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RATING AGENCIES: CONFLICT
OF INTERESTS

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“A man who does not know the truth is just an idiot.
But a man who knows the truth and calls it a lie is a crook”

Bertolt Brecht

SUMMARY

This project discusses about Credit Rating Agencies and the conflict of interests that they face with its clients; those entities assessed and being rated.

This is a very interesting topic since, as it will be analysed, Credit Rating Agencies' performance have huge impact in the economy, affecting the whole world. Nevertheless, few people know about them, how they work, its composition, and the crucial role that they play in the economy.

By writing this essay I want people to realize how important those entities are due to its reference role which facilitate funding worldwide. However, its business practice is still too murky so stricter rulers and supervision measures are required.

For investigating this subject, a research of different economic magnitudes such as risk premium and market index, from two different countries, will be done. Also a real case will be presented as a consequence of the bad practice of Credit Rating Agencies due to lack of enough supervision.

KEY WORDS: Credit Rating Agencies, conflict of interest, "The Big Three", Hannover Re.

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1. INTRODUCTION

The recent financial crisis (2006-2008) that has affected the whole world, has made people think deeply about it. Situations like this make us doubt whether the economy is well regularized, if economic agents are well structured, if there are enough supervision measures and agents to carry them out...

Nowadays, one of the economic agents that have a huge influence on the economic world and also played an important role in the crisis are The Credit Rating Agencies. Particularly, after the crisis, its performances, rights and obligations have been much criticized, even they have been incriminated of scam.

The aim of this essay is to present the role of *The Rating Agencies* in the markets as information intermediaries; analyse its main characteristics and observe how their rates affect different economic magnitudes such as risk premium and market index.

2. BACKGROUND

Credit Rating Agencies, also called CRAs, emerged in United States, with the railway boom (1860) to measure the risk of investing on railways. Standard & Poor's was the first one to set up in 1860, then Moody's (1906) and Fitch appeared. In 1924 Moody's ratings covered almost 100% of the bond market in the U.S. (Ruiz Saiz, 2012)

2.1 Standard and Poor's

Henry Varnum Poors (USA) saw in the railway boom a business opportunity. He published a book based on financial and operational railways and canals U.S. information, "History of Railroads and Canals in the United States" (1860). It was a collection of the main financial and operational railway companies in United States and information concerning them.

Henry Varnum Poors and his son William founded a company, "H.V. and H.W. Poor Co" which published an annual and updated version of this book.

A few years later, in 1906, Luther Lee Blake founded the Standard Statistics Bureau, in order to provide the same information about non-railway companies. The two companies merged in 1941 to become Standard & Poor's Corp.

The company was acquired by McGraw-Hill Companies, Inc. in 1966.

2.2 Moody's

In 1900 John Moody (New Jersey, USA) published “Manual of Industrial and Miscellaneous Securities”, its first assessment of the stock market; and founded John Moody & Company. The sale of this handbook was a success. (Efxto, 2013)

The 1907 crash led to an increase in the demand of independent financial analysis such as the handbook published by John Moody, however he was forced to sell his business due to lack of capital.

As mentioned before, at that time, in the U.S. there was a large market of private bonds for finance the booming railway industry, so Moody's came back in 1909; publishing “Analysis of Railroad Investments”. This handbook was exclusively focused on railway sector bond market and was the first book to make assessments with a letter scale. John Moody is known for making up the triple and double letter grades (A, AA, AAA ...)

Also, it was the first company that started to publish government bonds' ratings in an extensive and accessible way. Additionally, it was the pioneer on charging a subscription fee to investors for the rating information.

2.3 Fitch

The company was founded by John Knowles Fitch on December 24, 1913 in New York as Fitch Publishing Company. In 1997 it merged with IBCA Limited based in London, which main owner is Fimalac, a French holding company. It is the smallest of the three Rating Agencies described above.

Nowadays, there are more than 72 rating agencies from small size to large ones. They are engaged in assessing the credit risk associated with debt securities or structured finance instruments - including government bonds, CDs, corporate bonds, municipal bonds, collateralize securities (CDOs) or mortgage-backed securities -, borrowing entities, and even the creditworthiness of governments and their securities.

Credit risk is the risk that a lender face due to the possibility that the borrower does not return to him the money or does not pay the corresponding interests.

The risk evaluation of these obligations is determined by the probability that the debt issuer (the borrower) will fail to make the related interest payments on the debt, combined with other environmental factors.

