher can better ensure that what was intended to be studied is being studied. However, an approach like this could also isolate each stage in the processes and therefore prevent the researcher from fulfilling its overall purpose of the study.

The researcher adds more validity to the results by using the ESMA Q&A as one of the main data sources for the study. The ESMA Q&A includes questions from different types of market participants, all with a good understanding of different products, the market, and financial regulation. An important factor that can undermine validity for a research is if collected data and results comes from a source that do not fully understand the subject being studied (Collins & Hussey, 2009).

Validity can be considered medium-high for this study, and generalisability can instead be considered low due to the few sources of primary data.
5. Analytical Framework

In this section, different theories to better understand financial regulations will be discussed. The implementation process of regulatory frameworks will be explained by using the five core tasks set out in the DREAM framework.

5.1 Understanding Regulation

To understand the principals of regulations we will start on a very basic level. In general, regulations are usually designed to work through following steps or phases (OECD, 2012):

1. Regulation is implemented, which leads to changes in behaviour
2. Change in behaviour will ultimately leads to changes in outcomes
3. Changes in outcomes, such as improvement in an underlying problem or other changes in conditions, will change the conditions in the world

Firstly, a specific behaviour (or misbehaviour) needs to be identified. The primary function of the financial system is to intermediate capital, to connect those who want to earn a return on money with those who need money for productive purposes and are willing to pay for such money (Allan, 2013). Allan thinks that financial institutions, in a perfect world, would carry on their activities in ways that minimize risk to the financial system and the economy. However, in a realistic world, financial institutions cannot and will not change its behaviour themselves mainly because they lack financial motivation and also because they lack information needed about its competitors and the entire market. A regulator can help the market to change its behaviour by introducing regulations which forces market participants to different doings and behaviours (Allan, 2013). When asking about the concept of a regulation, Robert Baldwin points out that regulations is often seen as “an action that restricts certain behaviours and prevent occurrence of certain unattractive or unwelcomed activities”, regulation should lead to more structure and less chaos (Baldwin et al. 2012).

Secondly, change in behaviour will lead to changes in outcome. To achieve better regulatory outcomes, a regulator should try to find good balance between the following key components (as described in figure 3 below): Rules and regulations, framework and governance arrangements, operational processes, and leadership (OECD, 2013).
Figure 3: Necessary elements of better regulatory outcomes (OECD, Principals for the Governance of Regulators, page 4 (OECD, 2013)).

By finding a good balance between the different regulatory key-components, and by addressing “market failures” wisely and precise, regulators are better positioned to reach good outcomes. Regulators needs to manage its (often limited) resources without weakening the effectiveness of their regulatory strategies, and they always need to thrive towards “better-and-smarter” execution of financial regulation (Pan, 2011).

A key objective after the financial crises in 2007 has been to promote transparency and financial stability as a better outcome. To reach this, financial authorities in Europe have worked towards a market behaviour that promotes and encourage regulatory cross-border cooperation and consistency in enforcement of rules and systemic oversight (Singh, 2015). Singh claims that an important factor to accomplish positive outcomes of newly implemented regulations is to work towards a single regulatory regime with a strategy that focus on centralisation and a united enforcement approach. (Singh, 2015). This request or demand for better cooperation between regulators has become a more and more shared opinion over the last twenty years (White, 2015), and White claims that the financial crisis in 2008 only escalated the momentum of international regulatory cooperation. Further to this, White argues that if we don’t have a cross-border corporation between different regulators, market participants will eventually take advantage of the gap in some way.

Thirdly, a change in outcome will hopefully change the market? Stijn Claessens and Laura Kodres argues in their research that a market will not change and that different identified risks will most likely stay even after a crisis, but that we learn from previous incidents (Claessens et al. 2014). Claessens and Kodres also mentions in their report that to be more successful with regulation, the starting point must be a better understanding market participants mindset and behaviour. And in addition to this also understand why the
previous regulation (if any) was not successful in preventing a crisis from happening. And thereafter look carefully for all signs of risks and allow different views to be heard.

As a contrary, or at least different, opinion to Cleassens and Kadres we have Steven Schwarcz who argues in his report “Regulating Financial Change: A Functional Approach” from 2016 that one of the main issues with existing regulatory approaches and strategies is that that regulators (and society) makes financial regulation overly reactive to past crises and are therefore mainly trying to address previous risks and not new changes. Schwarcz means that the financial system changes and develops, and regulators should therefore always focus on develop tools for present or upcoming issues and not past issues (Schwarcz, 2016).

5.2 Analysis Tool – The DREAM Framework

To be able to better understand the implementation of EMIR, we have created an analysis tool from Robert Baldwin’s book “Understanding Regulation” (Baldwin et al. 2012) and his “DREAM framework”. The DREAM framework includes five tasks which goes through the main challenges that a regulator can run into when introducing and enforcing new regulations. We will at each step in our DREAM-framework-process discuss different theories from Robert Baldwin himself and other authors.

Robert Baldwin is not the only one that sees the regulatory implementation process as a set of tasks. Eric Pan also discuss in his paper “Understanding Financial Regulation” that a regulator should follow a number of tasks in order to better put together a suitable regulatory strategy. Pan’s philosophy to implement regulation is very similar to Baldwins, and includes tasks to determine regulatory content, facilitate compliance, and pursue enforcement (Pan, 2011).

Robert Baldwins DREAM framework is divided into five core tasks: Detecting, Responding, Enforcing, Assessing and Modifying. Each task and its individual purpose are presented in figure 4 below.

<table>
<thead>
<tr>
<th></th>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Detecting</td>
<td>The gaining of information on undesirable and non-compliant behaviour.</td>
</tr>
<tr>
<td>2</td>
<td>Responding</td>
<td>The developing of policies, rules, and tools to deal with the problems discovered.</td>
</tr>
<tr>
<td>3</td>
<td>Enforcing</td>
<td>The application of policies, rules and tools on the ground.</td>
</tr>
<tr>
<td>4</td>
<td>Assessing</td>
<td>The measuring of success or failure in enforcement activities.</td>
</tr>
<tr>
<td>5</td>
<td>Modifying</td>
<td>Adjust tools and strategies to improve compliance and address problematic behaviour.</td>
</tr>
</tbody>
</table>

Figure 4: The DREAM framework (Baldwin et al. 2012, page 227)
5.2.1 Detecting: Understand the Regulatory Rationale

When working with the DREAM framework, the first task in the process is the detection of undesirable behaviour or unwanted market practice. For this step in the process we will go through traditional “market failures” that can trigger regulatory movement.

A “market failure”

The main reason and overall rational for why a regulatory framework is implemented on a certain market can usually be find in the technical justification for regulating. Pan as well as Baldwin talks about market failures or market inefficiencies as the reason or overall rational for a regulatory frameworks existence (Pan, 2011). Baldwin clearly states that as the first step in his DREAM framework, when trying to detect and justify why a regulation is implemented, expressions such as “market failure” or “market absence” is often used (Baldwin et al. 2012). In his book, Baldwin list the following as traditional “market failures” that triggers regulatory implementation:

- Monopolies and natural monopolies
- Windfall profit
- Externalities
- Information inadequacies
- Continuity and availability of service
- Anti-competitive behaviour and predatory pricing
- Public goods and moral hazard
- Unequal bargaining power
- Scarcity and rationing
- Rationalization and coordination
- Planning

Pan agrees with Baldwin regarding classic failures, he also argues that economic regulation seeks to address market failures such as monopolies, externalities, imperfect information, excessive competition, anticompetitive behaviour and disruptive business cycles (Pan, 2011). By identifying the failure, the regulator can start to create the content for the framework.

It might be that there is not only one clear failure that triggers the regulatory movement, but instead a combination of several failures that leads up to a demand for regulation. For this research, the two market failures “Information inadequacies” and “Rationalization and coordination” from Baldwins list are seen as
more relevant. “Information inadequacies” points out the failure of not being able to evaluate products fully and not being able to compare all competitors with each other. Lack of information will most likely result in a non-functional competitive market (Baldwin et al. 2012). “Rationalization and coordination” points out the failure of standardization in agreements, procedures and products, that negotiation can be done on individual basis. Without standardized the market often fails to coordinate, which leads to procedures and controls linked to the market more difficult to implement (Baldwin et al. 2012).

