

CREDIT RATING AGENCIES:
Assessment of CRA regulatory effectiveness in the
EU and the U.S.

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“Explosive growth of shadow banking was about the invisible hand having a party, a non-regulated drinking party, with rating agencies handing out fake IDs.”

~ Paul McCulley of Pimco, bond investor ~



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Abbreviations

CDOs – Collateralized Debt Obligations

CESR – Committee of European Securities Regulators

CRAs – Credit Rating Agencies

CRD – Capital Requirements Directive

EC - European Commission

ECAI – External Credit Assessment Institutions

ECOFIN – Economic and Financial Affairs Council configuration

EP – European Parliament

ESMA – The European Securities and Markets Authority

EU – European Union

FSB – Financial Stability Board

IOSCO – International Organization of Securities Commissions

MBS – Mortgage-Backed Securities

NRSRO – Nationally Recognized Statistical Rating Organization

RMBS – Residential Mortgage-Backed Securities

SEC – Securities and Exchange Commission

S&P - Standard & Poor's

Abstract

The on-going debate over how strictly the financial markets and their participants should be regulated after the outbreak of the 2008 financial crisis has brought special attention to the case of the Credit Rating Agencies. Credit Rating Agencies are fundamental for the functioning of the global financial markets. Confiding on experts with the necessary tools and experience to conduct assessments on the creditworthiness and risk of financial instruments is more effective than let investors make one by one their own credit risk assessment. For that reason, financial institutions in the EU and the U.S had for a long time relied on these agencies to evaluate the credit risk of the financial markets, granting them both regulatory powers and a high degree of leverage, while the agencies themselves remained unregulated. However, inflated ratings on debt instruments such as Mortgage-Backed Securities in the early 2000s that turned out to be worthless are among the causes of the 2008 economic crisis. The massive downgrading of Mortgage-Backed Securities following the burst of the housing market bubble in 2007 triggered the panic, causing the dry up of financial markets and the bankruptcy of many companies. Therefore, since the economic turmoil of 2008, regulators on both sides of the Atlantic agreed that stricter regulation and oversight of the Credit Rating Agencies was needed in order to avoid a similar economic disaster in the future. For that reason, a series of new regulations have been passed in both the EU and the U.S. They are intended to improve the quality and integrity of the Credit Rating Agencies by addressing the problems posed by them and that contributed to the making of the crisis. However, understanding how to fix the problems posed by the Credit Rating Agencies while preserving the useful role they play as gatekeepers of the financial markets is proving to be an arduous and complex task. In this study I will discuss the regulations towards Credit Rating Agencies introduced after the crisis in the EU and the U.S, and analyze to what extent they are effectively addressing the malfunctions of the Credit Rating industry.

CHAPTER 1: Introduction

1.1. Background information

Nowadays Credit Rating Agencies (CRAs) are considered a vital actor in the financial markets, and they have a role, together with other financial actors, in safeguarding the international financial stability. But in the past, this was not quite like that, the role played by the CRAs in the financial markets has been gradually acquiring relevance since their creation. The rating business began in the United States (U.S) in the late 18th century, when the American business was in expansion and the transactions increased in number and complexity. Therefore, the usual channels used to gather information became insufficient and the need for a more specialised credit-reporting institution appeared. The purpose of these newly created agencies was to gather information on the financial situation and creditworthiness of companies around the U.S to then sell this information to subscribers (Garcia and Ruiz, 2012). The main role of these agencies is to “*assess the debt instruments (bonds and other securities) issued by firms or governments and assign “credit ratings” to these instruments based on the likelihood that the debt will be repaid*” (Rom, 2009; p640). They do so by assigning a rate normally characterized by a capital letter that will indicate the creditworthiness of the product or the debt, and the system used little differs from one agency to another.

Nevertheless, in mid 30s the situation for the CRAs changed, when the U.S government, more concretely the U.S Securities and Exchange Commission (SEC), included the references of the CRAs as regulation and thus, granted the CRAs the power to rate and determine the creditworthiness of securities and bonds. Following the grades issued by the CRAs the government restricted the extent to which a company could buy and sell assets that fell below those grades, and established rules that linked capital requirements to the ratings on securities. These new rules granted the CRAs a more relevant role in financial markets. Other regulatory element was the creation of the "Nationally Recognized Statistical Rating Organizations" (NRSRO), the SEC awarded this recognition to just three agencies: Moody's, Standard and Poor's, and Fitch Ratings. Over the next 30 years the SEC granted this status to only 8 additional agencies. However, the 3 previously mentioned agencies still account for more than 95% of the total rating market, and they are considered to be a natural oligopoly (Garcia and Ruiz, 2012).

As mentioned above, at the beginning these agencies were using a “subscriber-pays” model; the investors needing information paid for it. However, due to the increasing regulations that highlighted their relevance, the CRAs changed their business model in the early 1970s, switching from “subscriber-pays” to “issuer-pays” model. But this new business strategy would soon show its flaws, not for the CRAs itself which considerably increased their revenues, but for the stability of the international financial system. CRAs have grown very quickly since the 1970s. The fast development of globalization increased the number of investors and bond issuers worldwide. Both companies and sovereign countries

started issuing bonds in international markets, and financial institutions all around the world included CRAs ratings in their regulations (Garcia and Ruiz, 2012).

However, CRAs and their role on the global financial system is filled with stories of failure, as they have been giving away overly optimistic rates to products that were, in fact, ‘junk’. Their failures are not limited to the American market, where they are based, but also extend to Europe and other parts of the world. Examples of these fiascos are the Asian Crisis of 1997, diverse corporate bankruptcies in the 2000s (Enron, WorldCom, etc.) and the last and maybe most acute one, the 2007-2008 US sub-prime mess which led to the global financial and European sovereign debt crises. At the beginning of the 2000s the market for structured securities based on subprime residential mortgages rapidly grew, and the issuers of these securities needed to obtain their ratings from the three main Credit Rating Agencies (CRAs), namely: Moody’s, Standard & Poor’s (S&P), and Fitch, if they wanted to secure a position in the market. Therefore, positive ratings from the above-mentioned agencies were vital for the sale of the securitized products based on subprime residential mortgages and several other debt obligations. But in 2006 house prices started declining, and as a consequence the default on the mortgages strongly increased, what brought to light that the initial ratings on these securities were, indeed, extremely optimistic. The main reasons behind these failures on which I will further elaborate in this thesis have been identified as the following: A mix of conflicts of interest arising from the business model used by the CRAs (issuer-pays model) and the several services offered, a problem of competition with the other agencies (natural oligopoly with only three CRAs accounting for more than 95% of the market), a clear absence of accountability and liability subject to their activities, and overreliance on credit ratings by the different market participants including public authorities.

Due to their central role in the international financial markets, and the regulatory empowerment granted by some governments, especially the U.S., when the CRAs make mistakes, these are widely felt in the whole of the international financial system. The mistakes committed by the CRAs have resulted in terrible economic consequences that are an obvious detriment for the global financial stability, and in light of this many experts and government officials, especially in the European Union (EU), have drawn concerns about the regulatory power granted to the CRAs. A very good example of these concerns was stated by Thomas Straubhaar, the director of the Hamburg Institute of International Economics, who said: *"We can't have private companies, whose primary goal is maximizing profit, behaving like sovereign judges passing down opinions that are binding for disinterested third parties"*. Therefore, following the recent global financial crisis, a strong consensus materialized among regulators on both sides of the Atlantic that regulatory intervention was required. In the EU, a regulatory framework for CRAs was introduced for the first time, and the U.S substantially extended the already existing regulation on CRAs. These regulations are intended to tackle the problems surrounding the activities of the CRAs previously mentioned and discussed in this study.

1.2. Aim of the thesis

The aim of this thesis is to contribute to the studies aiming at understanding the causes, and finding solutions to the last financial crisis. Focusing on the role played by the CRAs in the latter, I will examine the regulations introduced in both the United States and the European Union which intend to tackle to the problems raised by the CRAs and that contributed to the break out of the crisis, namely; lack of competition in the credit rating industry, several conflicts of interests, absence of accountability, and overreliance on credit ratings. Taking into consideration all the above-mentioned, I establish the following research question:

To what extent are the EU and the U.S effectively regulating CRAs?

In order to adequately answer this research question, a set of sub-questions are established:

1. *How were the CRAs regulated in the U.S. and the EU prior to the 2008 crisis?*
2. *What are the main problems posed by the CRAs?*
3. *Are the post-crisis regulations addressing the problems posed by the CRAs?*

1.3. Research approach

Sub-questions I and II will be answered in the literature review in the following Chapter II. In order to answer the first sub-question, extensive literature and empirical findings on the different financial regulations towards the CRAs prior to the crisis in the EU and U.S. will be presented. Regarding the second sub-question, different strands of literature discussing the reasons behind the CRAs failures and problems raised will be discussed. Then, sub-question III and the results of the study will be discussed in Chapter four.

The research design chosen for this study and that will serve to answer the main research question is a comparative case study. Therefore, using the mentioned qualitative comparative method I will analyze and later establish whether the EU and the U.S have effectively addressed the identified problems in their latest regulations. Although I will describe the regulatory path for CRAs prior to the crisis, I will answer the main research question by focusing my analysis in regulation produced after 2008 and in light of the global financial crisis that broke out that same year. To do so, I will use all official legal documents available that reflect the change in regulation.

1.4. Theoretical relevance

The theoretical relevance can be described as the “analytical value a research question adds to the scientific discourse of the subdiscipline” (Lehnert et al., 2007 p.21). Therefore, this thesis will add value and contribute to the extensive literature on CRAs and more specifically in the field of financial regulation. By providing a detailed assessment of the regulations on CRAs, and reviewing the law objectively on both sides of the Atlantic, this thesis can contribute to a better understanding of the role of CRAs in the financial system and the impact that regulation on these agencies can have on the latter.

1.5. Policy relevance

The answer to the formulated research question can be considered policy relevant as it will contribute to the better understanding of the financial regulation aimed at correcting the problems raised by CRAs in both the EU and the U.S. In addition, this could contribute to the society as a whole, as the persistent failures of the CRAs have contributed to the detriment of the global economy and, therefore, to the lower wellbeing of the society in general. Last but not least, acknowledging the differences in CRAs regulation between the EU and the U.S, can contribute to the creation of future policies that intend to address financial market imperfections.

1.6. Outline of the thesis

This thesis is structured in five chapters. Chapter I introduces the topic and presents the objectives of this study in the form of main research question and sub-questions. The following Chapter II is composed of extensive literature review that provides detailed answers to the established sub-questions. First, the different regulatory paths adopted by the EU and the U.S. in the field of financial regulation, and second, the findings on the reasons behind the CRAs failures and further recommendations to address the latter. In chapter III the chosen research design used for this study is explained in detail. The last two chapters focus on answering the main question and the actual analysis of this study, in chapter IV the main findings of the analysis are presented and discussed, followed by chapter V in which I will discuss the limitations during the conduction of this research and the final conclusion of the study.

CHAPTER 2: Literature review

In this chapter, extensive literature review is provided which includes the experts view on the problems raised by the CRAs, regulation concerning CRAs before the crisis on both sides of the Atlantic, and possible solutions to tackle the CRAs problems. At the beginning of the chapter I provide some background information explaining the role of the CRAs in the financial system as well as a brief explanation of their rating system. Then I will lay down the different regulatory paths towards CRAs in the EU and the U.S prior to 2008, I will continue by broadly elaborating on the main problems raised by the CRAs, namely: lack of competition, several conflicts of interest, lack of accountability, and excessive reliance on credit ratings. Finally, I will provide a discussion of the main regulatory measures proposed by experts aiming at correcting the CRAs problems.

2.1. The role of CRAs in the financial markets

Nowadays CRAs are considered a vital actor in the financial markets, and they fulfill a role, together with other financial institutions, in safeguarding the international financial stability. The main purpose of these agencies is to “*assess the debt instruments (bonds and other securities) issued by firms or governments and assign “credit ratings” to these instruments based on the likelihood that the debt will be repaid*” (Rom, 2009; p640). Nevertheless, the role played by the CRAs in the financial markets has been gradually acquiring relevance since their creation, mainly due to the inclusion of their ratings as regulatory provisions (Garcia and Ruiz, 2012).

Globalization and the consequent interconnection of financial markets has resulted in the increase of movement of capitals across borders. This current scenario requires some form of regulatory intervention in order to contain risk and maintain global financial stability, and Credit Rating Agencies play a crucial role in this regard. Acknowledging this, regulators across many different countries have strongly relied on CRAs as gatekeepers of financial markets. Therefore, it can be said that CRAs are born out of the need to correct information asymmetry in the financial markets, particularly the information exchange between investors and borrowers (Rahim, 2010). Rahim identifies the role played by CRAs as twofold: “*(i) signaling, which involves providing information on how particular debt issue is placed in the market; (ii) certification, which entails issuing information on the eligibility of a particular debt issue with regard to standards set by regulators*” (Rahim, 2010; p434).

Due to their expertise and past reputation, CRAs took over duties that were initially responsibility of the state. They have become private authority with the approval of governments that granted them regulatory power to set and monitor the standards of credit risk for both private and public actors

worldwide. As argued by Kruck, “*CRA*s have managed to establish an important, widely recognized and nearly global private standard for creditworthiness” (Kruck, 2011: 56).