Despite the wide variety of rating agencies existing in the world, 95%¹ (Alessi, Wolverson, & Aly Sergie, 2013) of the market is dominated by 3 agencies: Standard & Poor's, Moody's and Fitch, resulting in an oligopoly. It is for this reason that they are called "The Big Three".

Standard & Poor's is the largest one with more than 1,400 analyst in 25 countries and 1.2 million credit ratings published. (Standard&Poor's Rating Services, 2014) Its way of evaluation is focused on the borrower's ability to meet its financial obligations in full and on time. Standard & Poor's is closely followed by Moody's with 1 million ratings and 1,200 analyst and supervisors. Moody's way of evaluation is focused on measuring the loss that the investor may suffer if the borrower defaults on its obligations. Then, it is Fitch with 350,000 ratings published.

This oligopoly is due to the reputation that those Rating Agencies have, that make investors trust on them. It is also partly prompted by some legal requirements that Federal Reserve or the European Central Bank have imposed to companies, in which a minimum rate given by one or even two of the Three Big Rating agencies are required for investing in certain assets.²

Credit Rating Agencies have a crucial financial role. A credit rating has a direct impact on the interest rate a security pays out: a lower rating (according to the Rating Agency, high probability of default) leads to higher interest rates.

As Bolsas y Mercados Españoles from now on BME, specifies on its webpage "lower grades are awarded to those issues of greatest risk, that is, lower grades are given to those issuers for which higher risk of default is charged. The bonds with high profitability, called high-yield bonds, are issued by lower-rated issuers."

Therefore, these ratings, mainly given by the Three Big Rating Agencies, are very important since the financial expenses of the entity depend on them: a lower rating force the issuing entity to issue bonds at higher rate, to compensate the investor's risk. (BME , 2014)

Furthermore, Credit Rating Agencies facilitate to companies, banks and governments the access to bond markets all around the world. They also help investors to measure the risk of lending money to rated entities, providing a comparable worldwide reference; being that The

¹ "The three major rating agencies hold a collective market share of roughly 95 percent. Their special status has been cemented by law—at first only in the United States, but then in Europe as well," explains an analysis by Deutsche Welle.

² In United States those limitations have been almost eliminated with the Credit Rating Agency Reform Act of 2006.

Basel II, which were recommendations on banking laws and regulations issued by the Basel Committee on Banking Supervision, gave to the Rating Agencies a crucial role. However, in 2013, Basel II was updated with Basel III, being one of the main changes the removal of the Credit Rating Agencies' role.

Three Big Agencies use a letter-classification known by all investors. As described by the BME, The Three Big Agencies use an alphabetical classification system with added numbers.

As it can be viewed in Table 1(attached), the highest possible rating assigned to the bonds of an issuer by Moody's Agency is Aaa; for Standard&Poor's (S&P) is AAA and for Fitch is also AAA. The rating CCC (S&P and Fitch) or Ca (Moody's) considers the issue as highly speculative with great risk and great uncertainty. DD stands for an issuer in default. Being in default means a situation in which the issuing entity of the debt, has fail to meet the legal obligations of the debt, has unpaid several coupons.

Investors value and trust on these ratings because they are "independent" from the institutions where they will invest.

What is more, all this means that investors are not limited solely to investing in known businesses by them, they can invest globally thanks to these ratings and the information given. So an investor can invest in a company that he had never heard about it before, because with the rating he is able to estimate its financial status. However, investors need to be aware that Credit Rating Agencies only provide investment advice, focusing solely on the assessment of default risk.

Ratings provided by the Rating Agencies have other functions besides making easier investment and capital raising for companies, banks and sovereign issuers. Issuers use credit ratings as references for financing contracts. Examples include the maintenance requirement of the rating in order to renew a credit, or the right to terminate a contract due to a rating decline. (Palacios García, 2012)

Moreover, some financial markets' regulators limit the acquisition of certain emissions to financial institutions, demanding a minimum rating as an essential requirement. Thereby, limiting the risk acquired by several key sectors of the economy. Also, they are used as constrain in laws and financial regulations.

3. RATING AGENCY'S BUSINESS MODEL

Rating Agencies can be managed by two different kind of business model:

3.1 Investor-pays model

On the one hand, *investor-pays model*; based on subscribers' payments.

In this model, ratings are not published publicly so investors who are not subscribed in the Rating Agency can not have access to the information. The main source of finance for the Agency is the subscription fee that subscribers pay for having access to the information of the ratings published. Credit Rating Agencies rate those entities that subscribers want to be rated, because they want information about them. Also Credit Rating Agencies can rate entities that they considered important for future subscribers. In any case, the assessed entity do not ask for an evaluation.