5.2.2 Responding: Development of Policies, Rules and Tools
Following the detection exercise, the second task in the DREAM process is to respond. This is done by developing different policies, rules and tools that can be used to detect undesirable behaviour or unwanted market practice. For this step in the process “the table of eleven” developed by the Dutch Ministry of Justice will be presented. In addition to this, different worldviews that potentially could influence the design of a regulatory framework is also be presented.

**Table of eleven**

“The table of eleven” is a framework developed by the Dutch Ministry of Justice to estimate levels of compliance associated with given laws (Baldwin et al. 2012). The table is split into two parts, spontaneous compliance dimensions and enforcement dimension.

The spontaneous compliance dimensions:

1. Knowledge of rules (a. Familiarity with rules, b. Clarity of rules)
3. Extent of acceptance (a. Acceptance of the policy objective, b. Acceptance of the effects of a policy)
4. The target group’s respect for authority (a. Official authority, b. Competing authority)
5. Non-official control (a. Social control, b. Horizontal supervision)

The enforcement dimensions:

6. Risk of being reported
7. Risk of inspection
8. Risk of detection (a. Detection in a records inspection, b. Detection in a physical inspection)
9. Selectivity
10. Risk of sanction
11. Severity of sanction
The table can be used to identify different factors that can impact on compliant behavior, to improve the design of rules and to locate potential areas of weakness, and to evaluate level of enforcement effort the regulator must carry out (Baldwin et al. 2012).

Pan describes this task, what he refers to as the compliance task, as “the process by which the regulator ensures that the regulated person both comprehends the content of the rule and also takes the necessary steps to comply with the rule’s requirements” (Pan, 2011, page 21). It is, according to Pan, also important that the regulator choses a regulatory strategy that makes it more difficult for affected market participants to invoke or avoid certain regulatory requirements.

**Worldview**

When explaining regulation, Baldwin brings up different worldviews (Baldwin et al. 2012). According to Baldwin, every regulation has a “core idea” about the nature of that specific world/environment, and that specific core idea or worldview will influence the design of the regulation and also the regulatory control approach carried out. The four control styles that Baldwin discuss in his literature are (Baldwin et al. 2012, page 51 table 4.2):

- **Fatalism** – Control through unpredictable processes/inherent fallibility
- **Individualism** – Control through rivalry and choice, incentives to underpin market and individual choice processes
- **Hierarchy** – Anticipative solutions, forecasting, and management response to enhanced authority and hierarchical ordering
- **Egalitarianism** – Control through group process, network style, participation.

When discussing the different control styles there are two dimensions to take into consideration: grid (the extent to which individual behavior is bound by rules) and group (the extent to which individual regards herself as being embedded within group process). For example, egalitarianism could be defined as “low grid/high group”.

**5.2.3 Enforcing: Apply Tools and Regulation**

Third task in the DREAM process is to apply tools and enforce the regulatory framework on targeted market segment. There are different strategies for this, as well as different enforcing styles and methods when intervening. In this section, we will discuss the enforcement pyramid and the pyramid of regulatory strategies.
Ayres and Braithwaite states in their book “Responsive Regulation” that when introducing different policies and rules, compliant behaviours is more likely to occur when a regulatory agency operates an explicit enforcement pyramid (figure 6) (Ayres et al. 1992). In an enforcement pyramid, there are different forms of enforcement on different levels, starting with persuasion, goes via warnings and civil penalties and all the way up to crime penalties, license suspension and license revocations. This will boost a logical and structured way for the regulator to deal with different types of interventions, following an escalation process starting at non-penal actions and escalate upwardly in the pyramid to finally end up at licence revocation.

In parallel with the enforcement pyramid, Ayres and Braithwaite also mentions a pyramid they refer to as the pyramid of regulatory strategies (figure 7) which points out to what extent the different rules and policies should be introduced (Ayres et al. 1992). The idea with the pyramid is that governments should first try to start at the bottom of the pyramid and offer self-regulatory solutions. But if that is not enough, the regulatory solution presented should escalate through the different stages of enforced self-regulation, command regulation with discretionary punishment and finally command regulation with non-discretionary punishment.
Both pyramids are also part of what Baldwin refers to as “responsive regulation” (Baldwin et al. 2012). The main difference between the two pyramids are the target audience. The enforcement pyramid is actions and sanctions towards a single regulated firm, while the pyramid of regulatory strategies is different strategies pitched at the entire industry. Both are important to keep in mind when studying the application of policies, rules and tools to a market.

**Risk-based regulation**

Compared to responsive regulation and the enforcement pyramids mentioned above, risk-based frameworks look principally to control relevant risks instead of secure compliance with a set of rules (Baldwin et al. 2012). In this approach “risk evaluators” are used as drivers for regulatory actions, and a desire of culture move within organisations from compliance and rules to more concern about risk and their assessment.

A problem with risk-based regulatory approach is potential isolation of the risk, to not see the full picture. Another problem with this approach is that regulatory focus can easily happen to stand on the organisations that carry the largest risk, and that remaining market participants will “fly under the raider” and not seen by the regulators (Baldwin et al. 2012).

**5.2.4 Assessing: Evaluating Regulation**

The fourth task when studying the process of implementing a regulatory framework using Baldwin’s DREAM framework is to track performance sensitivity and evaluate how well the system is being enforced. This part of the process should also calculate how much unwanted activity that, for different reasons, escapes
the impact of the different rules and controls implemented. We will in this part go through what Baldwin refers to as “Five criteria for evaluation” (Baldwin et al. 2012).

**Five criteria for evaluating**

When evaluating the fundamentals in the form of quality and the support of a regulatory framework, the following five different criteria can be used: *Legislative Mandate*, *Accountability*, *Due Process*, *Expertise* and *Efficiency*. Any argument that fall outside any of these five categories are most likely to be seen as irrelevant or unrelated by the public (Baldwin et al. 2012). It is important to remember that there will very often be trade-offs between the different categories, and that in an argument strengthen one criteria might mean weaken in another. For example, if a regulator has low legislative mandate, their accountability can still be strong and well received by the public.

**Legislative Mandate**

This criterion suggests that regulatory action needs support from higher authority such as Parliament (Baldwin et al. 2012). The people instruct, through Parliament, regulators to achieve results. When regulators can point out that they have accomplished intended results they are in a position to claim public support, and with that can the Parliament argue they have fulfilled their legislative mandate.

However, for this criterion it is important to point out that legislators normally avoid setting down precise objectives because they want to give regulators the freedom to deal with problems such as new risks, operational innovation and novel technology as they arise, and a statute will instead order a regulator to for example “protect interest of consumers” which is a vague and self-interpretive statement. As a result of this, regulators are infrequently involved in the transmission of statutory objectives, and for this reason it will rarely provide an easy straight-forward answer to questions about legitimation and fulfilled legislative mandate (Baldwin et al. 2012).

**Accountability**

The criteria of accountability suggest that a regulator with imprecise legislative mandate can still claim that they have the support of the public because they are still accountable to, and controlled by, another democratic institution (Baldwin et al. 2012).

The key-problem with this criterion is that if the Parliament itself, or any other elected institution, is not the body holding the regulator accountable, then the arrangement can be seen as unauthorised or unrepresentative (Baldwin et al. 2012).
Due Process
This criterion argue that the regulator can earn public support when chosen procedures are fair, accessible and open. So, attention is paid to equality, fairness and consistency of treatment, but also to levels of participation and decision making the public and other affected parties are authorised of. The rational is that proper democratic influence over regulation is ensured by due process being observed and that this has legitimating affect (Baldwin et al. 2012).

A major risk with the criteria of due process is that more participation will lead to less effective process for decision-making. Also, with a high level of involvement from the public the level of expertise and judgement within the regulatory framework can be questioned (Baldwin et al. 2012).

Expertise
A regulator may claim public support on the basis of its expertise instead of offering a give reasons or justification of the regulation (Baldwin et al. 2012).

Firstly, a major problem with this criterion is that the public may have difficulties in assessing whatever decisions and policies made by a regulator are produced by the application of expertise. Secondly, expertise can be questioned and not relied on by the public. Thirdly, it is difficult for the regulator to prove a natural standpoint, decisions based on judgement could have political aspects and interests (Baldwin et al. 2012).