However, all the power granted to these agencies comes with a price, and a long list of failures on the side of the CRA

s have highlighted the need to rethink to what extent certain actors in the financial system should be given the ground to provide such authority.

2.2. The role of the CRAs in the 2008 financial crisis

The sub-prime crisis that started in the summer of 2007 is considered to be the worst within the last one hundred years, not only for its devastating economic and social effects but also for its global scope. It triggered panic through the most powerful markets in the world as the efforts to contain it proved to be useless. Many factors and market players are blamed for the financial disaster, and within those are the CRA

s. The role played by the CRAs during the crisis has been highly criticized, as they inflated the ratings of many Mortgage-Backed Securities (MBS), making investors believe that these products were safe despite they were completely toxic. To clarify, an MBS is a type of security secured by one or several mortgages. These types of securities are originated as follows: First a regulated financial institution such a bank issues a home loan, then the bank sells this loan to an investment bank which places this loan on a group of mortgages with similar interest rate. Then the investment bank sells again the bundle of mortgages to another investment institution and so on. This process is called pass-through as it involves many different institutions and investors. Hence, when it was obvious that the housing market was a bubble about to burst, those investment grade (AAA) MBS suffered a sudden massive downgrade in their ratings, going from investment grade to default.

“Perhaps more than any other single event, the sudden mass downgrades of (residential mortgage-backed securities) and (collateralized debt obligation) ratings were the immediate trigger for the financial crisis” Senators Carl Levin and Tom Coburn (Younglai and Lynch. Reuters, 2011)

This reaction from the side of the CRA

s is believed to have triggered the crisis, contributing to the dry up of the markets and consequently causing the bankruptcy of some banks, insurance companies and pension funds. The reasons behind the failures of the CRAs to keep up with their role as financial gatekeepers are several, some of them are inherent to the business model of the CRAs and their internal governance, others are to be found within the regulatory structures.

2.3. CRAs rating types and processes

CRA

s rate different type of debt issuers such as private companies, sovereign states, supranational institutions, and financial institutions. The CRAs not only rate these subjects but also their debt instruments such as bonds, loans and securities. Ratings are usually classified in four different types,

namely: structured finance ratings, corporate ratings, covered bond ratings, and public and sovereign ratings (Stowell, 2010).

CRA's determine the solvency of borrowers by issuing a credit rating which indicates the borrower's probability of default. CRA's ratings are placed in a wide scale from low risk (investment grade) to high risk (speculative grade). When assessing credit risk, CRA's take into consideration a broad set of factors including financial risk, industry risk, business environment risk and management performance. All the previously mentioned factors are believed to have an influence on the issuer's capability to repay the debt. Although there is not a standard rating scale, commonly ratings are expressed in letters which indicate the risk, being AAA the highest and C or D the lowest (Stowell, 2010).

Finally, it is important to mention that CRA's provide solicited and unsolicited ratings. Solicited ratings refer to the ones that are properly requested by a party, such a private company but also can be a country soliciting a rating of their public debt. Solicited ratings constitute the majority, this type of requested rating is done upon the payment of a fee by the issuer. On the other hand, unsolicited ratings refer to all others and these ones are not requested by the issuer and therefore not paid by these one. The unsolicited rating is more unusual and is normally requested by investors. In some cases, unsolicited ratings can be the result of a previous issuer withdrawing itself from a rating but the CRA still reserves its right to issue the rating in order to keep the markets informed (Stowell, 2010).

Table 1.1. Rating scales by Moody's, Standard & Poor's and Fitch Ratings

	Moody's	Standard & Poor's	Fitch Ratings
Investment grade	Aaa	AAA	AAA
	Aa1	AA+	AA+
	Aa2	AA	AA
	Aa3	AA-	AA-
	A1	A+	A+
	A2	A	A
	A3	A-	A-
	Baa1	BBB+	BBB+
	Baa2	BBB	BBB
	Baa3	BBB-	BBB-

Speculative grade	Ba1	BB+	BB+
	Ba2	BB	BB
	Ba3	BB-	BB-
	B1	B+	B+
	B2	B	B
	B3	B-	B-
default	Caa	CCC+	CCC
	Ca	CC	DDD
	C	C	DD
		D	D

Source: (Dieter, 2002: 41)

2.4. Regulation of CRAs in the U.S and the EU prior to the crisis

2.4.1 U.S regulation of CRAs

CRAs themselves have remained unregulated for most part of their existence. However, their ratings were included as regulatory provisions rather early, when in 1936 the OCC (Office of the Comptroller of the Currency) ruled that banks would not be allowed to invest in bonds with a rating lower than BBB (investment grade). Due to this new rule, the influence of the CRAs in the financial markets started to grow rapidly, as both banks and issuers were now obliged to consider the ratings issued by these agencies. Moreover, this first regulation only took as reference the “recognized rating manuals”, which were exclusively the ones issued by the big three (Moody’s, S&P, Fitch) (Dieter, 2002).

1975 represented a fundamental change for the Credit Rating industry as consequence of their recognition as “Nationally Recognized Statistical Rating Organizations” (NRSRO) by the U.S. Securities and Exchange Commission (SEC). From then on, only CRAs that were granted NRSRO status were qualified to issue ratings. The first CRAs to be granted NRSRO status were Moody’s, Fitch, and Standard & Poor’s, and they remained the only agencies with NRSRO recognition for the next 28 years. Although this new rule represented an important development for the credit rating industry, the regulation itself was quite vague regarding the requirements and procedures needed to be granted the NRSRO status. The basic requirements set by the SEC to grant NRSRO recognition considered “*the nationwide reputation of the agency, its organizational structure, its financial situation, its size, the expertise of its personnel, the degree of independence between the agency and the companies being rated, the procedures adopted to issue ratings and the measures implemented to protect confidential information gathered from companies*” (Conte and Parmeggiani, 2008; p.3). However, these requirements were not officially codified, neither required any sort of verification, which eventually

made the procedure rather discretionary and non-transparent. Later in 1997, the SEC suggested a formal codification of the requirements for NRSROs, but ultimately no implementation took place (Conte and Parmeggiani, 2008). In fact, these agencies were granted NRSRO status because of their previous record of accurate ratings. However, granting them such status would not assure accuracy in their future ratings, this NRSRO designation was a simple endorsement of past achievements by the big three, namely Moody's, Fitch's and S&P. (Calabria and MacClintock, 2012).

Therefore, during the 20th century U.S regulators did not directly regulate CRAs, instead they included their credit ratings as regulatory provisions, and thus, they increasingly granted them the power to act as financial gatekeepers. But in 2001, the Enron, Worldcom and Parmalat scandals were uncovered, and this brought the spotlight on the Credit Rating Agencies, who had given all these failed companies "investment grade" ratings within few days before their collapse. These events eventually led for the first time ever to the regulation of CRAs in the U.S. (McClintock and Calabria, 2012).

Credit Rating Agency Reform Act of 2006

After failing to oversee scandals such as Enron or Worldcom, credit rating agencies received harsh criticism and came under fire. Concerned with the reasons behind these failures, regulators decided to issue regulation on CRAs for the first time in 2006. The Credit Rating Agency Reform Act of 2006 was issued with the aim of promoting rating quality and transparency, protecting investors and improving competition in the credit rating industry (Bayar, 2014). The Reform Act would only be applicable to CRAs under the NRSROs status, as these are the agencies whose ratings are used for regulatory purposes. The addressed issues were the following:

- Improving competition: *"Upon the effective date of the Act, a rating agency may seek designation by submitting an application to the SEC which includes, among other things, information about its credit ratings performance over a period of time; its internal procedures and methodologies for determining credit ratings; its policies and procedures to prevent the misuse of material, nonpublic information and to guard against potential conflicts of interest; its organizational structure; its code of ethics; its potential conflicts of interest; and a list of its 20 largest issuers and subscribers and the revenues received therefore"* (Cahill, 2006; p.2) For the first time and after years of consideration, the SEC formalized the requirements needed to become a NRSROs under section 3a(62) of Security Exchange Act, intended to make the process more transparent and ease barriers to entry (Cahill, 2006)
- Promotion of rating quality and protection of investors: *"the Act requires the SEC to conduct rule-making processes regarding the adoption by NRSROs of specific policies and procedures to prevent the misuse of material, non-public information and regarding the management of potential conflicts of interest related to, for instance, compensation received by NRSROs from*

issuers, the provision of consulting, advisory or other services by NRSROs, business relationships and ownership relationships of the NRSROs, and affiliations with underwriters. In addition, the Act requires the SEC to issue final rules to prohibit acts that the SEC, after a rule-making process, determines to be “unfair, coercive, or abusive.” (Cahill, 2006; p.3). These premises can be found under section 15E(g)(1) of the Security Exchange Act, and rules 17g-4, 17g-5 and 17g-6. (Cahill, 2006)

Although the Reform Act rules a codification of the requirements for the NRSROs registration procedure and grants the SEC the power to supervise the NRSROs, the Reform Act does not grant the SEC with the authority to interfere in the credit rating process of these agencies. In other words, the SEC does not have the authority to question the methodologies and procedures employed by the CRAs. To conclude, experts saw the Reform Act especially beneficial for increasing competition in the credit rating industry, as it entailed a fundamental change in the NRSROs registration procedure. On the other hand, the regulation intended to tackle CRAs problematics such as conflicts of interest was seen as vague, reflecting a lack of expertise by the SEC to define models for the CRAs. (Cahill, 2006).

2.4.2 EU regulation of CRAs

Following the Enron and Worldcom scandal, in 2002 the Economic and Financial Affairs Council (ECOFIN) demanded the EC to evaluate the activities of the CRAs within the Union. Shortly after in 2004 the European Parliament sharing similar concerns requested the EC to issue legislative proposals to regulate CRAs. Facing the demands, in 2005 the former Committee of European Securities Regulators (CESR) conducted a study for the European Commission (EC), which finally concluded that no legislation on CRAs was necessary in order to address the problematics raised by these agencies. Nevertheless, within the broad financial regulation produced by the EU, it was possible to find several mentions dealing with rating activities. Such as the directive 2003/125/CE which specifies that “the credit ratings issued by such agencies do not constitute a recommendation to invest per se, thus it cannot be assimilated to the ones strictly regulated by the detailed rules sourcing from the directive”. Another example of a Directive addressing CRAs was the “Capital Requirements Directive” (CRD) (2006/48/CE), this Directive stipulates that “profiles and risk assessments must be evaluated according to the criteria supplied by the External Credit Assessment Institutions (ECAI), whose members are credit rating agencies that have been awarded such recognition by the competent authorities”.

In conclusion, unlike the U.S, the EU had never issued specific regulation towards CRAs prior to the 2008 financial crisis. Although the EU recognized the important role and value of the CRAs in the financial markets, the EU only used a soft-law approach to regulate CRAs. Indeed, the EU solely relied on the code of conduct released by the International Organization of Securities Commissions (IOSCO) in 2004, which is a voluntary CRA compliance regime consisting of standards. The IOSCO code mainly

contains standards regarding corporate governance and transparency intended to assure the quality of the ratings and minimize possible conflicts of interest (Parker and Bake, 2009).

2.5. Problems posed by the CRAs

As previously mentioned, CRAs activities have been on the loop since the financial meltdown that followed the crisis in 2008. They are blamed for having failed in their role as financial gatekeepers and the reasons behind this situation have set the alarms on their integrity and performance. How and why this happened can be explained by five main problems posed by the CRAs as found in literature and that I will carefully elaborate on this section.

2.5.1 Quality of rating process

As previously mentioned, CRAs rate many different types of debt issuers such as private companies, sovereign states, supranational institutions, and financial institutions. The CRAs not only rate these subjects but also their debt instruments such as bonds, loans and securities. Within the different type of instruments rated by the CRAs, structured finance products lay at the core of the controversy when considering problems with the quality of the rating process. Structured finance products are a type of investment product, on which the return is directly linked to market indicators. They are generally composed of a bond, one or more underlying assets, and other type of financial instruments. After the crisis, several studies identified three main issues undermining the quality of the rating process of structured finance products (Rousseau, 2012). The identified issues are the following:

1. From 2001 to 2006, the market for residential mortgage-backed securities (RMBS) and collateralized debt obligations (CDOs) grew substantially, not only in number but also in complexity. Subsequently, CRAs experienced difficulties to keep track, and for instance there was a shortage in staff to rate these products. However, this particular situation did not prevent the CRAs from issuing ratings, what led to the issuance of poor-quality ratings. (SEC, 2008).
2. Another concern undermining the quality of the rating process is related to the information the CRAs receive from the issuers. As pointed by the SEC, CRAs “did not engage in any due diligence or otherwise seek to verify the accuracy or quality of the loan data underlying the RMBS pools they rated” (SEC, 2008, p.18).
3. Last but not least, the effectiveness of the methodologies used by the CRAs to determine ratings has been questioned. Experts argue that since the products they were rating, such as asset-backed securities, were new and complex, the CRAs did not have sufficient experience and may have make use of wrong models undermining the risk (Crouhy and Turnbull, 2008).

2.5.2 Lack of competition

In 2002 The Basel Committee on Banking Supervision estimated that there were around 130 CRAs worldwide operating at all levels, global, national and regional. However, still nowadays this industry is highly concentrated. At the global level, Moody’s, Standard & Poor’s and Fitch (Known as the big three) account for more than 95% of the market. The reasons behind the oligopoly nature of this industry can be found in their reputation but also on the regulatory structure of the U.S that facilitated barriers to entry for other CRAs.