There is no relationship between the Credit Rating Agency and the issuer of the rated debt, hence only public information is used by the Rating Agency for assessing the issuing entity. This is a negative point because using only public information may lead to inaccurate ratings, being that any crucial internal information is taken into account.

The positive point is that as there is no relationship between the Credit Rating Agency and the issuer of the rated debt, there can not be any distortion of the ratings nor any conflict of interest, resulting in high transparency.

Nonetheless, with the technological progress, the ratings and the reports were shared each time more easily among people who had not paid for them (by photocopies, fax, computers...) so “The Big Three” decided to adopt another business model (which will be explained below) over 70’s . At present time, there are also some small rating agencies that still use *investor-pays model*.

3.2 Issuer-pays’ model

On the other hand, from 1970’s until now, most of the large rating agencies are based on the *issuer-pays’ model*.

The main differences with the other model is that the ratings are published publicly, so anyone has access to this information and that the one who pays to the Credit Rating Agency is the issuing entity, not the investors (subscribers).

In this model, the issuing entity orders a solvency assessment and pays for the service and the given rate. This payment can be from \$1,500 to \$2,500,000 depending on the size and type of the security rated. For this reason, in this model, the issuers’ payments are the main source of funding for the agency, leaving subscribers in the background. After the request for the rating, the Credit Rating Agency assess the entity. However, in addition to public information that was used in the previous model, the Credit Rating Agency have access to more precise information -such as confidential information- due to the relationship that

exists between the issuing entity and the Credit Rating Agency. Hence, the last mentioned can have a more accurate and widespread view of the company being rated.

Nevertheless, this situation leads to the problem of conflict of interest: Credit Rating Agencies are paid by the issuing entity for the assessment of their own creditworthiness; instead of being paid by the investor (as it was in the first model.)

Obviously, Credit Rating Agencies are interested on serving their client's wishes (sometimes pushed by them). Being that if their clients are not satisfy with the rating provided, they will deny the rating. (Zunzunegui, 2006) As a consequence, the rating will not be published nor the Credit Rating Agency will be paid for the service. Alternatively, the issuing entity can change of Agency without paying for the service, meaning a loss of a client to the Rating Agency. (Area de Cooperacion UVA)

Conflicts of interest are widespread ethical problems and for that reason they deserve special attention. They are present in almost all human decisions, when we interact with others.

Other examples of this kind of problems in the financial field could be the situation in which a financial analyst values positively but unfairly some shares of a company because the company where he/she works for is involved in trading such shares. Another example in the health sector could be a situation in which a doctor suggests to a patient performing certain tests or treatments in their own clinic or in another clinic in which the doctor has economic interests or which is owned by any familiar.

This issue can be associated with the agency theory also called principal-agent theory. This relationship is defined as a relationship under which one or more person -the principal(s)- engage another person -the agent- to perform some service on their behalf which involves delegating some decision,, making authority to the agent. In this project, the principal is the company rated and the agent is the Credit Rating Agency.

Both entities have their own utility function, what means that they have their own goals and values. On the other hand, both utility functions can conflict as they do not share same goals.

The principal (company being rated) pays fees for being rated to the agent (Credit Rating Agency). This payment should provide the principal a kind of influence capacity on the rate given. If the principal is a key client, Credit Rating Agency is expected to satisfy them and probably will not downgrade its ratings or if they do, they will do it with caution.

Lately, last mentioned model has been very criticized since the widespread doubt about the rating efficacy and transparency.

4. PERFORMANCE ISSUING ENTITY

Within the most commonly used model nowadays, the *issuer-pays' model*, there are two possibilities of being rated. The first one is by requesting it. However, there also exists the possibility of being rated without requesting it.

In the first case, the entity (private, public or sovereign entity) request a rating for different purposes.

Often the issuing entity which want to be rated, sells bonds to raise money, since it is an easy and cheap way to borrow. A bond is a security that represents a promise to pay and it has the aim of obtaining finance for the bond issuer. The bond issuer can be a public institution, a supranational institution, a state, a regional government, a municipality or a private institution.

For many investors, ratings are a critical element in pricing securities and are usually used as an investment guide. In other cases, as mentioned before, those credit ratings are used as references for financing agreements or needed as a requirement. The Big Three's ratings are broadly used and clearly understood by all investors around the whole world, making a bond more attractive to a wider range of potential buyers and restricting business uncertainty.