Under the topic expertise, Pan states that one of the major challenges a regulator potentially faces is how to understand the market and its products. Regulators are facing a major challenge when they at all time need to understand how to regulate complex (already existing since long time or newly developed) instruments. To maintain a certain level of expertise, the regulator need to understand how financial transactions are conducted, the terms of different transactions, and the legal and financial obligations for all different parties (Pan, 2011).

Efficiency
A regulator may claim public support due to acting efficiently. Support by acting efficiently can by claimed in two different ways supported by two of the earlier discussed criteria. Either, support on the basis that the legislative mandate is being implemented effective. Or, efficient implementation will lead results that are efficient and will therefore imply a degree of independence from the mandate (Baldwin et al. 2012).

Support by acting efficiently could be criticised due to the fact that when something is efficiently implemented, there will be less time for testing and comparison and therefore can quality be questioned (Baldwin et al. 2012).
5.2.5 **Modifying: Going forward**

The last task in the implementation process is ongoing work to understand the market and to modify the regulatory framework and its approach if so needed. This is, according to Baldwin the most important part of process to build strong long-lasting regulation (Baldwin et al. 2012).

**Orders of Change**

For modification, the most important part is to “think outside the box” (Baldwin et al. 2012), to be innovative. In the book *Regulatory Innovation: A comparative Analysis* written by Julia Black, Martin Lodge and Mark Thatcher, changing regulation is divided into three levels / orders (Black et al. 2005):

- First-order changes are changes to settings or levels of basic instruments.
- Second-order changes are changes to instruments or techniques, but no change in the overall goal or understanding on which the regulation is based on.
- Third-order changes are changes to the goals of the policy and understanding on which the regulation is based on. Third-order changes is accompanied by first and second-order changes.

Black et al. questions if all regulatory changes can be referred to as innovative. They argue that second and third-order changes can be seen as innovative when for example having new problems with new solutions or old problems with new solutions. Applying an old solution to an old problem is not innovative even if there is a change. For first-order changes, since they do not mark anything new they should not be called innovative. However, even if a first-order change is not innovative they can still contribute to large or transformative effects (Black et al. 2015).
6. Empirical Results

In this section results from interviews and conference attendance are presented in summarised form. This followed by market feedback from selected market participants. Important changes made to the introductory part of the thesis are presented in this section as well.

6.1 Interviews

Two interviews were held with professionals within the field of financial services and post trade risk mitigation. Both interviewees are kept anonymous as per their request. Both interviews were held in April 2015 and lasted for about an hour each. Interview topics / questions are presented in Appendix 1.

The overall impression throughout the two interviews is that for the past years, any derivatives event, development or discussion have been all about regulations: Clarifications and understanding about the rules, solutions and innovations to fulfil mandatory requirements. Both interviewees have many years of experience from working with post trade risk mitigation, and they both agree that the industry is changing and that new regulatory requirements require much more attention, resources and knowledge from market participants and service providers.

*Trade reporting*

One of EMIRs key-provisions are reporting requirements. EMIR requires all counterparties with outstanding derivative contracts to report details of those contracts, and any new contracts they enter into, to an authorised trade repository (TR). One of the interviewees talks about one their business services expansion which is a new service that supports the reporting requirement. The repository service was added as a new service alongside the companies already developed services which provides trade reconciliations and counterparty exposure management for OTC derivative trades. Their new repository service helps clients to identify and resolve potential discrepancies in their reported repository data.

One of the major problems they see with the repository data is incompleteness and inconsistency. A large number of trades (but far from all) have been sent to different trade repositories in Europe since the implementation of the reporting rules in February 2014, so the initial phase to fulfil the regulatory obligation is completed. The problem is that the majority of this data are without standardised identifiers such as UTIs (Unique Trade Identifier), LEI’s (Legal Entity Identifier) and UPI’s (Unique Product Identifier), and without standardised identifiers the paring process becomes problematic. The paring process is important so that the entity can verify that the data is correct and in line with what was agreed with the counterpart. The industry is facing major challenges with the reporting requirement due to the data quality and the non-existing in-
house operational infrastructure to support this workflow. They also see major problems with standard identifiers such as UTIs, UPIs and LEIs. The idea is good, to have a standard format across the market, but far from everyone are able to fulfil the obligation. So far, these identifiers are creating massive work for everyone.

Risk mitigation

The new regulation states that for contracts that are not cleared, all counterparties are required to comply with operational risk management requirements, to preform risk mitigation activities such as portfolio reconciliation, portfolio compression and dispute resolution. These different risk mitigation activities were carried out by majority of larger market participants long before any regulatory requirement said so. But both interviewees agree that they see a difference in behaviour and actions.

- Fixed frequency. The new regulation states that portfolio reconciliation needs to be performed with a certain frequency, and this frequency is based on number of transactions for each relation. Instead of following internal risk limits the regulatory required frequency decides for the client. A standardisation in demand across the industry.
- Automated processes. With a regulatory requirement to perform certain activities, clients feel a bigger urge for less manual interaction and more automated processes. Pressure on IT-departments and technical solutions.
- Broader scoop of service. Risk management activities are preformed across new asset classes and currencies, involving transactions that might have been excluded from these activities earlier due to internal decisions. The priority and scope on risk mitigation have changed.

A challenge for the industry is to adjust their workflow and find enough recourses and knowledge in-house or elsewhere to be able to comply with new regulatory requirements.

Expanding client base

The ongoing regulatory change is forcing more firms to find ways to reduce risk and improve capital efficiencies. Both interviewees agree that the new regulatory requirements have attracted a high number of new clients to their services. These are mostly clients that don’t have an existing operational infrastructure to fulfil reporting obligations and mandatory risk mitigation activities (reconciliations, dispute resolution, confirmations and portfolio compression).

New clients come from a broader range of client types, including traditional clients such as international banks and financial institutions but also new client types such as corporates and smaller national banks. This
change in client type indicates an overall change in attitude towards risk management and risk mitigation for the OTC derivative market. Market participants are now prioritising regulatory requirements and regulatory work.

6.2 Conference Attendance

In addition to the interviews, primary data for this research was also collected through a conference. The conference was arranged by International Swaps and Derivatives Association (ISDA), and there were about 25 participants representing different European financial institutions. The subject of the conference was “Global Reporting Requirements – Implementation in the EU and internationally”. All speakers from the conference are listed in Appendix 2.

The conference gave an overall good impression. The size of the group, about 25 participants, gave individuals the opportunity and the comfort of speaking more freely, to “discuss” rather than “questioning”. Results from the conference have been summarised in 3 areas: EU reporting, improve transparency, standardised identifiers.

EU Reporting

A penal consisting of representatives from Clifford Chance LLP, ISDA, FCA and BNP Paribas discussed issues with EMIR Reporting. The consensus is that the main challenge with trade reporting is the data quality. The quality of the data reported by entities into trade repositories, and how well trade repositories are able to interpret the data submitted.

According to one of the panel members Tom Springbett, manager at FCA (Financial Conduct Authority), their main priority as a financial authority at this initial stage is to 1) make sure that all counterparties are reporting and 2) make sure that the submission is in accordance with EMIR requirements. Without prioritising this conduct work first, other users of the data will not be able to rely on it.

Several participants at the conference who represent larger financial institutions are concerned about the break-workflow.

“How will breaks be categorised by trade repositories?” – Will the repository prioritise fields when looking for breaks and accordingly separate smaller and larger issues, or will one smaller issue on a transaction create same type of break as a major issue within one of the key-transaction fields?
“How will breaks in the reported repository data be defined?” – A representative from a larger investment firm highlights the issue with currencies in foreign exchange (FX) transactions. That one major issue will be the order of the two currencies. Will this kind of issue be defined as a break, or will repositories be able to “cross-match” these kinds of fields and identify this as a fake break?

“How will breaks be communicated back to the reporting entity?” – Multiple questions about how information from trade repositories will be communicated back to the reporting entity. This is a major concern among the larger banks that don’t have the possibility with manual interaction in the process due to the size of data, they will have to build automated processes to receive and handle the data feed coming back. This is an interesting question which also divides the group on the conference into two groups. Participants representing smaller firms are more concerned about getting the data right in the first place, while larger firms are concerned about how they should handle the breaks instead of fixing the issue.