1975 represented a fundamental change for the Credit Rating industry as consequence of their recognition as “Nationally Recognized Statistical Rating Organizations” (NRSRO) by the U.S. Securities and Exchange Commission (SEC). There are currently ten CRAs recognized as NRSRO, and their inclusion under the NRSRO has been done gradually. The first CRAs to be granted said status were Moody’s, Fitch, and Standard & Poor’s. The big three were the only agencies recognized until 2003, when DBRS acquired recognition, consecutively followed by other six until 2008 when the last CRA was granted this status. As mentioned before, there is a total of 10 NRSRO agencies in the U.S., but the big three account for not less than 97% of the total credit rating market. The situation is not very different in the EU, although there are 26 CRAs registered (including five NRSROs), the big three make up for 92% of the market share.

Table 1. CRAs market concentration in the U.S.

Agency	Year founded	Year NRSRO designation	Market share
Standard & Poor’s Rating Services	1916	1975	42.3%
Moody’s Investors Service	1909	1975	36.9%
Fitch	1916	1975	17.9%
DBRS	1976	2003	1,5%
Kroll Bond Rating Agency	1984	2008	0.6%
A.M. Best Company	1899	2005	0,3%
Morningstar	2001	2008	0.3%
Rating and Investment Information	1998	2007	0.2%

Japan Credit Rating Agency	1985	2007	0.0%
Egan-Jones Rating Company	1995	2007	0.0%

Source: SEC

Table 2. CRAs market concentration in the EU

Agency	Market share
Standard & Poor's Rating Services	45%
Moody's Investors Service	31.2%
Fitch	16.5%
DBRS	1.8%
CERVED Group S.p.A.	0.9%
AM Best Europe-Rating Services Ltd.	0,9%
The Economist Intelligence Unit Ltd	0.8%
Creditreform Rating AG	0.5%
Scope Ratings AG	0.4%
Feri EuroRating Services AG	0.4%
GBB-Rating Gesellschaft für Bonitätsbeurteilung mbH	0.3%
Euler Hermes Rating GmbH	0.2%
ASSEKURATA Assekuranz Rating-Agentur GmbH	0.2%
ICAP Group SA	0.1%
Capital Intelligence (Cyprus) Ltd	0.1%
Spread Research SAS	0.09%
Axesor S.A.	0,05%
CRIF S.p.A.	0.05%
ModeFinance S.A	0.05%
Dagong Europe Credit Rating Srl	0.04%
ARC Ratings	0.03%
EuroRating Sp. Zo.o	0.01%

European Rating Agency, a.s.	0%
INC Rating Sp. Zo.o	0%
Rating-Agentur Expert RA GmbH	0%

Source: ESMA

One of the main concerns surrounding credit rating agencies is the lack of competition due to the existence of only a few big players. Even if theoretically there are other agencies, we already discussed that in practice the market is dominated in both sides of the Atlantic by the big three, namely: Moody's, Fitch, and Standard & Poor's. The reasons behind this highly concentrated market can be found in the entry barriers set up by the US government under the NRSRO regulation. (Rahim, 2010). Rating agencies' clients greatly prefer to be rated by agencies having NRSRO in order to secure a good advantage in the market. However, to achieve NRSRO status '*a credit rating firm must have national recognition; but national recognition is unlikely to be obtained unless a credit rating firm has NRSRO status*' (Rahim, 2010; p435). This paradox is what creates massive barriers to new entrants and non-US-based agencies, resulting in a highly concentrated industry, where decisions of one agency are affected by, and affect, the decisions of the other agencies (Rhee, 2014). Therefore, the willingness to regulate the CRAs to increase quality of ratings ended up creating a pernicious effect. Indeed, regulation created an oligopolistic situation, strengthened by the inclusion of the ratings of just a few agencies as regulatory provisions (Rahim, 2010; Rom, 2009; Hemraj). The lack of competitive environment enjoyed by the CRAs has been highlighted by many experts, an example of this concern was well expressed by Rahim when he argued that "*The high concentration in the credit rating industry makes it possible for the dominant agencies to behave anti-competitively to restrain entry into the market in order to retain their market share. This privilege could also result in dominant agencies reducing their service quality*" (Rahim, 2010; p435).

2.5.3 Conflicts of interest

By the end of 2007 there were over 64 000 structured finance products with triple A rating, and by that time they were considered safe. However, that false stability would soon be followed by credit squeeze, bear market and a worldwide economic recession. Since then the work of credit rating agencies has been heavily questioned. They are blamed for underestimating the risk of structured finance products and allowing conflicts of interest interfere in their ratings. The conflicts of interest identified by many experts and addressed in this study are three: the tradeoff between rating accuracy and rating stability, the interconnection between the dual services (consulting and rating) offered by the CRAs, and probably the most acute one, the CRAs business model and the risk entailed by this one (Johansson, 2010; Loffler, 2005).

For the CRAs the tradeoff between rating stability and rating accuracy presents a dilemma. Although rating accuracy is what is expected from them, rating stability seems to be higher rewarded for the CRAs, especially when the CRAs bear no civil liability when issuing inaccurate ratings. This issue will be further addressed in the next section. Loffler notes that during financial stability, issuers of products as well as investors place more trust on CRAs if their ratings do not continually bounce up and down. If the ratings are steady, this gives the illusion that CRAs were accurate all the way since the beginning, and this provides a sense of financial security to the parties involved (issuers and investors). However, this attitude can lead to a distorted sense of security and over trust in the CRAs. The problem with stability prevailing over accuracy is that this can result in a loss of valuable information. Such scenario goes against the very purpose of these agencies, which is to act as financial gatekeepers by correcting information asymmetry in the markets, and they fulfill this role backed up by regulation. Therefore, they should be filtering and providing the most relevant and accurate information regardless if this meets the "stability" requirements the clients expect or not (Loffler, 2005). However, the leverage and regulatory power yielded by the CRAs is presenting a very different scenario than the one desired, allowing this industry to prioritize benefits over rating accuracy. As Hansen points out: *"The very risk of having informational gatekeepers is that they can act self-interestedly since they are essentially informational bottlenecks with a vast potential for taking advantage of informational inequalities – and therefore it is also very hard to control their behavior"* (Hansen, 2012; p.33).

Another conflict of interest emanates from the dual services offered by the CRAs. CRA revenues come from two sources: consulting services and rating analysis. CRAs offer advice to issuers on the best way to structure a debt in order to get a high rating, then that same CRA offering the advice also rates the issue. Even though consulting services are supposed to be separate from rating services, oftentimes both business units collaborate.

The last and most sounded conflict of interest entails the CRAs' business model: "issuer-pays model". Since their creation and until the 70s the CRAs were charging the investors for the provision of the ratings. However, CRAs knew that charging issuers instead of subscribers would provide them with greater revenues. As Progress in technology made it possible for non-subscribers to access the rating information provided by the CRAs, the subscriber-pays model became unattainable. Thus, in mid 70s CRAs changed their business model from subscriber-pays (investors) to issuer-pays (issuer of products and debts). Meaning that now the issuer himself pays for his product to be rated (Hemraj, 2014). It should be noted that this new model substantially increased the CRA revenues, especially during the 2000s when Mortgage-Backed Securities (MBS) and CDOs were on the rise and thousands of these products were created and thus needed to be rated. The problematic entailed by the CRAs' current business model is simple to grasp: the issuer of a security or debt is aiming at getting the highest possible rating, and this gives the issuer an incentive to "shop around" in order to get the highest rating.

Therefore, within the current issuer-pays model used by the CRAs lies a potential conflict of interest, as the CRAs have enough incentives to offer over optimistic ratings in order to attract and/or keep customers. Hence, the issuer-pays model presents the opportunity for the issuer to “buy” ratings, a situation a priori beneficial for both issuer and CRA, but potentially harming for the world financial stability (Johansson, 2010). Hence, the risk entailed by the current business model is apparent, as noted by Johansson: *“the integrity of the rating might be affected by the interest of generating new businesses, particularly when rating structured finance products because of the high concentration of arrangers as well as the considerable revenues deriving from these ratings”* (Johansson, 2010; p.5).

2.5.4 Lack of accountability

We have already discussed how lack of competition and diverse conflicts of interest have damaged the integrity of the CRAs and led to questioning their role as financial gatekeepers. There is another question that concerns public regulators and market participants, the lack of accountability of the CRAs’ activities, and how it is quasi impossible to make them pay for their mistakes. It is clear by now that *“the role of credit ratings agencies (CRAs) is to forecast the probability that the issuer of a debt liability will default on the due repayment (its probability of default, PD)”* (Goodhart, 2010; p.) In this regard, the most important requirement of this forecast should be its accuracy. But what if they fail forecasting the future and this results in economic losses?

CRAs and their role as financial gatekeepers have made them indispensable for the global economy. By providing valuable information CRAs help investors make proper and safe investment choices. Therefore, they have the responsibility to provide accurate ratings in order to preserve the stability of the market. On top of that, financial institutions also confide in the ratings the CRAs provide. Nevertheless, and as the last financial crisis has shown, if their ratings are not accurate, this jeopardize the solvency of financial institutions and investors. Indeed, inflated ratings led investors to buy products that they believed to be safe but that in reality, were not safe. This false perception of safety became one of the major triggers of the 2008 financial crisis (Goldstein, Huang, 2015). As we already know, CRAs activities have a great influence in the way the markets behave. Hence, if they act negligently, it seems logical held them accountable. The problem so far is that their ratings are seen as “opinions”, and these opinions are guarded by the U.S Constitution as free speech. This situation presents a great obstacle for public regulators when trying to pass legislation that would apply liability to the CRAs activities. As Husisian claims: *“The lack of firmly institutionalized accountability relationships is a formidable hurdle for national stakeholders. However, it makes it even more difficult for stakeholders outside the U.S. to hold rating agencies accountable”* (Husisian, 1990; p 460).

Kerwer also argues how *“viewing CRAs as providers of neutral information misses their role as de facto regulators of financial markets. The criteria CRAs use to evaluate creditworthiness are in effect*

access rules for financial markets. A high-quality credit rating (“investment grade”) will allow for unproblematic access to the most liquid capital markets whereas a low-quality rating (“speculative grade”) assigns a junk bond status and will in effect exclude a bond from the most liquid markets... CRAs are thus de facto regulators of financial markets” (Kerwer, 2005; p 460). Following his statement, it is apparent the great influence the CRAs have in the structure and strategy of financial markets, and hence, they should be susceptible to ex post accountability if they fail in their predictions. However, and despite their repeated failures, CRAs have avoided liability since their creation in both the EU and the U.S. They are absolved from statutory liability under the securities laws in the U.S., and further guarded from civil liability by the First Amendment. As expected, CRAs are very much aware of this advantage, and any time they are questioned about their failed predictions, they argue that these ones are only opinions, and that they should not be taken as the absolute truth. Surprisingly enough, and contrary to what they claim as being “sole” opinions, S&P slogan claims the following: *“Powerful Opinions. Authoritative Analysis”* (Kerwer, 2005; p475).

2.5.5. Overreliance on credit ratings

Concerns over excessive reliance on credit ratings strongly increased in both sides of the Atlantic in the aftermath of the financial crisis of 2008. It is believed that the regulatory structure specially in the U.S pushed these agencies to the core of the bond markets, what assured that if these agencies were to make mistakes, these mistakes would have negative consequences for the entire financial system (White, 2010). Therefore, the hardwiring of credit ratings in regulatory provisions seem to be a big problem. Positive ratings appear to be seen by investors as a seal of approval of creditworthiness which culminates in investors not conducting their own risk assessment. Moreover, it is believed that relying solely on external ratings may lead to herd behavior and snowball effects. Herd behavior has a negative connotation and implies that a subject follows the behavior of other subjects instead of reflecting and making the decision by itself, like animals in a herd (Amtembrink and Heine, 2013). Hence, legislation requiring the use of credit ratings and the lack of knowledge and information of structured finance products are the main factors identified as contributing to overreliance on credit ratings. For example, In the U.S the Financial Stability Board (FSB) *“identified the source of over-reliance in the hardwiring of credit ratings in numerous regulatory and legislative frameworks at the international and national levels”* (De Pascalis, 2016, pp).

As stated by Masciandaro, *“the role of ratings is to provide, through the publication of an opinion, information to markets on the likelihood that a bond issuing agent – company, bank, and government institution – may renege on its commitments”*. However, the investigations conducted after the 2008 crisis concluded that there had been biased behavior in the activities of the CRAs that lead to distortions in ratings. Therefore, the problem arises when what is supposed to be an “opinion” becomes a regulatory tool and subsequently, an excessive reliance is placed on these, sometimes distorted opinions

(Masciandaro, 2013). As previously mentioned, experts warn how exclusive reliance on external credit ratings can trigger herd behavior and cliff-edge effects. In the case of Europe, downgrading spiral of sovereign rates exacerbated the financial instability of the Eurozone in particular. Experts on the matter also note an important difference in the effects that negative and positive ratings have on the economy, having the former one much immediate consequence and a more powerful impact on the decisions taken in the markets (De Pascalis, 2016). As a consequence of all the problems above mentioned, U.S. and EU regulators reached the conclusion that legislation was needed in order to reduce overreliance on external credit ratings.