Nowadays credit ratings are crucial for reaching global markets since the issuer entity shares and communicates its financial situation certificated by a "famous trusty" Rating Agency. (Moody's, 2014) In fact, developing countries depend on strong sovereign credit ratings to access funding in international bond markets.

After the rating application, the initial rating meeting is held, in which the issuer supply to the Rating Agency some crucial information such as "background and history of the entity, industry trends, national political and regulatory environment, management quality, experience, attitude toward risk-taking, management structure, corporate and debt structure and financial position among others", as Moody's states in its webpage.

For studying the issuer entity, the Credit Rating Agency assigns a lead analyst to prepare a recommendation to the rating committee. The Rating Agency Committee analyses and evaluates all the information in an objectively way, taking into account both public and private information about the entity. At the end of the process, which is strictly confidential, the issuer will be informed of the rating given.

If the issuing entity thinks that the rate is unfair or it is dissatisfied with it, the client is able to appeal to the Rating Agency. The client also have the right to choose whether its rating will be made public or not, or public it with a limitation.

Commonly, a new rating is distributed by press release simultaneously to the major financial media worldwide. This press release will also appear on the corresponding website of the Credit Rating Agency that has issued the rating such as: www.moody.com, www.standardandpoors.com or www.fitchratings.com; as well as on other relevant regional and local media.

A professional relationship between the issuer entity and the Credit Rating Agency is set up once being rated. This relationship is also viewed as a batches' sale, by which rating agencies assess an issuing entity with the condition that the issuing entity undertakes to use the same rating agency for future emissions. This means that the issuing entity is committed to using the service of that Rating Agency.

Periodically, at least annually, the agency will get in touch with the entity for assessing the evolution of the company and request significant additional information. Now, according to the MEMO/13/13 European Commission with reference to sovereign countries, sovereign ratings would have to be reviewed at least every six months (rather than every 12 months as it was currently being applied under general rules). (European Commission, 2013)

On the other hand, there also exists the possibility of being rated without requesting it. The rating agency rates a company or a sovereign state only with public information, being that it does not imply any meeting between the credit rating agency and the entity rated.

This service do not involve any payment since the issuing entity has not apply for the service. However, sometimes, the Credit Rating Agency gives an unsolicited rating to an entity pretending to be paid (by the entity) for assessing the entity in the future It is like going fishing; first drop a line (CRA gives an unsolicited rating) and then they wait until the entity hook (the entity hire their services in the future.)

It can be appreciated that this situation is related with a marketing strategy, marketing inbound/pull strategy. The Three Big Rating Agencies have already a high visible and known name. All investors in the world and all companies know who those agencies are and the prestige that they have. So clients seek out their services in an active way. Those Rating Agencies have a customer relationship management and for engage clients, they use discounts and promotions on their services.

Several researches have proven that unsolicited ratings are lower and less accurate than solicited ratings, one of the reasons is the lack of the business' private internal information. (National Bank of Belgium, 2006)

Later we will address this issue, analysing an unsolicited rating case, the Hannover case.

5. GOVERNMENTS AS ISSUERS

Governments and countries also want to take advantage of being rated. Besides increasing the number of potential investors, sometimes they need a rating for legal issues. Other times, Credit Rating Agencies convince sovereign States of the necessity of their services, telling them that the ratings will take place regardless of the decision of the State and that it is better for the State to "cooperate" instead of facing a rating. (Ugeux, 2011)

Sometimes, sovereign bonds³ must have been rated by at least two independent entities to enter the market. Therefore, the regular process is that countries go to any of the Big Three - S&P, Moody's or Fitch- to ask them for a credit rating for their debt. This service, as well as for any company, is paid; although those fees paid by sovereign entities are confidential data difficult to obtain.

In Spain, Dirección General del Tesoro y Política Financiera, which depends on Ministry of Finance, has been engaging Moody's and Standard & Poor's (S&P)'s services, since many international investors require that the Spanish public debt has a minimum rating of one or two agencies to be able to acquire it.

Concretely in 2009, the Spanish Government paid half a million euros for rating Spanish debt. And in 2010 (Caballero, 2010), the Spanish government paid between 365,000 and 530,000 euros to the Three Big agencies (S & P, Moody's and Fitch) to get a credit rating.