It is, according to Tom Springbett at FCA good that firms send in data to a trade repository even if it is not 100% correct, and by doing so they are trying to at least fulfil the first of the two priorities that FCA has established. Tome Springbett also explains that “instead of putting all resources on trying to fix issues with old trades, focus on live trades and get them right instead”. This is the opposite compared to questions from market participants, which are more of an operational character and how to solve breaks from an operational aspect (handle data feed, highlight breaks) and not so much regarding the actual breaks and how to resolve them going forward.

**Improving transparency**

Karel Engelen from ISDA talked about regulatory transparency for the global derivatives market. Greater regulatory transparency is a key public policy goal that was codified at the G-20 Summit in Pittsburgh 2009. According to Karel Engelen transparency on the market is unquestionably better now than before the crisis, and majority of all OTC derivative transactions globally are being reported to a repository.

But despite this positive progress, there are still major challenges that remain. Common standards do not yet exist for the format and the content of the data which leads to variability and hinders the transparency:

- Content: Data requirements differ in different jurisdictions, and some of the data requirements are not clear enough. Market participants who act globally are, because of this, facing costly, duplicative and conflicting reporting rules to obey to.
• Format: Standardized reporting have not been adopted quickly and broadly enough by reporting parties. This will cause major problems for the trade repositories that must collect and try to standardize the data for them.

One of the solutions that Karel Engelen adds to her discussion is a central source that defines and documents trade data and workflow requirements for each reporting field that is required by each regulator. A central dictionary like this would be a powerful tool for the industry to improve data quality and understand discrepancies in data reported to different repositories. The central source would be a key element to facilitate data aggregation across jurisdictions.

**Standard identifiers**

A key component of global data aggregation is the use of standard identifiers for party, trade and products. A panel consisting of representatives from Citigroup, Deutsche Bank, Bank of England and ISDA discussed current work on LEIs, UTIs and UPIs, and different challenges to implement them as global standards.

Unique Trade Identifiers (UTIs) and Unique Product Identifiers (UPIs) are important for global data harmonization and aggregation. Legal Entity Identifiers (LEIs) are important for the industry to identify counterparts in financial transactions. The overall impression is that the derivative market needs standard identifiers in order to fulfil regulatory goals such as improved transparency and enhanced oversight.

According to Tara Kruse and Ian Sloyan, the implementation of LEIs is progressing well. The field is not unique for each transaction and therefore not something that party and counterparty have to agree on for each transaction, the exchange only needs to happen once. The main challenge is that it is not yet mandatory for all jurisdictions and trade repositories are still accepting trades reported without LEIs.

“For how long will trade repositories accept transactions without LEIs” – There is not a fixed date for when trades will be declined if they don’t have a LEI, this is of course linked to the fact that LEIs are not yet mandatory in all jurisdictions. However, regulators globally are becoming less tolerant to accept trades without LEIs.

For UTIs the main challenges are a) which party will generate the UTI and b) how will the UTI be shared between the two parties? The UTI generation, communication and matching should occur at earliest possible point in the trade flow. To try to resolve the challenges of UTIs, best practice papers with key principals are published by ISDA. And according to Tara Kruse, “for this to work everyone have to take responsibility and follow best practice”.

Product identifiers, UPIs, are needed to improve consistency and to avoid having different organisations refer to same products with different names. UPIs are also important from a macro perspective, to enable overview of market. The ISDA product taxonomy/UPi is comprehensive (should cover all asset classes), carries a level of flexibility (so it can grow with future market needs) and is cost effective (built on existing market practice and infrastructure). The main challenges are a) implementation, b) how to treat exotic products and c) were to stop (how detailed can you be in each classification)?

“Why do we need the UPI? Is this important from a macro/micro perspective, or is it just to classify each product in a standardised way” – This is what a number of participants are asking, again from representatives from larger financial organisations. The panel here explains that by implementing UPIs, the market will better understand what products that are being traded (they can easier analyse them like this). It should also simplify the process for each financial firm when working with breaks and discrepancies.

6.3 The ESMA Q&A

The first version of the ESMA Questions & Answers on EMIR Implementation (ESMA Q&A) was published on 20 March 2013, and updates have been published on a regular basis after that. We are for this research reviewing the version released on 10 July 2017, which includes all questions and answers up to this time.

The document is, in a very organised and structured way, presenting both questions asked and answers given. The document is divided into the following sections:

- General Questions
- OTC Derivatives
- Central Clearing Party
- Trade Repository
- OTC Reporting Scenarios
- ETD Reporting Questions

Due to the scope of this research, the sections about Central Clearing Party and ETD Reporting will not be covered at all.

General Questions

In this section, main part of questions is related to classification of entities and entity groups. The EMIR framework identifies financial counterparts (FC) and non-financial counterparts (NFC), and the mandatory requirements are different for these two groups. In order to fully comply with the regulatory requirements,
each market participant needs to know what rules are applicable for them and also make sure that duplication or over-reporting/operating is avoided.

An example of questions from General Questions: *Should the funds be considered as the counterparty to a derivative transaction in the context of EMIR, or should it be the fund manager?*

**OTC Derivatives**

In this section, we again find questions regarding product and entity definitions and classifications. But we also find questions that there are of a more “technical character” regarding the actual requirement, for example how to calculate or generate certain values or outputs. Main subjects for the questions are: FCs/NFCs, clearing thresholds, risk mitigation techniques, intragroup transactions, non-European entities, and clearing obligations.

For example, question 12 in this section answers questions regarding risk mitigation techniques. Below are 2 out of 10 sub-questions included in question 12. They are both of an organisational/ classification character, and not regarding details of the actual requirement.

*Are FCs and NFCs allowed to delegate the risk-management procedures and arrangements referred to in EMIR Article 11(1) to an asset manager, who is providing portfolio management service to the counterparty on an agency basis?*

*What is the definition of “Counterparties” used in Regulation (EU) 149/2013 Article 13 (Portfolio reconciliation) and Article 14 (Portfolio compression)? Does it include third country entities?*

A question of a more “technical character” is for example 14b (see below):

*What are the “key trade terms that identify each particular OTC derivative contract” for the purpose of the portfolio reconciliation requirements?*

The answer given by ESMA includes all details requested: As provided for in Article 13 of RTS on OTC derivatives, such terms shall include the valuation attributed to each contract in accordance with Article 11(2) of EMIR. They should also include other relevant details to identify each particular OTC derivative contract, such as the effective date, the scheduled maturity date, any payment or settlement dates, the notional value of the 32 contract and currency of the transaction, the underlying instrument, the position of the counterparties, the business day convention and any relevant fixed or floating rates of the OTC derivative contract.
Trade Repositories

This is the section with the highest number of questions, and were all the questions are of a more “technical character”. The EMIR reporting obligations specifies that all in-scope transaction should be reported to a selected trade repository. Questions regarding each reportable field are presented here. This section also includes questions regarding standardised identifiers such as LEI, UTI and UPI.

Many of the answers in this section have been amended, this is clearly highlighted with colour and date. Questions may also include an answer that clearly indicates that changes will most likely come later (for example question 11e, see below).

What codes should be used / is there any development in the UPI and UTI?

The answer: ESMA did not yet receive any formal request to endorse a UPI or UTI framework and there are no details yet on how these will look like. If there is no endorsed UPI/UTI the counterparty should report other codes, as set out in the EMIR technical standards on reporting.

OTC Reporting Scenarios

This section is a supporting section to the previous section, Trade Repositories, this is where all the operational information regarding trade reporting are gathered. This part of the Q&A provides for a description of the reports that shall be transmitted by counterparties, CCPs or third entities on their behalf to a trade repository in 3 different cases:

- Case 1: Bilateral, non-cleared trade (basic case)
- Case 2: Principal trades in a chain
- Case 3: Counterparty dealing bilaterally with another counterparty through a broker

6.4 Summary of Empirical Results

Empirical data have been collected through interviews, a conference, and by studying the ESMA Q&A.

Interviews

- Trade Reporting: A large number of trades are being reported, but the data reported is incomplete and inconsistent. The majority of this data is also without standardised identifiers.
• Risk Mitigation: Market participants have been performing different types of risk mitigation activities even before EMIR came into force. However, the key-change among majority of clients is that clients are now focusing on fixed frequency, automated processes as well as a broader range of different services and products.