2.6. Possible solutions

It's important to mention that an extensive debate exists on whether regulation is needed to solve the problems raised by the CRAs, or if by the contrary CRAs are enough incentivized by the need to protect their reputational capital. Nevertheless, this thesis is based on the belief that regulation of CRAs is needed to correct the problems raised by these agencies and to ensure financial stability. Regulation may be the answer as the CRAs fall under a regulatory dependence environment, as legislation requires the use of ratings to trade financial products. In this particular environment, the theory of reputational capital loses importance, and economic incentives may prevail over the will to protect the reputation. Therefore, in light of the latest events occurred in 2008, experts have expressed their views on the best ways to solve the discussed problems through regulation, and these are explained hereunder.

CRAs analyse masses of data and supply credit information to investors, underwriters, and traders and as a result they "have become more than an advisory opinion; they have become a standard of value and a tool of financial regulation" (Forbes et al, 1974, p.1)

In regard to the quality of the rating process, three main issues interfering in the latter were highlighted: (1) lack of resources and staff, (2) absence of due diligence on the side of the CRAs when assessing the quality of the information received from the issuers, and (3) the dubious effectiveness of the methodologies used to rate complex structured finance products. In order to improve the accuracy of the rating process and increase its transparency, experts recommend in first place a greater disclosure of information and of methodologies. In second place, they call for a greater assessment of the information received by the CRAs from the issuers, they must make sure this one is accurate. Finally, in order to assure that measures are implemented, public authorities should closely monitor the CRAs and ultimately make sure the rating process is as accurate as possible. (Hansen, L, 2012, p.20).

Regarding the issue of competition, we have already mentioned how CRAs are considered a "natural" oligopoly, because to establish and maintain such a reputation and track record is very costly. Nevertheless, experts affirm that the regulatory power granted to their credit ratings strengthens the

oligopolistic nature of the CRA industry. (Partnoy, 2006). For instance, Cinquegrana argues that “*rating opinions are so important precisely because they are hardwired in global regulation*” (Cinquegrana, 2009; pp.4). Thus, some experts suggest that removing ratings from regulation will result in a more competitive environment for the rating industry, as users of ratings will understand them as mere opinions.

One of the measures the vast majority of experts find crucial to tackle conflict of interest on the CRAs’ activities consist of separating consulting services from rating services. Thus, in order to eliminate the interfering between the consulting and rating services, public authorities should issue regulation requesting the CRAs to separate their two lines of business (consulting and rating). This measure would boost the ratings accuracy as it would remove the pressure of assigning a specific rating to a specific issue. Therefore, “*CRA staff in the "other services" unit must not be involved in the ratings analysis performed by the staff in the ratings services unit*” (Nan and Dow, 2014 p. 172).

Another measure regulators should implement is to require issuers to obtain ratings from multiple agencies simultaneously, preferably agencies using different payment methods (issuer-pays and subscriber-pays). This would end the “shop” for highest rating problem. Although the measures previously mentioned would greatly improve a part of the conflict of interest problem, it is still insufficient. In fact, the most acute conflict of interest, the “issuer-pays” model, seems to remain beyond reach. However, the alternative payment model on the other side of the spectrum, the subscribers-pay model, is not considered a feasible option. (Nan and Dow, 2014 p. 175).

Another promising measure recommended by experts is the creation of an independent assessment institution. This institution should be paid by the CRAs and would compare the performance and oversee the activities of the CRAs. This agency acting as a watchdog should be also responsible for randomly assigning agencies to issuers applying for ratings, which again would end the shop for rating problematic. This independent agency overseeing the activities of the CRAs should remain neutral and not captured by the CRAs. Whether this independent agency should be established by a private third party or by the government is still being discussed among experts. Since the aim is to make the CRAs pay themselves for this independent agency, it is proving difficult to decide the best way forward in order to assure its full independency (Goodhart, 2010).

Regarding the lack of accountability, in the U.S for example CRAs have been always protected by the first amendment as their ratings were considered mere opinions. Meaning that if their ratings were not accurate, no matter how negatively this may affect the markets, CRAs could not be held accountable in the courts. Experts recommend regulators to allow the application of civil liability to the CRAs in case of negligence behavior. In an ideal situation, CRAs should be accountable to both issuers and investors.

Experts are positive if CRAs would be subject to civil liability this would automatically enhance their accountability (Rosseau, 2012, p.10).

We have already discussed how the hardwiring of credit ratings in regulatory provisions are among the problems raised by the CRAs. Hence, concerning the problem of overreliance on credit ratings, experts recommend regulators to reduce the “hard wiring”, of credit ratings in regulations, in other words, to reduce the excessive mention and inclusion of credit ratings in regulations. Hence, the goal should be to reduce mechanistic overreliance on credit ratings for all the parties involved, namely: governments, banks, investors, issuers, etc. With the aim of reducing excessive reliance on external ratings and correct the problems mentioned above, the FSB issued in 2010 a set of principles to be followed by market participants and implemented by regulators. The measure proposed by the FSB is twofold: First, to encourage investors, banks and other market participants to do their own independent credit assessment. For that purpose, these subjects are asked to acquire the expertise and resources needed to assess the credit risk they are vulnerable to. Second, the FSB requests regulators to remove, wherever possible, the references to external credit ratings from laws, standards and regulations. Nevertheless, experts acknowledge that the success of this measure will depend on two main conditions: international coordination among regulations, and a trustworthy alternative to external ratings (De Pascalis, 2012). Some of the measures discussed above are intended to tackle specific problems such as conflicts of interest, while others could tackle several problems at the same time. In short, the recommendations to be considered include the creation of an agency to supervise CRAs activities and assign agencies to issuers at random, greater transparency and greater due diligence, disclosure of methodologies, make CRAs subject to civil liability, separate consulting services from rating services, require issuers to get ratings from more than one agency, and finally reduce the “hard wiring” of credit ratings from regulations and standards.

Table 3. Summary of problems and possible solutions.

Problems	Recommended solutions
Quality of rating process	<ul style="list-style-type: none"> <li data-bbox="858 1594 1383 1675">- Greater disclosure of rating methodologies <li data-bbox="858 1720 1383 1854">- Greater due diligence by the CRA's when assessing information received by the issuers <li data-bbox="858 1899 1383 1980">- Monitoring of CRA's by public authorities

Lack of competition	<ul style="list-style-type: none"> - Removing credit ratings from regulation
Conflict of interests	<ul style="list-style-type: none"> - Separation of consulting services from rating services - Require issuers to obtain ratings from multiple agencies simultaneously - Find an alternative to the issuer-pays business model - Creation of an independent assessment institution to monitor CRAs activities and performance, paid by the CRAs
Lack of accountability	<ul style="list-style-type: none"> - Application of civil liability to CRAs in case of negligent behaviour
Overreliance on credit ratings	<ul style="list-style-type: none"> - Reduce the excessive mention and inclusion of credit ratings in regulation

CHAPTER 3: Research design and methods

In this chapter, the research design and the research methodology will be introduced. I will elaborate on the thesis process and I will explain the reasons why I chose such methodology and design. Additionally, I will explain the reason why I chose these two particular cases, and finally the type of data collected and how it will be analyzed.

3.1. Research design and methodology

The selection of an appropriate research design is crucial when conducting a study as it will influence the process and the accuracy of the results. This study uses a qualitative research method, which concerns words rather numbers. Nevertheless, there are many different types of research designs within the qualitative approach. These include surveys, experiments, case studies, etc. The choice of the research design will depend on the research question as each design will offer different advantages depending on the needs of the study.

For this thesis I chose a comparative case study design, consisting of two cases. A case study consists of an in-depth examination of a single case or several cases, these cases can be policies, laws, regulations, interventions, events, etc. In the case of comparative case studies, these ones examine how or why particular, for instance policies, function or fail to function. In addition, comparative case studies imply the analysis and further establishment of differences or similarities between the cases subject to the study. In order to conduct a successful analysis and obtain accurate results, the cases should be described in depth (Yin, 2014).

The purpose of this study is to analyze to what extent the EU and the U.S have addressed the CRAs problems effectively in their regulations. Moreover, I will discuss how much the two regulatory schemes differ between each other, for that reason a comparative case study seems the most appropriate strategy for this thesis.

3.2. Case selection

The selection of the two cases serving this study was based on its relevancy for the topic and the importance of the context. First, the credit rating agencies were born in the U.S and still today THE U.S represents their biggest market, followed by the EU. As the EU acts as a single market, CRAs ratings impacts the entire European community, especially since the CRAs are providing ratings on EU members' sovereign debt. This is the reason CRAs are regulated on the EU level and ESMA obtained exclusive competency over surveillance of the CRAs (European Court of Auditors, 2015, n22). Moreover the 2008 global financial crisis where the CRAs are partially blamed for was originated in the U.S financial market, and quickly spread to Europe. Both the EU and the U.S have been the most

affected parties by the 2008 crisis, not only its markets but also in the case of Europe the public debt across its states has been terribly damaged. Therefore, the need to effectively regulate the activities of CRAs is particularly relevant for this two parties.

In addition, the EU and the US are central players in the global financial system, and although important similarities in the way they manage their financial markets exist, they also differ in some fundamental regulatory frameworks. The differences present legal challenges for businesses operating in both markets. Therefore, the CRA controversy also represents an opportunity to create a more consistent regulatory framework in both sides of the Atlantic, and thus providing a better global financial environment. For that reason, it is not only relevant to see whether the new regulations are effective, but also how much they differ from each other.

3.3. Operationalization

The objective of this study is to determine to what extent the regulations implemented towards the CRAs in the EU and the U.S are effective and see how much they differ between each other. To do so this will be operationalized in the following manner: In order to provide an accurate answer to the main question, I will start by discussing all the regulations implemented in both sides of the Atlantic after 2008. This thesis focuses on five main problematics posed by the CRAs, namely: (1) quality of the rating process, (2) lack of competition in the credit rating industry, (3) several conflicts of interests, (4) lack of accountability, and (5) overreliance on credit ratings. Therefore, I will clearly indicate the regulatory provisions that specifically address, if they do, the mentioned issues. Taking into consideration the previously discussed possible solutions recommended by experts, and evaluation reports conducted post implementation of the regulation, I will analyze whether the recommendations are included in the new regulations and therefore, how effective are the latter. Finally, I will elaborate on the main differences between both EU and U.S regulations towards the CRAs.

3.4. Data sources

Case studies use multiple sources of information in order to compare and determine the differences between the selected cases. It is crucial to carefully select relevant information and analyze the data in a transparent and unbiased manner for the obtention of accurate results (Yin, 2014).

For the purpose of this study I will make use of both primary and secondary sources. For the discussion of the new regulations I will use primary sources such as official legal documents and government reports. When analyzing the effectiveness of the regulations, I will also make use of secondary sources consisting mainly of academic article and evaluation reports.

3.5 Validity and Reliability

To provide a valid and reliable research paper, I conducted a thorough literature review. I rely my research on numerous accredited and peer reviewed academic articles and journals which based their findings on recognized methodologies. Furthermore, I studied the entirety of the regulations addressing the CRAs both in the US and in the EU providing me numerous datapoints to conduct my analysis. In addition, I used a comparative case study for this paper, which is a reliable research technique allowing me to analyse regulations based on geography but also historical trends in regulation before and after 2008 financial crisis. This research can be easily continued by adding new data points in case the regulations develop further in the coming years.

CHAPTER 4: Data analysis

Credit rating agencies are among those blamed for having caused the financial crisis of 2008. The de-regulatory path of the financial markets that started in the 80s have offered the market participants, such as the CRAs, a great deal of leverage which resulted in extremely risky behaviors that culminated in the meltdown of the economy. Therefore, many experts blame the mismanagement of the financial sector in the apparent lack of regulation and regulatory oversight. Therefore, since the crisis regulators both in the EU and the U.S agreed that stricter regulation and oversight over the CRAs needed to be applied in order to avoid another economic disaster like the one occurred in 2008. For that reason, a series of new regulations have been passed in both sides of the Atlantic. These are intended to improve the quality and integrity of the CRAs by correcting the problems posed by these and that contributed to the making of the crisis. Therefore, I will discuss the new regulations and reforms in both the EU and the U.S, by assessing them against the five problems addressed in this study.

4.1. EU regulation of CRAs

Although credit ratings have been recognized in Europe since a long time ago, the CRAs and its credit ratings remained unregulated in the EU until 2009. Until then, the EU had relied on the IOSCO code of conduct, which consisted of a self-regulatory approach to manage CRAs based on a code of standards to be voluntarily followed by the CRAs. Nevertheless, the role played by CRAs in the making of the 2008 financial crisis set alarms on their activities, and self-regulatory and light-touch regulation approach towards CRAs were signaled as the problem. Therefore, the EC chose not to follow the recommendations offered by the Financial Stability Forum, the Committee of European Securities Regulators and the European Securities Markets Expert Group, all of which had recommended to continue with the current self-regulatory regime established for the CRAs. The EC understood this self-regulatory regime as insufficient, and so decided to move forward with a new and stricter regulatory approach to CRAs (Amtenbrink and Heine, 2013). Between 2009 and 2013 the EU gradually introduced several pieces of regulation addressing the CRAs (Parker and Bake, 2009). Whether these new rules effectively address the five main problems posed by the CRAs or not will be discussed hereafter. As it can be expected, the analysis will be based on the last reform introduced in 2013. Nevertheless, the initial regulation will be also introduced and discussed, as some of the features of this remained untouched.