However, there are some governments, which do not want to be rated by these Credit Rating Agencies. Those countries are: Belgium, Australia, Germany, India, Italy, Japan, Netherlands, Argentina, France, Switzerland, UK and USA.

These countries do not want their debt to be rated. So, when one of these countries is rated (without paying any fee, of course), it is called an "unsolicited rating".

³ In Europe, government bonds are also known as sovereign bonds. In UK, government bonds are also known as "gilts"; in France, as "OATs"; in Germany as "Bunds"; in Italy, "BTPs". In the United States, government bonds are also known as "U.S. Treasuries" or "T-Bills" – (AFME, Association for Financial Markets in Europe., 2014)

“Ratings Services may also assign Unsolicited Credit Ratings when Ratings Services: (a) believes sufficient market interest exists for the Rated Entity or (b) uses the Unsolicited Credit Rating as a component of its Credit Ratings on other Rated Entities (e.g., a credit support provider or a dependent Credit Rating for another Rated Entity)” (Standard&Poor’s, 2012) as Standard and Poor’s indicate in their web page.

Also, Moody’s affirm that “As a publisher of opinions about credit, MIS⁴ reserves the right to issue unsolicited Credit Ratings. The purpose of this policy is to provide greater transparency to market participants with respect to published Credit Ratings that are initiated by MIS EU⁵”

Other reason why The Big Three Rating Agencies (S&P, Moody’s and Fitch) rate these governments is among others, because there are companies which are in those countries that do want a rating.

6. CRAs’ STOCKHOLDERS AND RESPONSIBILITY

Although information about the The Big Three Rating Agencies’ composition is quite difficult to obtain, -which may imply lack of transparency- in this paragraph we will discuss about it.

STANDARD AND POORS – It belongs to the publisher McGraw-Hill Companies, which is a publicly traded company, also called in United Kingdom as public limited company. Its business has a direct relation with education. McGraw’s main shareholder is Capital Group (12, 3%). Other relevant shareholders are Vanguard Group which is an American investment management company, Black Rock which is a multinational investment management corporation based in New York City, the investment bank Oppenheimer Funds, the investment company T. Rowe Price, Fiduciary Management, Independent Franchise Partners...

MOODY’S – Belongs to Moody's Corporation and it shares its main stockholders with S&P: Capital Group; State Street; Black Rock; Vanguard Group; and T Rowe Price; all of them from the financial sector. Other important shareholders that are not shared with S&P are Berkshire Hathaway Inc (12, 47%), Capital Research Global Investors (part of Capital Group), Value Act Capital Management, Neuberger Berman and Invesco Advisers.

⁴ MIS refers to Moody’s Investors Service, Inc.

⁵ MIS EU refers to those MIS entities registered in the European Union pursuant to the EU regulation for credit rating agencies.

Both Moody's and McGraw are headquartered in Manhattan.

FITCH – Also called Fitch Group, Fitch Rating or Fitch Inc, headquartered in New York and in London.

Its shareholders are divided in two: 60% Fimalac (Financière Marc de Lacharrière) in Paris and The Hearst Corporation 40% (publisher of several newspapers and magazines).

It should be highlighted that those companies which are Credit Ratings's shareholders are also rated by The Three Big Rating Agencies.

For example: Capital Group is a shareholder (12.5%) of McGraw-Hill Cos (S&P's owner). S&P rates Capital Group, so here we can appreciate an indirect relation. The company being assessed is shareholder of the owner of the rating entity; with the possibility of influence on its ratings. The same happens with Moody's as Capital Group is also a strong shareholder of Moody's.

On the other hand, Capital Group is a company which operates on the financial sector. This is a very sensitive sector, for this reason, ratings given to other companies in this sector will affect directly to the company more than if it was another sector. As we have just said, Capital Group is an influential shareholder of two CRAs so this company could influence on the financial sector to take advantage of the situation. Situations such as large losses of a big companies in the sector can be one of the consequences. Situations like the one just mentioned can impact the market, decreasing market's transparency.

A fact quite impressive since Rating Agencies should be completely independent from both the company going to be evaluated, and surely independent from the sector in which it operates. The European Commission MEMO/13/13, has issued a limitation about this subject:

“If a shareholder of a CRA holds an important position in other CRAs or in an instrument rated by a CRA, this could lead to a conflict of interest that could affect the quality of ratings.

To this end the compromise introduces limitations on shareholding in CRAs:

- (1) 5% limitation in cross-shareholding of a CRA;
- (2) A disclosure regime for rating instruments of shareholders holding more than 5%; and
- (3) A prohibition for rating instruments of shareholders holding more than 10%.”