• Clients: Expanding client base, and not only in terms of number of clients but also different type of clients such as larger non-financial companies.

Conference Attendance

• Trade Reporting: Data quality is the main challenge. Market participants are also concerned about the break-workflow and how this will be communicated.
• Improve Transparency: Unquestionably better now than before the crisis. Common standards do not yet fully exist for data format and content which is a concern. Market participants are also expressing a need for a central source for documents, trade data and workflow requirements.
• Standardised Identifiers: UTI, UPI and LEI. Standardisation is important for global data harmonization and aggregation, and the main challenge is that standardisation is not yet mandatory for all jurisdictions.

ESMA Q&A

• Information is easy accessible for everyone
• The same question does not have to be asked several times
• Everyone is given the same answer, and the document can therefore be used as a working tool between entities
• Highlights areas of weakness that both the regulator and market participants needs to work on
7. Analysis and Discussion

In this section, all results will be analysed and discussed by using the theoretical framework, empirical result and the background on the subject. The analysis will follow similar structure as the theoretical section using the DREAM frameworks different tasks.

To be able to better understand the implementation of EMIR, we have for this study created an analysis tool from Robert Baldwin’s book “Understanding Regulation” and his “DREAM framework” (Baldwin et al. 2012). The DREAM framework consists of five core tasks that highlights theories and strategies linked to the different stages in the implementation process: How the overall purpose of the regulations is detected, how regulators can respond to unwanted behaviour by developing rules and policies to facilitate compliance, how enforcement can be pursued, and how already established rules can be assessed and later modified.

7.1 Detecting

Why is there a need for regulation? Is the market failing? When going through the classic “market failures” that Baldwin brings up, which are common driver for introduction of new regulation, we see the connection to EMIR and OTC derivatives on two of the failures.

“Information inadequacy” points out the failure of not being able to evaluate products fully, and not being able to compare all competitors which results in a non-functional competitive market (Baldwin et al. 2012). For derivatives trading, which is based on capitalisation on uncertainty (Durbin, 2011), inadequate information could result in unpredicted levels of uncertainty and risk. EMIR’s key provisions were introduced to improve transparency and reduce the risks associated with the OTC derivatives market (Final report, ESMA, 2012). One can argue that lack of transparency is a form of information inadequacy, lack of transparency could point out the failure of not having a central, easy accessible, place for information gathering. Lack of transparency is not listed as one of Baldwin’s most common market failures, but can be considered closely linked to the failure of “information inadequacy”.

When comparing Basel 3 and EMIR, the aim to improve market transparency is something that the two regulatory frameworks have in common. However, when going through the key provisions for each framework one will notice that EMIR have actual operational requirements that will improve transparency (for example report all transactions to central trade repositories accessible for regulators and different authorities), while the Basel 3 accord is focused on capital and liquidity requirements which will strengthen the market and its participants.
“Rationalization and coordination” points out the failure of standardization in agreements, procedures and products, that negotiation can be done on individual basis. Without standardized the market often fails to coordinate, which leads to procedures and controls linked to the market more difficult to implement (Baldwin et al. 2012). If comparing derivatives traded over an exchange and derivatives traded OTC, we have from the background of this report learnt that the standardisation in contracts traded over an exchange does not allow for as much flexibility. And according to Heckinger (Heckinger et al. 2014) does derivatives traded over-the-counter (OTC) mainly exist because there is the demand for uniquely designed contract and non-standardisation. If the procedure of trading OTC derivatives will not be standardised, the regulators and different market associations have worked towards 1) standardisation in how to identify contracts (using standardised identifiers such as LEI, UTI and UPI) and 2) coordination in different communication and control procedures among market participants (trade reporting to repositories, timely confirmation and follow-up between trading parties, standardised mandatory risk mitigation techniques for all open trades). These efforts could indicate that the regulator is, even if unstandardized and over-the-counter traded products is not removed completely, that the markets is moving towards more standardisation and less individualism.

The ESMA Q&A indicates strong willingness to coordinate the market, to address issues and set up procedures, to direct market participants in a direction where standardised operational procedures are used. For example, different cases for trade reporting – to avoid having numerous versions of how the trade reporting is done, ESMA is trying to create “standardised” ways. There is also a request or demand for better cooperation between different regulators, and Tessa White (White, 2015) argues that if we don’t have a cross-border corporation between different regulators, market participants will eventually take advantage of the gap in some way. This is very important since many entities is not only affected by EMIR, but by other regulatory frameworks globally. To coordinate within Europe is a good first step to be able to move forward, but a second step should be to look at how regulators can coordinate in-between themselves to resolve the issue globally.

The ESMA Q&A is also forcing the market to look at products and contracts in a more standardised way. For trade reporting (which is mandatory) all fields are explained and semi-standardised (data format, acceptable values, mandatory fields etc.) in the ESMA Q&A. So even if volumes and specific product types is not banned by the regulation, the products still need to be reported and include all mandatory fields. And the number of questions around this subject indicates that this has probably not been done by majority of market participants earlier.
7.2 Responding

The “table of eleven” can be used to understand and improve the best suitable design of rules and to locate potential areas of weakness in a regulatory framework (Baldwin et al. 2012).

The first part of the table, the spontaneous compliance dimension, can be used to help us identify different factors that can impact compliant behavior among market participants on the European OTC derivative market (Baldwin et al. 2012). From the two interviews that were held for the purpose of this study we learnt that there is a change in attitude towards regulations among parties trading OTC derivatives. The two interviewees talked about the increased interest for risk mitigation among potential, new and already existing clients, and that they saw many new clients that signed up to use risk mitigation services and wanting to comply with regulatory requirements. This activity among market participants indicate high acceptance. You could also argue that the target group (market participants and parties trading OTC derivatives) do respect the financial authority and its regulation. During the ISDA conference we also learnt that there are many questions from the market which would indicate that even if the acceptance rate is high, the familiarity and the clarity of the rules is still a work in progress. Some parts of the regulation are for the market to learn more about, and some is for the regulator to further develop throughout the ongoing implementation process (for example format for standardized transaction values such as UTI and UPI and trade-matching in repositories to “sort out” all reported trades). ESMA have regularly published a “Question & Answers” document which clearly indicates that both the regulator and market participants respect and commit to further development of EMIR (Questions & Answers, ESMA, 2014). This also indicates what parts of the regulation that needs to be further explained / developed to increase familiarity and clarity among everyone.

The spontaneous compliance dimensions:

1. Knowledge of rules (a. Familiarity with rules, b. Clarity of rules)
3. Extent of acceptance (a. Acceptance of the policy objective, b. Acceptance of the effects of a policy)
4. The target group’s respect for authority (a. Official authority, b. Competing authority)
5. Non-official control (a. Social control, b. Horizontal supervision),

One of the main topics discussed during the conference was standard identifiers and difficulties that market participants, repositories and the regulator are having with this. This brings us to the second part of the “table of eleven”, the enforcement dimensions. When the market is still struggling to adapt and comply with rules, there is also a risk of failure and sanctions. Enforcement levels for the introduction of a regulatory framework is complicated to study, no direct reference data to compare with. But for further studies within
the subject of EMIR and the European OTC derivative market, a focus on the enforcement level would be interesting to study.

The enforcement dimensions:

1. Risk of being reported
2. Risk of inspection
3. Risk of detection (a. Detection in a records inspection, b. Detection in a physical inspection)
4. Selectivity
5. Risk of sanction
6. Severity of sanction

You could argue that with a regulatory framework that is not recently introduced, the enforcement dimension could help you understand strength and weakness within the compliance dimension better. For example, with a high number of sanctions being imposed (rules being broken) the knowledge of the rules is maybe not high enough? Or the respect for the authority is low? Or the costs/benefits associated with the rules are too high/low?

Eric Pan describes the responding task as “the process by which the regulator ensures that the regulated person both comprehends the content of the rule and also takes the necessary steps to comply with the rule’s requirements” (Pan, 2011). He points out the importance of creating rules that are effective but also water-proof. The number of questions that comes from market participants indicates that some of the requirements are difficult to adhere to, and therefore could one argue that entities would, if they could, avoid the requirement. The way Pan describes the situation indicates an equality between market participants and authority, that responsibility is not only on entities to follow the rules but on authority to also create well-designed rules that must to be followed. According to Allan are financial institutions not capable of changing its behaviour themselves mainly because they lack financial motivation and because they lack information needed about its competitors and the entire market. A regulator can help the market to change different behaviours by introducing regulations which forces market participants to different doings and behaviours (Allan, 2013).