4.1.1 Regulation (EC) No 1060/2009 and 1st amendment

The first regulation directly addressing the CRAs in the EU is the Regulation (EC) No 1060/2009 of the European Parliament (EP) and of the Council of 16 September 2009 on Credit Rating Agencies, further amended in 2011. Hence, with this regulation a legal framework for the CRAs in the EU is

introduced for the first time. The reasons to justify the need for regulation towards the CRAs were expressed by the EU authorities under preamble 10 of the CRA regulation as shown below:

Credit rating agencies are considered to have failed, first, to reflect early enough in their credit ratings the worsening market conditions, and second, to adjust their credit ratings in time following the deepening market crisis. The most appropriate manner in which to correct those failures is by measures relating to conflicts of interest, the quality of the credit ratings, the transparency and internal governance of the credit rating agencies, and the surveillance of the activities of the credit rating agencies. The users of credit ratings should not rely blindly on credit ratings but should take utmost care to perform own analysis and conduct appropriate due diligence at all times regarding their reliance on such credit ratings (Preamble 10, Regulation (EC) No 1060/2009).

This first piece of regulation was intended to correct some of the problems posed by the CRAs as previously discussed. Overall, the regulation aimed at enhancing the integrity, reliability, transparency and good governance of the credit rating industry. It was also intended to improve the quality of the ratings and offer protection to both investors and issuers, and therefore to the public in general. The main measures introduced by this initial regulation included a CRA registration procedure, supervisory tools, and stricter requirements regarding the issuance of credit ratings.

1. Registration procedure for CRAs

Since 2009 if CRAs operating in the EU wish to be recognized as such, they have to apply for registration. The EU further requires all the registered agencies to comply at any moment with the conditions applicable under the CRA regulation. This rule can be found under Art. 2 (1) under Art. 14 of the CRA Regulation.

A credit rating agency shall apply for registration under this Regulation as a condition for being recognised as an External Credit Assessment Institution (ECAI) in accordance with Part 2 of Annex VI to Directive 2006/48/EC.

Therefore, if a CRA wishes to be recognized as an ECAI, it must register. Additionally, EU authorities hold the right to approve CRAs located outside the EU and willing to operate within the Union. In order for the EU to approve foreign CRAs, they must be subject to supervision in the third country, and ultimately comply with the legal frameworks both within the EU and the third country. There are currently 31 CRAs registered under the EU scheme.

2. Supervisory instruments

One of the most relevant features of the initial regulation and that remains in place is the creation of a supervisory body to monitor the CRAs' activities in the EU. The 1st amendment of the regulation 1060/2009 carried out in 2011 grants the European Securities and Markets Authority (ESMA) the exclusive power to register and supervise CRAs in the EU. The powers granted to ESMA include the possibility to request information to the CRAs at any time given, the conduction of investigations on CRAs, the imposition of fines, the temporary suspension of the use of credit ratings for regulatory purposes, and the withdrawal of the registration of a CRA. These provisions are included under regulation (EU) No 513/2011 of the European Parliament of 11 May 2011, and further amended under regulation (EC) No 1060/2009 on credit rating agencies. Examples of the aforementioned are the following:

(9) ESMA should be responsible for the registration and ongoing supervision of credit rating agencies, but not for the oversight of the users of credit ratings...

(13) In order to carry out its duties effectively, ESMA should be able to require, by simple request or by decision, all necessary information from credit rating agencies, persons involved in credit rating activities, rated entities and related third parties, third parties to whom the credit rating agencies have outsourced operational functions and persons otherwise closely and substantially related or connected to credit rating agencies or credit rating activities...

(18) ESMA should also be able to impose fines on credit rating agencies, where it finds that they have committed, intentionally or negligently, an infringement of Regulation (EC) No 1060/2009...

(25) In the case of an infringement committed by a credit rating agency, ESMA should be empowered to take a range of supervisory measures, including, but not limited to, requiring the credit rating agency to bring the infringement to an end, suspending the use of credit ratings for regulatory purposes, temporarily prohibiting the credit rating agency from issuing credit ratings and, as a last resort, withdrawing the registration when the credit rating agency has seriously or repeatedly infringed Regulation (EC) No 1060/2009

3. Governance and rating issuance issues

Regarding governance issues, this first regulation introduced several rules that, to some extent, addressed the problems of conflict of interest posed by the CRAs. These rules mainly require from the CRAs to improve internal policies to mitigate possible conflicts of interests in relation to employees and rating process.

Three main rules were set to have an impact on the internal governance and organizational design of the CRA's. The first one obliges the CRAs to create and document internal processes for detection of

potential conflict of interest. A second rule frames the CRA's remuneration policies, preventing staff's bonifications based on the CRA's financial performance, aiming at reducing the issuance of inaccurate ratings to pursue higher sales. Finally, a third rule binds the CRA's to increase staff turnover preventing long, thus potentially partial business ties. Example of this are the articles cited below:

(26) Credit rating agencies should establish appropriate internal policies and procedures in relation to employees and other persons involved in the credit rating process in order to prevent, identify, eliminate or manage and disclose any conflicts of interest and ensure at all times the quality, integrity and thoroughness of the credit rating and review process. Such policies and procedures should, in particular, include the internal control mechanisms and compliance function.

(30) In order to avoid conflicts of interest, the compensation of independent members of the administrative or supervisory board should not depend on the business performance of the credit rating agency.

(33) Long-lasting relationships with the same rated entities or their related third parties could compromise the independence of rating analysts and persons approving credit ratings. Those analysts and persons should therefore be subject to an appropriate rotation mechanism which should provide for a gradual change in analytical teams and credit rating committees.

Furthermore, given the controversy surrounding the rating of structured finance products after the subprime crisis, under this new regulation these products will be treated differently from other products. This rule consists of the creation of an "additional symbol" to differentiate them from other rating types. Moreover, CRAs are requested to reveal information about the due diligence procedures they have undergone when rating this type of instruments. When rating complex products within the structured finance instruments, there are even further restrictions under article 34 as shown below:

(34) In cases where the lack of reliable data or the complexity of the structure of a new type of financial instrument, in particular structured finance instruments, raises serious questions as to whether the credit rating agency can produce a credible credit rating, the credit rating agency should not issue a credit rating or should withdraw an existing credit rating.

Overall, the initial regulatory regime for CRAs in the EU showed to be insufficient. The quality requirements and supervisory tools introduced by the initial regulation may help to boost the quality and integrity of ratings, but the initial regulatory framework largely missed to address problems such as overreliance and accountability, and the measures addressing conflicts of interests were substantially mild. When it comes to the problem of overreliance, the creation of a registration procedure for CRAs does not seem to motivate investors to make less use of credit ratings, and the use of ratings for

regulatory provisions remained unaddressed (Amttenbrink and Heine, 2013). However, the EU authorities acknowledged these important absences and a second and last reform was introduced in 2013 covering far more issues.

4.1.2. Regulation (EU) No 462/2013

With this new and last reform introduced in 2013, the EU intended to address the issues that remained unaddressed or not sufficiently addressed on the initial reform.

1. Quality of rating process

In order to improve the accuracy of the rating process and increase its transparency, the last reform of the EU regulation offers a series of provisions in this regard. For instance, Art 6b requires CRAs to use rigorous methodologies to determine ratings and these methodologies should be subject to validation based on historical experience. In addition, Art 11a dictates that ESMA must assess the methodologies presented by the CRAs. Moreover, CRAs are required to monitor and update the ratings on an annual basis, as well as making sure that the employees have sufficient experience and knowledge to conduct rating analysis.

(6b) A credit rating agency shall adopt, implement and enforce adequate measures to ensure that the credit ratings and the rating outlooks it issues are based on a thorough analysis of all the information that is available to it and that is relevant to its analysis according to the applicable rating methodologies. It shall adopt all necessary measures so that the information it uses in assigning credit ratings and rating outlooks is of sufficient quality and from reliable sources...

(11a) the credit rating agency shall notify ESMA of the intended material changes to the rating methodologies, models or key rating assumptions or the proposed new rating methodologies.

2. Conflicts of interests

Several conflicts of interests have been identified in the CRA industry, they mainly refer to the issuer-pays business model currently in use by the CRAs, the interconnection of the dual services offered by the CRAs (rating and consulting) and the tradeoff between rating accuracy and rating stability. Although there are some mentions to conflicts of interest' problematic in the 2011 regulation of CRAs, the main issues above mentioned remained largely unaddressed. However, the new regulation applicable since 2013 aims at further addressing some of the highlighted issues. Under Art.6 CRAs are required to establish a more effective internal control structure that will mitigate possible conflicts of interest. Moreover, the initial regulation addressed conflicts of interest caused by CRAs' employees, and now those have been extended to the ones possibly caused by shareholders within the CRAs.

(6b) A shareholder or a member of a credit rating agency holding at least 5 % of either the capital or the voting rights in that credit rating agency or in a company which has the power to exercise control or a dominant influence over that credit rating agency, shall be prohibited from:

(a) holding 5 % or more of the capital of any other credit rating agency;

(b) having the right or the power to exercise 5 % or more of the voting rights in any other credit rating agency;

(c) having the right or the power to appoint or remove members of the administrative or supervisory board of any other credit rating agency;

(d) being a member of the administrative or supervisory board of any other credit rating agency;

(e) exercising or having the power to exercise control or a dominant influence over any other credit rating agency.

Furthermore, Art.6.b introduces the rotation-provision system on re-securitizations products. These products consist of packages of already existing securitized debt obligations that become a single new tradable security. This aims at mitigating conflict of interest in regard of the issuer-pays model. Indeed, with the new rule, one CRA cannot provide ratings on a financial product if that CRA already provided a rating on the product's sub securities within the last 4 years.

(6b) Where a credit rating agency enters into a contract for the issuing of credit ratings on re-securitisations, it shall not issue credit ratings on new re-securitisations with underlying assets from the same originator for a period exceeding four years.

Finally, under Art.8c and 8d issuers soliciting the rating of structured finance products are requested to appoint at least two different CRAs. Furthermore, when choosing the CRAs, the issuer should appoint at least one CRA with no more than 10% of the total market share. This measure aims at mitigating possible shop for the highest rating.

1. Where an issuer or a related third party intends to solicit a credit rating of a structured finance instrument, it shall appoint at least two credit rating agencies to provide credit ratings independently of each other... Where an issuer or a related third party intends to appoint at least two credit rating agencies for the credit rating of the same issuance or entity, the issuer

or a related third party shall consider appointing at least one credit rating agency with no more than 10 % of the total market share...

2. The issuer or a related third party as referred to in paragraph 1 shall ensure that the appointed credit rating agencies comply with the following conditions:

- (a) they do not belong to the same group of credit rating agencies;*
- (b) they are not a shareholder or a member of any of the other credit rating agencies;*
- (c) they do not have the right or the power to exercise voting rights in any of the other credit rating agencies;*
- (d) they do not have the right or the power to appoint or remove members of the administrative or supervisory board of any of the other credit rating agencies;*
- (e) none of the members of their administrative or supervisory boards are a member of the administrative or supervisory boards of any of the other credit rating agencies;*

(f) they do not exercise, or have the power to exercise, control or a dominant influence over any of the other credit rating agencies.

3. Overreliance

Reliance on credit ratings has been identified as twofold: (1) the use of ratings for regulatory purposes, and (2) the market participants reliance on credit ratings. Both forms of reliance are connected, as markets over rely on credit ratings since they are included in regulations and standards. As we previously discussed, excessive reliance on credit ratings can lead to cliff effects and herd behavior, unleashing terrible economic consequences. Therefore, the 2nd reform of the CRA regulation addresses the problem of overreliance in Art.5a. First, it requests financial institutions to conduct their own credit risk assessment and to avoid relying exclusively on external credit ratings. In addition, the supervisory bodies watching these institutions are requested to oversee the competence of the internal risk assessments.

(1) The entities referred to in the first subparagraph of Article 4(1) shall make their own credit risk assessment and shall not solely or mechanically rely on credit ratings for assessing the creditworthiness of an entity or financial instrument.

(2) Sectoral competent authorities in charge of supervising the entities referred to in the first subparagraph of Article 4(1) shall, taking into account the nature, scale and complexity of their activities, monitor the adequacy of their credit risk assessment processes...

Furthermore, Art.5c highlights the need to continue working towards the elimination of all references to credit ratings for regulatory purposes in Union Law, and this should be accomplished by 1 January 2020.

(5c) Without prejudice to its right of initiative, the Commission shall continue to review whether references to credit ratings in Union law trigger or have the potential to trigger sole or mechanistic reliance on credit ratings by the competent authorities, the sectoral competent authorities, the entities referred to in the first subparagraph of Article 4(1) or other financial market participants with a view to deleting all references to credit ratings in Union law for regulatory purposes by 1 January 2020, provided that appropriate alternatives to credit risk assessment have been identified and implemented.

4. Lack of accountability

Prior to the crisis it was quasi impossible to hold the CRAs accountable for failing in their rating activities, as they were freed from civil liability. EU regulators acknowledged this problem and now the CRAs are subject to civil liability by investors and issuers under the new CRA regulation applicable since 2013. Hence, under Art.35a, issuers or investors can claim damages from the CRAs if they can prove that they acted negligently when determining the ratings.

Art.35a. Where a credit rating agency has committed, intentionally or with gross negligence, any of the infringements listed in Annex III having an impact on a credit rating, an investor or issuer may claim damages from that credit rating agency for damage caused to it due to that infringement.

An investor may claim damages under this Article where it establishes that it has reasonably relied, in accordance with Article 5a (1) or otherwise with due care, on a credit rating for a decision to invest into, hold onto or divest from a financial instrument covered by that credit rating.

An issuer may claim damages under this Article where it establishes that it or its financial instruments are covered by that credit rating and the infringement was not caused by misleading and inaccurate information provided by the issuer to the credit rating agency, directly or through information publicly available.

4.2. U.S regulation of CRAs

In the U.S regulation towards CRAs existed prior to the 2008 financial crisis, but this proved not to be sufficient as it did not prevent for the same mistakes to happen again. For that reason and in light of their responsibility in the 2008 financial crisis, the CRAs currently face stricter regulation in the U.S.. The new regulatory approach to the CRAs, under the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010), addresses issues that were missing in the Reform Act of 2006, such as lack of accountability, overreliance on credit ratings and several conflicts of interest.

4.2.1 Dodd-Frank Wall Street Reform and Consumer Protection Act (2010), Title IX, Subtitle C

The text of the Dodd-Frank Wall Street Reform starts by listing the Congress' findings that justify the need for regulatory reform. First, the Congress recognizes the crucial role of the CRA's in the stability of financial markets which requires a public oversight. Secondly, given their commercial nature, the CRAs should be bound by the same commercial liability as any other financial businesses. Additionally, the Congress highlights that the CRAs are prone to a high level of conflict of interest, justifying the need for stricter governance. Finally, the Congress acknowledges that inaccuracy of past ratings have created an adverse selection mechanism resulting in financial mistrust and economic slowdown.

- (2) *Credit rating agencies, including nationally recognized statistical rating organizations, play a critical "gatekeeper" role in the debt market that is functionally similar to that of securities analysts, who evaluate the quality of securities in the equity market, and auditors, who review the financial statements of firms. Such role justifies a similar level of public oversight and accountability.*
- (3) *...the activities of credit rating agencies are fundamentally commercial in character and should be subject to the same standards of liability and oversight as apply to auditors, securities analysts, and investment bankers.*
- (4) *...credit rating agencies face conflicts of interest that need to be carefully monitored and that therefore should be addressed explicitly in legislation in order to give clearer authority to the Securities and Exchange Commission.*
- (5) *In the recent financial crisis, the ratings on structured financial products have proven to be inaccurate. This inaccuracy contributed significantly to the mismanagement of risks by financial institutions and investors, which in turn adversely impacted the health of the economy in the United States and around the world. Such inaccuracy necessitates increased accountability on the part of credit rating agencies.*

Considering all the findings abovementioned, Dodd-Frank Act requires regulators to implement a series of new rules that seek to improve the quality of the credit rating industry. Moreover, Dodd-Frank Act introduces a new SEC office to monitor credit rating and CRAs. This new office in is charge of supervising the activities of NRSROs, one of the responsibilities of the SEC Office for credit ratings is to carry out an annual examination of every single NRSRO followed by the issuance of a public report. In addition, the Dodd-Frank Act grants the SEC with increased powers to issue fines and penalties to CRAs in breach with the law. In general terms, the Dodd-Frank Act grants the SEC with more powers to set requirements for the credit rating industry and aims at providing the market participants with more and better information about the CRAs (Gorman, 2010)

1. Rating process

In line with fighting conflicts of interests, Dodd-Frank Act also includes provisions on internal governance and transparency. These refer to the disclosure of rating processes and methodologies under Section 932(q) and 932(r), intended at enhancing transparency. Moreover, the “Look-back” requirement under Section 932(a) requests the CRAs to apply internal policies to avoid the influence of employees on ratings’ accuracy. Furthermore, this same rule requests the SEC to conduct studies to determine whether the CRAs are applying these internal rules appropriately. Finally, under Section 932(a) each NRSRO must submit an annual report to the SEC reporting on the effectiveness of the internal governance management and possible changes that may affect the quality and integrity of ratings.

(932q)The Commission shall, by rule, require that each nationally recognized statistical rating organization publicly disclose information on the initial credit ratings determined by the nationally recognized statistical rating organization for each type of obligor, security, and money market instrument, and any subsequent changes to such credit ratings, for the purpose of allowing users of credit ratings to evaluate the accuracy of ratings and compare the performance of ratings by different nationally recognized statistical rating organizations.

(932r)The Commission shall prescribe rules, for the protection of investors and in the public interest, with respect to the procedures and methodologies, including qualitative and quantitative data and models, used by nationally recognized statistical rating organizations.

“Look-back” requirement:

(A) REVIEW BY THE NATIONALLY RECOGNIZED STATISTICAL RATING ORGANIZATION.—... The nationally recognized statistical rating organization shall— “(i) conduct a review to determine whether any conflicts of interest of the employee influenced the credit rating; and “(ii) take action to revise the rating if appropriate, in accordance with such rules as the Commission shall prescribe. “

(B) REVIEW BY COMMISSION.— “(i) IN GENERAL.—The Commission shall conduct periodic reviews of the policies described in subparagraph (A) and the implementation of the policies at each nationally recognized statistical rating organization to ensure they are reasonably designed and implemented to most effectively eliminate conflicts of interest.

(932,a) Each individual designated under paragraph (1) shall submit to the nationally recognized statistical rating organization an annual report on the compliance of the nationally recognized statistical rating organization with the securities laws and the policies and procedures of the nationally recognized statistical rating organization.

1. Conflicts of interests

Several conflicts of interests arising from the business model and services offered by the CRAs proved to have compromised CRAs' integrity and independence. In an effort to mitigate the several conflicts of interests, Dodd-Frank Act rules a series of provisions. For instance, under Section 939F, the SEC is required to conduct a twofold study that would assess the possibility to create a system to randomly appoint CRAs to issuers of structured finance products. Moreover, the SEC is requested to evaluate other alternatives to the current issuer-pays business model.

Section 939F. The Commission shall carry out a study of— (1) the credit rating process for structured finance products and the conflicts of interest associated with the issuer-pay and the subscriber-pay models; (2) the feasibility of establishing a system in which a public or private utility or a self-regulatory organization assigns nationally recognized statistical rating organizations to determine the credit ratings of structured finance products.

2. Overreliance

As in the case of the EU, the problem of regulatory and market reliance on credit ratings in the US is a salient concern. Thus, in order to reduce overreliance on credit ratings, Section 939A of Dodd-Frank Act requires the removal of several statutory references to credit ratings from various federal agencies. Moreover, Dodd-Frank act also requests market participants to decrease mechanistically reliance on credit ratings by encouraging them to conduct their own credit risk assessment.

(a) AGENCY REVIEW.—Not later than 1 year after the date of the enactment of this subtitle, each Federal agency shall, to the extent applicable, review - (1) any regulation issued by such agency that requires the use of an assessment of the credit-worthiness of a security or money market instrument; and (2) any references to or requirements in such regulations regarding credit ratings.

(b) MODIFICATIONS REQUIRED.—Each such agency shall modify any such regulations identified by the review conducted under subsection (a) to remove any reference to or requirement of reliance on credit ratings and to substitute in such regulations such standard of credit-worthiness as each respective agency shall determine as appropriate for such regulations.

3. Accountability

Prior to the crisis, the CRAs in the U.S were protected by the first amendment refereeing to freedom of speech, as their ratings were considered mere opinions. This implies that they were not subject to any type of liability and it was not possible to held them accountable for their mistakes. However, policy makers recognize that mere opinions cannot be the foundation of financial regulation. Hence, a new approach to the meaning of credit ratings, and the accountability of the CRAs was needed. Now, under Dodd-Frank Act this situation has changed and a new regulatory approach has emerged which makes CRAs subject to civil and expert liability. Therefore, Art 35(a) of Dodd Frank Act includes the CRAs under the same liability provision applicable to accounting firms or securities analysts.

Art. 35a. “Where a credit rating agency has committed, intentionally or with gross negligence, any of the infringements listed in Annex III having an impact on a credit rating, an investor or issuer may claim damages from that credit rating agency for damage caused to it due to that infringement”

The rule also details the conditions on which the CRAs can be held accountable in case of inaccurate rating. The suing party needs to prove by hard facts the interference of the CRAs on the quality of the rating.

EXCEPTION.—In the case of an action for money damages brought against a credit rating agency or a controlling person under this title, it shall be sufficient, for purposes of pleading any required state of mind in relation to such action, that the complaint state with particularity facts giving rise to a strong inference that the credit rating agency knowingly

or recklessly failed— “(i) to conduct a reasonable investigation of the rated security with respect to the factual elements relied upon by its own methodology for evaluating credit risk; or “(ii) to obtain reasonable verification of such factual elements (which verification may be based on a sampling technique that does not amount to an audit) from other sources that the credit rating agency considered to be competent and that were independent of the issuer and underwriter.”

4.3. Regulatory effectiveness assessment

A remarkable number of recommendations for CRAs’ reform have been proposed in both the EU and the U.S since the Enron scandal in early 2000s, which already brought to light some of the CRAs problems. In chapter two I discussed a series of reforms presented by experts and academics that could solve many of the malfunctions surrounding the CRAs and its activities. These are in short, the following: the creation of an agency to supervise the CRAs activities and assign agencies to issuers at random, greater transparency and greater due diligence, disclosure of methodologies, make the CRAs subject to civil liability, separate consulting services from rating services, require issuers to get ratings from more than one agency, and finally reduce the “hard wiring” of credit ratings from regulations and standards. Therefore, I will use the recommendations mentioned above to determine to what extent the new regulatory measures introduced in the EU and US are effective. I will identify which of the recommendations have been taken into consideration, and how effective they are regulating the CRAs.

4.3.1 EU regulation assessment

One of the measures advised by most experts was the creation of an independent agency that would oversee the activities of the CRAs. It was also advised that this agency had to be paid by the CRAs themselves. Although this measure has not been strictly applied, the appointment of ESMA in 2011 as an exclusive body overseeing the activities of the CRAs appears to be in line with the recommendation made by experts. ESMA therefore will serve as an independent agency to supervise the CRAs. The powers granted to ESMA include the possibility to request information to the CRAs, the conduction of investigations on CRAs, the imposition of fines, the temporary suspension of the use of credit ratings for regulatory purposes, and the withdrawal of the registration of a CRA. Considering that prior to the crisis no regulatory framework for the CRAs existed, neither were they supervised in any way, the creation of ESMA represents a huge step towards the good governance and management of the CRAs. If the powers and responsibilities held by ESMA are applied appropriately, this could ensure good governance within the credit rating industry, and help improving the quality and integrity of credit ratings and the credit rating industry as a whole (Altman et al. 2010). In practice, ESMA

establishes the requirements for a CRA to issue a rating, it oversees the CRAs` activities and can revoke the right to issue in case of failure to follow the right processes.

Regarding conflicts of interests, one of the measures recommended by experts and that has been applied under EU regulation is to require issuers to get ratings from more than one agency. Therefore, under Art 8c and 8d issuers of structured finance products are requested to appoint at least two CRAs and this could prove effective to tackle the shop for highest rating problematic. On the other hand, the rotation provision under Art. 6b appears to be limited, as it only applies to ratings on re-securitizations, and these have substantially decreased since the 2008 financial crisis. However, one could argue that this limitation may be due to re-securitizations being the products that received over optimistic ratings and that led to the 2008 economic crisis. Moreover, the conflict of interest arising from the issuer-pays model remains unsolved, although the problem seems to be the inability of experts and regulators in finding an alternative business model that would successfully replace the current issuer-pays model. Finally, one recommendation that has been supported by many experts was the separation of consulting services from the rating services offered by the CRAs. However, the conflict of interest regarding the interconnection of the dual services offered by the CRAs remains unaddressed, as so far there is no legal mention of this issue.

In regard to competition, the oligopolistic nature of the CRA industry has been perceived as a problem by market participants and regulators. The initial CRA regulation introduced in 2009 tried to address this problem by introducing a registration procedure, in which every CRA, big or small, needed to meet a set of requirements in order to be successfully registered and operate within the EU. Hence, this measure could give the opportunity to new players to show they can be trusted by investors as they had to comply with the same requirements as bigger CRAs, even though these new players did not have yet the reputation enjoyed by the bigger agencies. Additionally, the rotation-provision rule intended to mitigate conflict of interest is expected to boost competition among the credit rating industry, as it will force issuers to select different agencies. Finally, under Art. 8d issuers of structured finance products are requested to appoint at least one CRA with no more than 10% of the market share, this rule is in the right path to improve competition, as it offers smaller agencies higher chances to be appointed by issuers. It is to be noted that the big three still account for more than 95% of the market share in structured finance products and that just nine out of the thirty-one CRAs registered in the EU can issue ratings on structured finance products (Van de Pol and Verheij, 2017). Competition, though increased to nine players, remains limited for structured finance products. We can also argue that structured finance products buyers tend to overlook ratings coming from secondary CRAs. Indeed, investors tend to favor ratings from well-known CRAs research especially when understanding rating methods requires demanding capabilities (European Court of Auditors, 2015, n22).