When comparing EMIR with Basel 3, a major difference is that the Basel accords are voluntarily, each country finds their own pace to adopt, while EMIR is mandatory. If we would use the same approach for Basel 3, use the sanctions dimension to better understand the compliance dimension, the outcome would maybe not follow the same structure and could therefore not be interpreted in the same way. Low levels of
sanctions could maybe indicate low acceptance and low implementation ratio of the framework instead of low level of knowledge and respect for authority. This is not something that we are going to discuss further in this paper, but it is still important to point out the difference since the two frameworks are both targeting the OTC derivative market with the intention to improve transparency and financial stability. The Dodd Frank act is much more similar to EMIR, being a mandatory framework with very similar key-provisions. However, Dodd Frank is only targeting a smaller segment of market participants, entities categorised as Swap Dealers or Major Swap Participants. Any outcomes would only indicate behaviour among the selected group and not the entire OTC market for that jurisdiction.

In addition to the “table of eleven” we are in this section also going to discuss control style in relation to a worldview. Baldwin talks about a “worldview”, and that every regulation has a specific “core idea” about the nature of that world or environment it is acting on (Baldwin et al. 2012). Baldwin argues that the specific “core idea” will influence the design of the regulation and also the regulatory control style carried out. So, when discussing the development of policies, rules, and tools, which we are doing at this stage, it is also interesting to understand the control style. From the four different worldviews and control styles discussed in the theoretical chapter (Fatalism, Individualism, Hierarchy and Egalitarianism), we think that “egalitarianism” is the control style that is most applicable on EMIR.

Egalitarianism is control through group process, network style and participation. From the conference and the interviews that has been part of this research, group efforts (again the example with work and development around standard identifiers and how the market can develop and agree on standard format for this) and participation (market participants signing up for mandatory services, trying to adhere to rules) is the core for these discussions. The authority is also taking part of the discussion, for example the FCA (Financial Conduct Authority in the United Kingdom) who took part at the conference and was being transparent in their approach.

7.3 Enforcing

The theoretical chapter for this research included a discussion about enforcement, and both the enforcement pyramid and the pyramid of enforcement strategies have been mentioned. The main difference between these two pyramids is the audience. The enforcement pyramid is actions and sanctions towards a single regulated firm, while the pyramid of regulatory strategies is different strategies pitched at the entire industry (Baldwin et al. 2012).
Apart from in the theoretical chapter, sanctions have not been a central part of the discussion throughout this research. It was not a central point of discussion during the interviews, at the conference or in the ESAM Q&A, and it is not something that is discussed in detail in the different reports used to clarify and understand the regulatory framework (mainly the Final Report). Could this be due to the fact that EMIR is still considered as a relatively new regulation? That some of the provision is still in a “transitional process”? Even if the regulatory framework were introduced in 2012, there were still some uncertainty about few rules and few definitions that were further discussed by market participants and the regulator. For example, for the trade reporting, according Tom Springbett who is manager at FCA and was part of the conference panel, the main priority for the FCA is not to find issues but instead as a first priority to make sure that everyone is reporting. Secondly, when trades are in the repository, make sure that the submission is in accordance with EMIR requirements. Looking at the enforcement pyramid, licence revocation or suspension which are the top items in the pyramid, doesn’t seem relevant at this stage. But warning letters and other persuasions that are lower down in the pyramid are invoked to encourage and persuade market participants to fulfil their obligations.

We also learnt that the first stage in the lifecycle of an OTC transaction would be for both parties to enter into written documentation to establish an OTC derivative trading relationship (ISDA, 2006). The overall parameters of trading activities are established in a bilateral agreement including activities for the next stages in the lifecycle (for example portfolio reconciliation and portfolio compression). An agreement like this (especially if it is a standardised ISDA master agreement) should include clear objectives for how to fulfil regulatory requirements throughout the lifecycle. One could argue that without clear objectives you will, as an organisation, have difficulties establishing trading relationships and initiate transactional agreements. Because the regulatory responsibility is bilateral, both party and counterpart must fulfil the mandate such as; bilateral portfolio reconciliation, bilaterally agree on generation and communication around standard identifiers (UTI, UPI), bilaterally agree on trade reporting etc. If your counterpart is being sanctioned for non-compliant behaviour, you are most likely not fulfilling your obligations either and therefore a target for the regulator.

The ESMA Q&A can be used to increase knowledge among market participants. The format and the content of the report lower the risk for entities to be sanctioned due to lack of knowledge. It also creates an opportunity for counterparties, when disagreeing, to refer to the document and the input of the regulator. As mentioned above, for example at the stage where counterparties must bilaterally agree on the process for the generation and communication around standard identifiers (UTI, UPI), the ESMA Q&A is an excellent tool to use. When comparing Dodd Frank and EMIR, the major difference is the number of organisations
affected. When only include low number of entities, Dodd Frank only involves Swap Dealers and Major Swap Participants, the forum for questions and answers does not have to be as “public”. Also, with a lower number of involved parties, the main issue should not be lack of knowledge and organisation, but instead resources, prioritisation and commitment among in-scope entities.

The second pyramid discussed in the theoretical chapter is a pyramid with enforcement strategies. The idea is to illustrate different layers of regulatory enforcement, starting at the bottom with “soft regulation” and working upwards in the pyramid for more strict regulation. As mentioned before, this pyramid illustrates how the regulation is pitched at the entire industry, not individual organisations. But EMIR was introduced to avoid a new financial crisis and to stabilise the OTC derivative market, and a “responsive regulation” approach might not match the purpose of the framework. One can argue that a more “risk-based” regulatory approach is more suitable here, that the focus is on identify risks and that the regulatory framework is focused on risk assessment instead of “rules”. This argument is strengthened with fact that the key-provisions of EMIR are focusing on risk assessment (risk mitigation, trade reporting and clearing) instead of bans and rules on “what not to do”.

One problem or potential risk that Baldwin mention about the risk-based approach is that focus will be on the organisations that carry the largest risk. But taken the information received from interviews and the conference, EMIR is affecting the entire market and all participants trading OTC derivatives. As one of the interviewees said, they don’t just see many new clients that want to engage in risk mitigation activities, but also many new types of clients such as larger corporates (non-financial counterparts). This could indicate a culture change in the industry moving towards strong risk assessment among all market participants.

7.4 Assessing

It is important to evaluate the fundamentals in the form of quality and the support of a regulatory framework. And as discussed in the theoretical chapter, five different criteria can be used for this exercise: Legislative Mandate, Accountability, Due Process, Expertise and Efficiency (Baldwin et al. 2012). To evaluate EMIR three different criteria have been chosen: Due Process, Expertise and Efficiency.

ESMA is an independent EU authority, and have full accountability towards the European Parliament. Even though the criteria for accountability is valid and important to understand, the discussion falls outside the scope of this research and will not be discussed further.
**Due Process**

One way of evaluating a regulatory framework is to look at implemented procedures. Are these procedures fair, accessible and open to market participants? Are market participants, regardless of size or importance, treated with equality, fairness and consistency? EMIR clearly state that where appropriate, rules that are applicable to financial counterparties should also apply to non-financial counterparties. One could argue that EMIR as a regulatory framework is trying to be fair and try to treat all counterparts equal. It is also important to remember the core idea with EMIR, to improve transparency and reduce uncertainty, and this core idea has nothing to do with who is trading what but instead how the process is controlled and risks are limited.

When evaluating the implementation process based on the treatment of market participants (that they are, regardless of size or importance treated with equality, fairness and consistency), we could compare the EMIR framework to the Dodd Frank Act. When evaluate the regulation from this point of view, EMIR seems more fare than Dodd Frank, taken the fact that every single entity in Europe trading one or more OTC derivatives must fulfil the different mandatory criteria. Is this maybe a less effective approach? Could be, but Baldwin also highlighted the fact that when using the five criteria for evaluation, there is also a bit of give and take: if you have higher effectiveness there might be some lack in due process.