When it comes to the problem of absence of accountability, the introduction of civil liability for the CRAs under the 2013 reform can be considered a positive step towards the successful regulation of CRAs. In first place, the fact that CRAs are now liable to investors and issuers may have a disciplinary impact on CRAs, which can motivate them to comply with the regulation currently in place. However, I believe the effectiveness of this rule could be limited by the many interpretations and conditions attached to the civil liability provision. For example, when claiming damages, specific terms in Annex III such as “damage”, “negligence” or “impact” are to be applied and interpreted in conformity with each national law. Thus, although in theory the introduction of civil liability is a positive measure, in practice the limitation of its applicability could raise doubts.

In regard to the quality of the rating process, the initial regulation introduced in 2011 already dictated that structured finance products should be treated differently from other products, and CRAs were requested to disclose information about the due diligence procedures they undertook when rating this type of instruments. Moreover, the 2013 reform also requires CRAs to disclose the methodologies and to present them to ESMA for validation. Overall, the measures targeting the rating process seem to be in line with recommendations, and if followed by both sides (CRAs and regulators) it should result in a more accurate and transparent rating process.

Finally, the overreliance issue, which lies at the core of all problems, is to some extent addressed in the last reform. In this sense, the problem with the initial regulation was that it mostly focused on CRAs’ conduct but overlooked how market participants and governments make excessive use of credit ratings erroneously. Now, Articles 5b and 5c intend to decrease excessive reliance on credit ratings by limiting the use of credit ratings for regulatory purposes. Article 5c appears to be an important step forward, as it rules that references to external credit ratings should be eliminated from EU law by 2020 if appropriate alternatives are implemented. Nevertheless, the elimination of references to credit ratings in EU law depends on finding other suitable alternatives. Therefore, if these alternatives are not found, the rule will prove to be completely ineffective. As Deipenbrock argues “*that conditionality might turn into ambiguity*”, and credit ratings will remain entrenched in regulation if alternatives to these are not found (Deipenbrock, 2016, pp.217).

Overall, the EU regulatory framework covers all the five problems discussed in this study, and a relevant number of the recommendations made by experts are introduced. It can be observed how this new regulation greatly focuses on surveilling and monitoring the CRAs. However, some important recommendations are still left untouched, such as the separation of dual services to mitigate conflict of interest, or the creation of an alternative business model that would replace the controversial issuer-pays business model. In 2015, an audit published by the European Court of Auditors (ECA) analyzed the effect of the new regulations on the CRA governance. Auditors found that although the lead time to become an authorized CRA largely decreased, lack of standards to assess the underlying rating

methodology still maintains a level of mistrust from investors for the new CRAs limiting in fact competition. In fact, ECA also points out that despite new CRAs being registered, European Union only consider the ratings of 4 CRAs for the assessment of its own credit. Finally, the audit found out that ESMA lacks internal documentation tools to efficiently follow over time the evaluation of the CRAs as inspectors found several cases of missing documents in the past investigations (European Court of Auditors, 2015, n22)

Table 4. Summary of EU regulatory assessment.

Problem addressed	EU Regulation	Assessment of EU Regulation
Quality of rating process	<ul style="list-style-type: none"> • Introduction of a registration procedure for all CRAs operating in the EU market. Rating methodologies used by the CRAs should be subject to assessment and validation by ESMA • Continuous rating update and publication on the European Ratings Platform • Creation of ESMA as a supervisory body to monitor CRA activity within the EU 	<ul style="list-style-type: none"> • It almost follows all the points recommended by the experts except for the fact that monitoring of the CRAs is not paid by the latter, but instead is by ESMA which is public
Overreliance	<ul style="list-style-type: none"> • Reduction of overreliance on credit ratings, external credit ratings should be eliminated from EU law by 2020 if appropriate alternative are found 	<ul style="list-style-type: none"> • Although the regulation intends to eliminate the references to ratings in the financial regulation, the effectiveness depends on the finding of alternatives to the CRAs ratings. Therefore, if they do not find alternative, this regulation will prove non applicable
Conflict of interest	<ul style="list-style-type: none"> • Introduction of rotation provision • Request market participants to appoint at least two different CRAs to issue the requested rating, being one of these a smaller CRA • Request disclosure of potential conflict of interest 	<ul style="list-style-type: none"> • The only measure that has been followed is the appointment by the issuers of more than one CRA. Although a rotation provision has been introduced, it is limited to re-securitizations. • Moreover, the two most important triggers of conflicts of interest remain untouched Issuer-pays business model, and separation of dual services offered by the CRAs.
Lack of Competition	<ul style="list-style-type: none"> • Introduction of a registration procedure for all CRAs operating in the EU market. • Request market participants to appoint at least two different CRAs to issue the requested rating, being one of these a smaller CRA • Introduction of rotation provision 	<ul style="list-style-type: none"> • The provisions introduced by the CRA regulations seem to be aligned with the recommendation made by experts. It is difficult today to assess the effectiveness of this regulation.
Lack of accountability	<ul style="list-style-type: none"> • Introduction of civil liability for CRAs in case of negligence and CRA regulation violation 	<ul style="list-style-type: none"> • The introduction of civil liability is a positive step forward. However, the rule is attached to too many interpretations which could limit its applicability

4.3.2 U.S regulation assessment

In some cases, the Dodd-Frank Act of 2010 dictates specific rules to be implemented right away by the SEC, but in other cases simply advises the SEC to conduct studies on, for instance, alternatives to the current CRAs' business model. This means that if the study does not come out with satisfactory alternatives, the concerning issues will remain unsolved. If this would be the case, and so far it appears to be, the rule and approach shows to be ineffective.

Regarding the lack of competition in the credit rating industry, the barriers to entry posed by the US government under the NRSRO regulation remain unaddressed. Despite the controversy surrounding the

big three for their role played in the crisis, still today these three big players make up for 97% of the market. As argued by Joffe, *“stiffened NRSRO registration and reporting requirements, increased the cost of entry for prospective entrants and thus limited the prospects for new competition and much-needed industry disruption. Even today, three firms continue to dominate the credit rating market”* (Joffe, 2018; p.1). Thus, in terms of competition the policy currently in place proves to be ineffective.

As mentioned before, one of the measures advised by most experts was the creation of an independent agency that would oversee the activities of the CRAs, and this had to be paid by the CRAs themselves. Strictly speaking, this measure has not been taken on board by U.S regulation. However, the Dodd-Frank Act grants the SEC increased powers to monitor and further regulate the CRAs, similar measure as the one implemented by EU regulation with the appointment of ESMA as supervisory body of CRAs. But in both cases the CRAs will not pay for mentioned services as these two bodies are public agencies. Within the new powers of the SEC lies the possibility to issue fines and penalties to CRAs that are proven to have acted negligently. In fact, two out of the “big three” have already paid a penalty for their wrongful judgements in the run up of the 2008 crisis. In January 2017, Moody’s entered an agreement with the U.S justice department, twenty-one states, and the District of Columbia, to pay a penalty of \$864m for its contribution to the financial crisis (Reuters, January 2017)

“Moody’s failed to adhere to its own credit-rating standards and fell short on its pledge of transparency in the run-up to the ‘great recession’,” principal deputy associate attorney general Bill Baer. (Reuters, January 14th 2017)

In 2015, S&P reached a similar agreement with the U.S Justice Department to pay \$1.375bn for its contribution to the financial crisis. In fact, the penalty paid by S&P constitutes one of the most ambitious cases for the U.S in relation with the collapse of the housing market back in 2008 (Viswanatha and Freifeld, 2015). Fines were also issued in the EU, although the amount to pay by the CRAs was much lower. For instance, ESMA fined Moody’s €1.24m in 2017 for finding issues in the evaluation methodology of 19 ratings. Furthermore, in 2018, ESMA fined Fitch €5.13m because of a conflict of interest where an important shareholder of Renault also was a member of Fitch’s board of shareholders (ESMA, 2017).

Although the creation of an independent agency to supervise the CRAs which was highly recommended by the experts has not been properly met, the increased powers granted to the SEC to regulate and monitor the agencies could bring positive effects. The fact that now the CRAs must submit annual reports to the SEC reporting on internal governance management, on top of the studies regularly conducted by the SEC itself on CRAs’ compliance, may at least encourage the CRAs to be more transparent and comply with the regulation in place. Additionally, the penalties paid by two of the biggest CRAs may serve as a deterrent to other CRAs to act negligently.

Under Section X, the Dodd-Frank Act requests the SEC to conduct annual examinations on NRSROs and the SEC acted upon this request. However, the results of the studies conducted by the SEC each year have suggested problems with several CRAs, but every year the conclusions are discouraging: *“The Commission has not determined whether any finding discussed in this Report constitutes a material regulatory deficiency, but may do so in the future”* (SEC,2015). This shows that although in theory a lot of efforts have been made, and changes in CRA regulation applied, in practice the impact to date is minimal. Perhaps the fact that there is currently a stricter regulation in place may to some extent deter credit ratings from committing such obvious failures as those committed prior to the crisis. However, the effective application of the regulation is still being questioned, although this could to some extent act as a deterrent.

Concerning the problem of overreliance, as in the case of the EU regulation, the Dodd-Frank Act requires the removal of several statutory references to credit ratings from various federal agencies. Moreover, Dodd-Frank act also requests market participants to decrease mechanistic reliance on credit ratings by encouraging them to conduct their own credit risk assessment. The rule requiring the removal of references to credit ratings specified that this had to be done within a year of the enactment of the rule. However, nine years have passed and references to credit ratings can still be found in many provisions (Rivlin and Soroushian, 2017).

In regard to the problem of accountability, or better to say the lack of it, The Dodd-Frank Act rules for the first time ever the application of civil and expert liability to the CRAs. The Dodd Frank Act includes the CRAs under the same liability provision applicable to accounting firms or securities analysts. Nevertheless, as it happens in the case of the EU liability rule, this is also subject to exceptions and interpretations. For instance, under the current regulation an issuer can claim damages if it is proven that the infringement in the rating was not caused by inaccurate or wrongful information provided by the issuer itself to the CRA. Although the application of civil liability to the CRAs is a fundamental and positive step towards the achievement of accountability, some experts are skeptical about the effectiveness of this rule due to the conditionality and exceptions attached to it. Some argue that issuers and investors bringing CRAs to court and make them pay for their negligence will be the exception instead of the rule, meaning that the chances to see many of the CRAs paying back for their mistakes are minimal (Haar, 2013, p.20)

Regarding conflicts of interests, the truth is that U.S regulators have not followed most of the recommendations made by experts. Although some of the recommendations were suggested by the Act, they are yet to be implemented. Hence, under U.S regulation of CRAs there is no legal requirement for issuers to get ratings from more than one agency, neither a rotation-provision as the one implemented by the EU. Moreover, the SEC has not come yet with an alternative business model for the CRAs, that would replace the controversial issuer-pays model. Neither has the SEC enforced a system where the

CRAs are assigned to issuers at random as it was suggested by many experts. Finally, the promising measure of separating the dual business offered by the CRAs (rating and consulting) has been ignored by U.S regulators as well. Therefore, after eight years since the enactment of the Dodd-Frank Act, experts note that regulators in the U.S have not applied yet many of the reforms suggested by the Act. (Rivlin and Soroushian, 2017)

Overall, the Dodd-Frank Act tried to address all five problems discussed in this study by granting regulators increased powers. The Act included some of the experts' recommendations, examples are the intention of removing credit ratings from regulatory provisions, or the introduction of civil liability. However, major recommendations aimed at correcting conflicts of interest were ignored (Rivlin and Soroushian, 2017).

Table 5. Summary of U.S regulatory assessment.

Problem addressed	US Regulation	Assessment of US Regulation
Quality of rating process	<ul style="list-style-type: none"> CRAs are requested to submit an annual report on the effectiveness of the internal governance and changes that could affect integrity of ratings CRAs are requested to disclose the rating process and methodologies CRAs are requested to apply internal policies to avoid influence of employees on rating outcomes 	<ul style="list-style-type: none"> US regulation also follows most of the points recommended by experts. The only exception is that CRAs are not paying the agency that monitors them
Overreliance	<ul style="list-style-type: none"> US regulation requires the removal of statutory references to credit ratings 	<ul style="list-style-type: none"> Nine years have passed and references to credit ratings can still be found in many provisions therefore the regulation has not been fully applied
Conflict of interest	<ul style="list-style-type: none"> CRAs are requested to submit an annual report on the effectiveness of the internal governance and changes that could affect integrity of ratings CRAs are requested to apply internal policies to avoid influence of employees on rating outcomes SEC is requested to evaluate other alternatives to the current issuer-pays business model 	<ul style="list-style-type: none"> US regulation has not followed most of the recommendations including the separation of dual services offered by the CRAs and the issuer-pays business model.
Lack of Competition	None	<ul style="list-style-type: none"> The barriers to entry posed by the US under the NRSRO regulation remain unaddressed
Lack of accountability	<ul style="list-style-type: none"> Introduction of civil and expert liability for CRAs in case of negligence and CRA regulation violation 	<ul style="list-style-type: none"> The introduction of civil liability is a positive step forward. However, the rule is attached to too many interpretations which could limit its applicability

4.4. Main differences between EU and U.S regulation

Prior to the crisis, Europe had relied exclusively on soft law to regulate CRAs, this was done by relying on the IOSCO code of conduct to manage CRAs, whereas the U.S, had regulated them some years in advance. Although CRAs were to some extent regulated in the US prior to the crisis, regulation was vague, and as we have seen it did not prevent the CRAs from making the mistakes that led to the crisis. The current regulatory frameworks targeting the CRAs both in the EU and the U.S are quasi identical. Although some differences can be appreciated, these are minimal, and in fact all the five problems

posed by the CRAs and discussed in this study are to some extent addressed by both regulations. In practice, these regulations led to the issuance of several unprecedented fines inflicted to the CRAs by regulating bodies.