As part of the Due Process criteria, Baldwin also brings up about levels of participation and decision making. If affected parties are involved, that there is a democratic influence over regulation, this would have a legitimating affect (Baldwin et al. 2012). A topic discussed at the ISDA conference was standardised identifiers and the implementation of these. And according to Tara Kruse from ISDA “for this to work everyone have to take responsibility and follow best practice”. This encourage participation and involvement, and is a strong argument for good due process. The ESMA Q&A could also be seen as proof of high level of participation. Questions are asked by the market and answered by ESMA, the process is transparent and accessible. Based on feedback from the market, changes are made and improvements are shared. The Q&A report sends a strong message of involvement.

A major risk with the criteria of due process is that more participation will lead to less effective process for decision-making. On the interviews held, one of the things mentioned around standard identifiers such as LEI, UTI and UPI was the low quality in the data submitted to trade repositories, standardised identifiers are far from fully implemented. The process of cleaning up the data is still very much a work in progress. So, there is public involvement (as mentioned above), but having everyone involved in the decision around
the data structure might have slowed down the process and made the work within the trade repositories much more difficult.

**Expertise**

A regulator may claim support on the basis of its expertise instead of offering a give reasons or justification of the regulation (Baldwin et al. 2012). When taking EMIR as an example, the justification of the regulation is strong, no one wants a new financial crisis. The level of expertise can also be considered high, taken the fact that ISDA (International Swaps and Derivatives Association), DTCC (Depository Trust & Clearing Corporation) and other central associations are highly involved in the regulatory progress. And in addition to this market participants are part of discussions around solutions, improvements and developments of the regulatory framework.

Under the topic expertise, Eric Pan (Pan, 2011) states that one of the major challenges a regulator potentially faces is how to understand the market and its products. Regulators are facing a major challenge when they at all time need to understand how to regulate complex (already existing since long time or newly developed) instruments. One could argue that by introducing standardised identifiers such as UPIs (and to some extent UTIs), the regulators are pushing some of this responsibility back to the trading entities. If all trades are categorised the regulator can focus on understanding different categories rather than doing individual judgements on individual products. This would also potentially encourage the market to create products that “fits” within already defined product categories that the regulator should have understanding for.

**Efficiency**

One way of evaluating the regulatory framework and the work performed by the regulator is to look at efficiency. A regulator may claim public support due to acting efficiently. Support by acting efficiently can by claimed by for example efficient implementation which will lead results that are efficient and will therefore imply a degree of independence (Baldwin et al. 2012). One problem that Baldwin mention with an efficient implementation is less time to spend on testing.

Efficiency is something that should always be put in relation to an action or process (Baldwin et al. 2012). The decision of introducing a new regulatory framework (not only in Europe, but globally) was a major decision. EMIR entered into force on 16 August 2012, but most of the obligations under EMIR needed to be specified further via regulatory technical standards (RTS) and they took effect after the initial start date. Could this be seen as low efficiency? Or as high efficiency, taken that the regulation entered into force even if not everything was finalised? One could argue that the efficiency has been in line with the capacity of what market participants can handle, that the implementation process has pushed market participants to
prioritise regulations and regulatory work within organisations (as discussed during the interviews, regulatory obligations including reporting requirements and risk mitigation activities are highly prioritised), but still kept the implementation process at a speed participants could handle and obey to.

7.5 Modifying

The last task in the implementation process is ongoing work to understand the market and to modify the regulatory framework and its approach if so needed. In the theoretical chapter “order of change” is discussed. It is a logic of three steps, where first-order changes are smaller adjustments and third-order changes are larger changes to goals and fundamentals (Baldwin et al. 2012).

When implementing something new, one could argue that small changes or modifications are necessary, that they complete the process from idea to reality. As mention earlier in this section, ESMA have regularly published a “Question & Answers” document which clarifies and explains questions and new developments relating to EMIR (Questions &Answers, ESMA, 2014). Many of the matters brought up in the report could be seen as first-order changes, either initiated by the regulator or inspired by market participants. For example, the regulatory technical standards (RTS) initially stated that one of the mandatory fields reported to trade repository for each transaction is “product”. There has after the RTS entered into force been discussions about the format of the unique product identifier (UPI), for example at the conference referred to earlier. Is this a first-order-change or just part of the implementation process?

Second-order changes, and even third-order changes, would come later in the process and not this soon after the implementation. To make more than an adjustment or smaller changes you would need either proof of inefficiency or misjudgment when implementing. Taken the scoop of EMIR, regulating the entire OTC derivative market in Europe, we would most likely not have seen a second or third order change this soon after the introduction. However, this would be an interesting discussion for future studies.

Basel is an interesting example when exploring different level of changes. As mentioned above, when implementing something new one could argue that small changes or modifications are necessary, so first and second-order changes are expected. But Basel 3 is the third accord released, Basel 1 and 2 were released earlier. The difference between them could be third-order changes? They share the same overall aim, but have different focus of regulation: Basel 1 specified a minimum ratio of capital to risk-weighted assets for the banks, Basel 2 introduced supervisory responsibilities and capital requirement, and Basel 3 promotes the need for capital and liquidity buffers and requirements. But these changes could also be classified as, instead
of changes, separate pillars within the same framework. EMIR is still relatively new, comparing year 1975 when Basel started to take form to 2012 when EMIR first came into force. We might see similar development for EMIR as for the Basel Accords.

7.6 Summary of DREAM

Detection, to find the main reason and overall rational for why a regulatory framework is implemented. Two “market failures” have been identified as relevant for this research and discussed further.

- “Information inadequacy”: One can argue that lack of transparency is a form of information inadequacy. A failure for the European OTC derivative market is that there were no central, easy accessible, place for transactional information gathering.
- “Rationalization and coordination”: Without standardization in agreements, procedures and products the market often fails to coordinate, which leads to procedures and controls linked to the market more difficult to implement. Taken the fact that derivatives traded over-the-counter (OTC) mainly exist because there is the demand for uniquely designed contract and non-standardisation makes this not only a failure but also a weakness for the OTC derivative market.

Responding, the process of developing rules and policies for the market. This can be measured in two different dimensions: Compliance (including knowledge of rules, costs/benefits, extent of acceptance, and target group’s respect for authority) and enforcement.

- Compliance: We learnt that there is a change in attitude towards regulations among market participants. Increased risk mitigation activity among market participants indicate high acceptance. The ESMA Q&A shows that some parts of the regulation need to be further developed and explained to increase familiarity and clarity among everyone. The overall conclusion is that that the target group (market participants and parties trading OTC derivatives) do respect the financial authority and its regulation.
- Enforcement: In the early stage of the implementation process enforcement is more difficult to study, the market is still adjusting to the change. The level of sanctions could maybe show the level of knowledge and respect for authority, but it could also indicate low acceptance and low implementation ratio. The conclusion is that at a later stage, when EMIR is fully implemented, to study the level of enforcements could help you understand strength and weakness within the compliance dimension better.

Enforcement, discussions around two different pyramids: The enforcement pyramid which demonstrates actions and sanctions towards a single regulated firm, and the pyramid of regulatory strategies which
highlights different strategies pitched at the entire industry. Enforcement is not a central point for this research, and this could be because the EMIR framework is still in its implementations pace. The ESMA Q&A can be used to increase knowledge among market participants and with that avoid future enforcements.

When assessing and evaluating EMIR, three different criteria have been chosen: Due Process, Expertise and Efficiency.

- **Due Process:** One could argue that EMIR as a regulatory framework is trying to be fair and try to treat all counterparts equal. The discussions in at the conference and The ESMA Q&A indicates high level of participation, questions are asked by the market and answered by ESMA, the process is transparent and accessible.

- **Expertise:** The level of expertise can also be considered high, taken the fact that different market associations are highly involved in the regulatory progress. And in addition to this market participants are part of discussions around solutions, improvements and developments of the regulatory framework.

- **Efficiency:** The decision of introducing a new regulatory framework was a major decision. One could argue that the efficiency has been in line with the capacity of what market participants can handle, that the implementation process has pushed market participants to prioritise regulations and regulatory work within organisations

**Modifying:** Many of the matters brought up in the ESMA Q&A could be seen as first-order changes, either initiated by the regulator or inspired by market participants. Second and third-order changes would most likely come later in the process, in order to make larger changes you would need either proof of inefficiency or misjudgment when implementing.
8. Conclusion

The purpose of this research was to study the introduction of EMIR, and to better understand the implementation process and its successfulness. Lack in transparency, standardisation and coordination were “market failures” or behaviours that European regulators wanted to address and improve, they wanted to lower risks associated with trading OTC derivatives and with that avoid a new financial crisis with OTC derivatives in the centre. Hillary Allan argues that financial institutions, in a perfect world, would carry on their activities in ways that minimize risk to the financial system and the economy. However, in a realistic world, financial institutions cannot and will not change its behaviour themselves mainly because they lack financial motivation and lack of information needed about its competitors and the entire market. A regulatory framework like EMIR can help the market to change its behaviour by introducing regulations which forces market participants to different doings and behaviours (Allan, 2013).

Both Robert Baldwin and Eric Pan claims that to better put together an appropriate regulatory strategy and to better understand regulation, the process should follow a number of tasks that will determine regulatory content, facilitate compliance, and pursue enforcement and assessment work (Baldwin et al. 2012) (Pan, 2011). Robert Baldwin refers to this process as DREAM: Detect, Respond, Enforce, Assess and Modify. To use DREAM when studying the implementation of EMIR have encourage a very structured and logical way of understanding each step of the process, to understand not only what different steps there is to take in an implementation process but also how to reason and argue around each step.

The different regulatory requirements set out in the EMIR framework involves all market participants regardless of for example entity categorisation or portfolio size. As part of the DREAM framework, one way of evaluating a regulatory framework is to see if the regulator is fair, accessible and open to market participants? One could argue that EMIR, as a regulatory framework, is trying to be fair and try to treat all counterparts equal, that all entities should share the responsibility of creating market stabilisation and coordination. It is also important to remember the core idea with EMIR, to improve transparency and reduce uncertainty, and that this core idea has nothing to do with who is trading but instead how the process is controlled and risks are limited. But it is also important to point out the fact EMIR is a work in progress and that the market is still adjusting to the change, for most of the market participants major operational changes are required in order to fully comply with mandatory obligations.

8.1 Answers to Research Questions

*How can we study the implementation process of EMIR to understand the level of regulatory successfulness?*
Results from this research indicates that when studying an implementation process, a good strategy is to divide the process into a number of tasks, where each task helps us understand a specific part of the process. Robert Baldwin refers to this process as “DREAM”, a framework that will help us Detect, Respond, Enforce, Assess and Modify new regulations. Applying DREAM will help the researcher to, in a structured and logical way, understand a) what different tasks there are to manage throughout an implementation process and b) how to understand the purpose and different theories for each individual task.

For this study has the DREAM framework help the researcher to 1) understand different market failures that have triggered the regulatory movement, 2) understand clarity in rules and requirements (including knowledge of rules, extent of acceptance, and target group’s respect for authority), 3) understand level of enforcements, 4) understand how to evaluate a framework by measure efficiency, expertise and due process, and 5) understand level of changes and its different impact to the framework.

And even if the implementation of EMIR is not fully finalised, by using a strategy which involves different tasks, each stage of the implementation process can be analysed to measure successfulness of the task.

*How has the implementation process of EMIR affected the ability of the rules to achieve its purpose?*

The ESMA Q&A and other accessible forums initiated by the regulator have helped the market to adopt to the new regulations, and have also helped the industry to work more united with a common approach and understanding of different obligations and requirements. One could argue that the high level of involvement among market participants is a strong indicator for a successful implementation approach and high acceptance of the regulatory framework.

The process chosen by the regulator was for the implementation of EMIR to happened in stages from 2012 and ongoing. EMIR was a major change for the entire industry, and one could argue that the market is acting in its maximum capacity, and to release regulatory requirements in steps was a necessary approach. Different operational and organisational issues have been highlighted in the results of this report, for example the generation and coordination of different standardised identifiers such as UTI and UPIs, and to give the market time to adjust could also indicates an implementation approach where the regulator is trying to support and understand market participants and their needs.

*How are market participants reacting to EMIR?*

Results in this research indicates high involvement among market participants. Results also indicates an attitude change among participants where financial regulations and regulatory requirements have become
subjects with top priority. Market participants are struggling to fulfil mandatory requirements, but most of market participants are still trying to adopt. The ESMA Q&A indicates that many questions are raised by market participants, both high level questions regarding for example entity classifications and product identification and more detailed questions regarding for example formats for specific data fields or creation of standardised identifiers. In the detecting stage in the DREAM framework Baldwin (Baldwin et al. 2012) brings up different “market failures” as a reason for implementing regulations, and we have for this research highlighted “information inadequacy” as a market failure for the OTC derivative market. With documents such as the ESMA Q&A, the regulator has in a successful way started the process of creating more central, easy accessible, places for information gathering.

8.2 Implications and Further Research

This study has mainly focused on the introduction of EMIR and how to better understand different stages throughout the implementation process of a new regulatory framework. This focus is mainly because implementing EMIR is still an ongoing process, and by dividing the process into different tasks each task can be understood separately without having an overall answer and outcome for EMIR. So, since this research was intended to study the implementation of EMIR, the next logical step for further research would be to analyse and understand different implications and outcomes of EMIR.

An implication of introducing new regulations could be that the group of market participants that trade OTC derivatives changes, that only large, strong entities with already existing infrastructure survives the regulatory change. From our findings, we have learnt that major operational requirements are mandatory regardless of the size of the organisation or individual transaction, and that many market participants are struggling to fulfil different obligations.

We have also learnt that an important part of why OTC derivatives are traded is the desire for customised and uniquely designed products. If that is no longer allowed in the same extent as before, a consequence could be that the demand to trade over-the-counter might decline and entities might find other ways of fulfilling the same purpose as an OTC contract would have done previously.

8.2.3 Further Research

One subject that has been discussed throughout the research is different types of mandatory standardised identifiers such as Legal Entity Identifiers, Unique Product Identifiers and Unique Transaction Identifiers. For future research, the progress around standardised identifiers and common data format would be interesting to study, to understand how the implementation went, and how the usage of the identifiers has
developed over time. When collecting both primary and secondary data for this research, an indication of difficulties and extra work around data-formats were expressed among both market participants.

Enforcement is not a central point for this research, and this could be because EMIR is still in its early implementation stage. As part of the responding stage in DREAM, we learnt that level of sanctions could indicate level of knowledge and respect for authority, but it could also indicate low acceptance and low implementation ratio. At this stage level of enforcements is more difficult to study, the market is still adjusting to the change. But when EMIR is fully implemented, further research could cover the level of enforcements and regulatory actions to better understand strength and weakness within the framework itself.
List of references


BIS (2016) *History of the Basel Committee* [http://www.bis.org/bcbs/history.htm] [Accessed 01 October 2017]


Appendix 1 – Interview Questions

1. Are you currently working with financial services linked to financial regulatory requirements?

2. Have your services changed anything since EMIR was introduced?

3. How have your client base changed since EMIR was introduced?

4. Have clients' attitude towards your services changed since EMIR was introduced?

5. Any other changes you seen on the market before or after EMIR (or other regulatory requirements) were introduced in Europe or elsewhere?
Appendix 2 – Conference Speakers

CLARE EASTBURN
Senior Vice President, Global Head Regulatory Initiatives Middle Office, Citigroup

KAREL ENGELEN
Co-Head, Data Reporting and FpML, International Swaps and Derivatives Association, Inc. (ISDA)

PETER FOkses
Global Head GTO Market Initiatives, Group Technology and Operations (GTO), Deutsche Bank AG

ANDREW GREEN
Head of DTCC Deriv/SERV Sales and Strategy, Depository Trust & Clearing Corporation (DTCC)

TARA KRUSE
Co-Head of Data, Reporting and FpML, International Swaps and Derivatives Association, Inc. (ISDA)

PAUL LENIHAN
Associate, Clifford Chance LLP

MONICA SAH
Partner, Clifford Chance LLP

IAN SLOYAN
Assistant Director, Data and Reporting, International Swaps and Derivatives Association, Inc. (ISDA)

TOM SPRINGBETT
Manager, Derivatives Reform, Financial Conduct Authority (FCA)

JOHN TANNER
TR Data Manager, Bank of England

KARIN VERLINDEN
Capital Markets Initiatives, BNP Paribas