Both the EU and the U.S have tightened rules on the CRAs in first place by granting increased powers to regulators, such as ESMA in the EU or the SEC in the U.S. These two public agencies have the responsibility to oversee and monitor the activities of the CRAs. In regard to transparency, The EU goes slightly further than U.S. Although in both regulations, disclosure of information about the rated entities is required, in the EU this has to be made publicly available, while in the U.S the CRAs only have the obligation to disclose such information to the regulators. In the case of disclosure of methodologies, both regulations require such action. However, the EU regulation is stricter in regard to methodologies as it requires CRAs to use rigorous methodologies to determine ratings and these methodologies should be subject to validation based on historical experience. On the other hand, U.S regulation does not prescribe how these methodologies should be, neither requires validation. In practice, failure to follow methodologies can lead to serious fines. For instance, both the SEC and ESMA fined the CRA Moody's \$16m for rating methodology breach in 2017 and 2018, respectively \$16m and €1.24m. It can be observed that fines issued by the SEC are systematically higher than fines issued by ESMA (ESMA, 2017)

Regarding the treatment of conflicts of interests, both the EU and U.S regulators have not yet come with an alternative to the controversial issuer-pays model. However, the EU seems to be more precise and stricter when addressing the issue of conflict of interest. Example of this is the requirement for the CRAs to adopt internal rules and procedures in order to mitigate possible conflicts of interests. For instance, ESMA fined Fitch €5.1m for breaching the procedure preventing conflict of interests (ESMA, 2019). Moreover, the U.S regulation does not legally require issuers to get ratings from more than one CRA, neither rules the rotation of CRAs provision, on the other hand these two provisions are ruled by the EU.

In regard to accountability, both the EU and the U.S have introduced for the first-time civil liability for the CRAs. Nevertheless, both regulations attached high levels of conditionality and exceptions to this provision. Finally, the treatment of overreliance is very similar in both regulations. Both the EU and the U.S require the removal of references to credit ratings from regulations, laws and standards. Nevertheless, this regulation is not empirically applied in US and not yet in application in the EU, limiting its effectiveness. They also request market participants to decrease mechanistic reliance on credit ratings by encouraging them to conduct their own credit risk assessment, although its effectiveness is yet to be proven.

Table 6. Summary and comparison of EU and U.S regulatory assessments.

Problem addressed	EU Regulation	US Regulation	Assessment of EU Regulation	Assessment of US Regulation
Quality of rating process	<ul style="list-style-type: none"> • Introduction of a registration procedure for all CRAs operating in the EU market. Rating methodologies used by the CRAs should be subject to assessment and validation by ESMA • Continuous rating update and publication on the European Ratings Platform • Creation of ESMA as a supervisory body to monitor CRA activity within the EU 	<ul style="list-style-type: none"> • CRAs are requested to submit an annual report on the effectiveness of the internal governance and changes that could affect integrity of ratings • CRAs are requested to disclose the rating process and methodologies • CRAs are requested to apply internal policies to avoid influence of employees on rating outcomes 	<ul style="list-style-type: none"> • It almost follows all the points recommended by the experts except for the fact that monitoring of the CRAs is not paid by the latter but instead is by ESMA which is public 	<ul style="list-style-type: none"> • US regulation also follows most of the points recommended by experts. The only exception is that CRAs are not paying the agency that monitors them
Overreliance	<ul style="list-style-type: none"> • Reduction of overreliance on credit ratings, external credit ratings should be eliminated from EU law by 2020 if appropriate alternative are found 	<ul style="list-style-type: none"> • US regulation requires the removal statutory references to credit ratings 	<ul style="list-style-type: none"> • Although the regulation intends to eliminate the references to ratings in the financial regulation, the effectiveness depends on the finding of alternatives to the CRAs ratings. Therefore, if they do not find alternative, this regulation will prove non applicable 	<ul style="list-style-type: none"> • Nine years have passed and references to credit ratings can still be found in many provisions therefore the regulation has not been fully applied
Conflict of interest	<ul style="list-style-type: none"> • Introduction of rotation provision • Request market participants to appoint at least two different CRAs to issue the requested rating, being one of these a smaller CRA • Request disclosure of potential conflict of interest 	<ul style="list-style-type: none"> • CRAs are requested to submit an annual report on the effectiveness of the internal governance and changes that could affect integrity of ratings • CRAs are requested to apply internal policies to avoid influence of employees on rating outcomes • SEC is requested to evaluate other alternatives to the current issuer-pays business model 	<ul style="list-style-type: none"> • The only measure that has been followed is the appointment by the issuers of more than one CRA. Although a rotation provision has been introduced, it is limited to re-securitizations. • Moreover, the two most important triggers of conflicts of interest remain untouched Issuer-pays business model, and separation of dual services offered by the CRAs. 	<ul style="list-style-type: none"> • US regulation has not followed most of the recommendations including the separation of dual services offered by the CRAs and the issuer-pays business model.
Lack of Competition	<ul style="list-style-type: none"> • Introduction of a registration procedure for all CRAs operating in the EU market. • Request market participants to appoint at least two different CRAs to issue the requested rating, being one of these a smaller CRA • Introduction of rotation provision 	None	<ul style="list-style-type: none"> • The provisions introduced by the CRA regulations seem to be aligned with the recommendation made by experts. It is difficult today to assess the effectiveness of this regulation. 	<ul style="list-style-type: none"> • The barriers to entry posed by the US under the NRSRO regulation remain unaddressed
Lack of accountability	<ul style="list-style-type: none"> • Introduction of civil liability for CRAs in case of negligence and CRA regulation violation 	<ul style="list-style-type: none"> • Introduction of civil and expert liability for CRAs in case of negligence and CRA regulation violation 	<ul style="list-style-type: none"> • The introduction of civil liability is a positive step forward. However, the rule is attached to too many interpretations which could limit its applicability 	<ul style="list-style-type: none"> • The introduction of civil liability is a positive step forward. However, the rule is attached to too many interpretations which could limit its applicability

To conclude, I observe that both regulators in the EU and the U.S seemed to have acknowledged the problems discussed in this study. Therefore, following some of the recommendations that were expressed by experts in the matter, both the EU and the US have introduced new pieces of regulation that intend to address the problems raised by the CRAs. However, small differences can be found between the two regulations. In my opinion these point to the different approach to financial regulation that in general differentiates the EU and the US. The US tends to interfere less in the market, appealing to a much more liberal approach, and in line with that the EU financial regulation seems to be slightly stricter. Table 3 illustrates the main changes introduced by the EU and the US in CRA regulation post 2008 financial crisis

5. Conclusion and recommendations

To what extent are the EU and the U.S effectively regulating CRAs?

I would like to conclude by answering all the sub questions raised in this study, followed by the answer to the main research question. Credit Rating Agencies play an essential role in the global financial markets by assessing the credit risk of many business, financial institutions, and sovereign states. However, their inaccurate ratings of structured finance products in the years prior to crisis contributed to the explosion of the latter. The reasons behind their failures in the run up to the crisis seems to be caused by a series of internal governance problems and regulatory mismanagement. Prior to 2008 economic crisis regulation on CRAs was rather vague. Moreover, during the 20th century U.S regulators did not directly regulate CRAs, instead they included their credit ratings as regulatory provisions, and thus, they increasingly granted them the power to act as financial gatekeepers. But in 2001, the Enron, Worldcom and Parmalat scandals were uncovered, and this brought the spotlight on the Credit Rating Agencies, who had given all these failed companies “investment grade” ratings within few days before their collapse. These events eventually led for the first time ever to the regulation of CRAs in the U.S. (McClintock and Calabria, 2012). Moreover, the EU had never issued specific regulation towards CRAs prior to the 2008 financial crisis. Instead, the EU used a soft-law approach to regulate CRAs, more concretely it solely relied on the code of conduct released by the International Organization of Securities Commissions (IOSCO) in 2004 (Parker and Bake, 2009). Nevertheless, public authorities have acknowledged the problems posed by the CRAs, namely: (1) quality of the rating process, (2) lack of competition, (3) several conflicts of interests, (4) lack of accountability, and (5) overreliance on credit ratings. Therefore, since the crisis a strong consensus has developed among regulators in both sides of the Atlantic around the idea that stricter regulation is needed to correct the problems posed by the CRAs.

In this study I intended to analyze to what extent the regulations introduced by the EU and the U.S towards the CRAs are effective in addressing the discussed problems. In the case of the EU, it was the first time that a regulatory framework for CRAs was introduced. This new regulation addresses to some extent all five mentioned problems. Overall, a relevant number of recommendations made by experts are included under the regulatory provisions, such as the creation of ESMA as an agency overseeing and monitoring the activities of the CRAs, the application of civil liability to the CRAs, the intention to remove references to credit ratings from EU law, or rules for the internal governance of the CRAs intended to mitigate possible conflicts of interests. However, some important recommendations are still left behind, such as the separation of dual services in order to mitigate conflict of interest, or the design of an alternative business model that would replace the controversial issuer-pays model currently in place. Moreover, some of the provisions under EU regulation, such as the civil liability provision or the removal of credit rating references, are attached to high levels of conditionality that may hinder the effectiveness of these rules.

In the case of the U.S regulation, similar remarks can be formulated. Overall, the Dodd-Frank Act tried to tackle all the five CRAs problems discussed in this study by granting regulators increased powers. As in the case of the EU with the creation of ESMA, the Dodd-Frank Act also confided the SEC with the responsibility to oversee and further regulate the CRAs. Additionally, the Act also included some of the suggestions recommended by experts, examples are the intention to remove the mention of credit ratings on regulatory provisions, study the possibility of an alternative business model for the CRAs, or to make CRAs subject to civil and expert liability. However, the U.S regulation lags a bit behind when treating internal governance of the CRAs, and the rules intended to mitigate conflicts of interests could be considered less precise than the ones of the EU regulation. Similar to the EU case, the civil liability provision or the removal of references to credit ratings are attached to high levels of conditionality that can pose a problem to the effectiveness of these rules. Overall, the truth is that most of the promising suggestions made by the Dodd-Frank are yet to be implemented by regulators.

To conclude, understanding how to fix the problems posed by the CRAs while preserving the useful role they play as gatekeepers of the financial markets has proved to be an arduous and complex task. Efforts have been made by regulators on both sides of the Atlantic, and regulation towards CRAs is now much stricter than it was prior to the crisis. However, in practice these regulations still need to be tested, many questions among experts on how effective they really are still arising. The satisfactory effectiveness of these rules will ultimately depend on the practicability of their enforcement. In fact, since 2015, the CRAs had to pay several fines to both ESMA and SEC. The record was a \$16m fine inflicted to Moody's in 2018. I question if this amount is really dissuasive for the CRAs or is just a drop in the ocean as Moody's declared \$4.4bn revenues in 2018 (Moody's 2018 Annual Report).

To finalize, I would like to suggest the a few recommendations that could further strengthen the current regulatory framework. Both the EU and the US should invest in further looking into a new business model that would ultimately replace the issuer-pays business model still in place. When it comes to competition, the US should introduce more explicit measures in favor of breaking the oligopolistic nature of the CRAs' market and facilitate smaller and newer CRAs to have a chance in the market. Overall, I think it would be beneficial if both the EU and the US would agree in a common framework to regulate CRAs, adopting best practices and harmonizing the current trends.

Limitations

The findings of this study have to be seen in light of some limitations. For example, I took the decision to analyze the CRA regulation introduced after the 2008 crisis in light of the scandal that followed that event. However, since the end of the crisis and the introduction of new regulation, no other economic meltdown has occurred that could have tested the integrity of the ratings issued post-crisis. Moreover, and in line with the above mentioned, although CRAs are now object to civil liability, so far, no CRA has been brought to court. Therefore, we haven't had the chance to see to what extent in practice the new civil liability framework is effective. Last but not least, as it is common in qualitative studies, all recommendations and opinions discussed in this study are based on particular economic and policy theories, as well as their evaluations. For what, it is very difficult to issue a conclusion that would catalogue these policies of being truly effective or right, as the possibility of bias is always present. Taken all these limitations into consideration, I tried to bring together as many opinions as possible and I analyzed them with objectivity.

Suggestions for further research

Researchers could further develop this research topic by studying the impact of the CRAs regulations on financial stability on a longer time frame. Indeed, as most of the measures were very recently introduced, we do not have the complete overview on the long run of the impact of regulations. Furthermore, research needs to be conducted from 2020 onwards to analyze the effectiveness of the elimination of reference to ratings in EU regulation. In addition to this, further quantitative studies could be conducted to assess whether the introduction of a second rating agency has a real positive impact on competition. Indeed, buyers can overlook the rating of the minor agency resulting in a selection bias. Additionally, it would be relevant to study how many cases have been brought up against the CRAs since the introduction of civil liability.

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