With those limitations the European Commission pretends to enforce the independence of the Rating Agencies from their shareholders and from other CRAs. Also as being established: “the new rules will require CRAs to disclose publicly if a shareholder with 5% or more of the capital or voting rights of the CRA holds 5% or more of a rated entity, and would prohibit a shareholder of a CRA with 10% or more of the capital or voting rights from holding 10% or more of a rated entity.”

A European Commission proposal for 2014 is to make stricter the existing laws concerning independence of CRAs. They have proposed a “rotation of the debt issuers every 3 years between the agencies that rate them. What is more, ratings from two different rating agencies would be mandatory for complex debt investments. A big shareholder of a credit rating agency could not simultaneously be a big shareholder in a competitor” as it is commented in the European Commission webpage.

A fact to be foregrounded is that rating agencies are classified as private agencies, they do not have any legal responsibility. Ratings represents mere opinions on credit quality and do not guarantee the product or a recommendation for purchase.

In fact, U.S. rating agencies have got the protection of freedom of speech, the same that protects freedom of the press; to shield against claims of investors harmed by their bad practices. Meaning that they do not respond to damages caused by their performance.

For all the above commented, CRAs’ “opinion” should not impact significantly, rather negative nor positively in the economy.

In this essay we want to analyse i) if the ratings affects directly or indirectly the economy, and if so, how and the degree of importance of those effects. ii)Also, it will be analysed if there is any conflict of interest between Credit Rating Agencies and companies and if so, how it is reflected.

7. ANALYSIS OF THE DATA

For studying the first point i) the existence of a relationship between the ratings received by a country and its impact on the economy, we will study two different countries, concretely Portugal and France. We think that studying the impact on a country is the best way of doing this analysis since an effect on a country will affect also the entities and companies established in that country.

Portugal has been selected because Portugal was one of the European countries “rescued” along with Ireland and Greece. What is more, in October 2011, European Commission considered the idea of prohibiting Rating Agencies to publish ratings on rescued EU countries, since the ratings could exacerbate the debt crisis in the Eurozone. (Nieto, 2011)

The Government of Portugal blamed them about the crucial situation that was facing Portugal, when its debt was rated as junk bond. By analysing it, we will see if those arraignments were true, if Portugal arrived at that situation alone by its bad management or if Rating Agencies helped this country sink.

On the other hand, France has been selected as it is viewed as a strong country that has not been one of the worst in Europe. For summarizing, two European countries with very different situation have been selected for analyse the impact of CRAs in different environments.

As a measure of the impact on the economy, there will be considered two quantities with different meanings: premium risk and the stock market index.

Premium risk is an index that refers to the interest that a state has to pay to investors who have lent money to the State by buying some of its debt (in the form of debt securities, bonds). The risk premium is established by comparing the German 10 year’s bond, as it is considered the safest.

As an example: if Spain sells sovereign bonds (debt security) at an interest of 5% and Germany does so with a rate of 1%, the difference between the two is 4%, or what is the same, the Spanish risk premium would be 400 points.

An increase in the premium risk of a country implies an increase in the interest rate. (Hoyos Miller, 2013)

The stock market index is an indicator of the market’s evolution based on the behaviour of the prices of the most representative securities. The stock market index that we will use in this essay will be the one of Portugal, the PSI 20 index and the most important of France, CAC 40 index.

We have obtained all data with reference to both index in the webpage datosmacro.com. There, it is shown the stock market index as a number expressed in basis points and as a percentage. The percentage shows the increase or decrease of the index and it is quite similar among different stock indexes. The number expressed in basis points vary a lot among different indexes because each index has started from a different basis called “market basis”.

The market basis of an index is a number in which an index starts to be traded on a stock exchange. The market basis is a number without importance, it is the same choosing 5,000 points as a base or 1,500 points, since the important factor is the variation of the index.

The base value of the CAC 40 index was established in 1987 and it was 1,000 basis points. The base value of PSI 20 index is 3,000 basis points.

First of all, we will study how a rating given, in the first case to France, and then to Portugal affects the risk premium of each country.

Due to the scarcity of data, we have taken all the ratings given by Standard and Poor's, Moody's and Fitch, in this order. As the Three Credit Rating Agencies use different ways to rate, an equivalence table (see Table 1 attached) has been used for comparing the three kind of ratings. Then all ratings have been equated taking the S&P model as a base.

As mentioned before, all data has been acquired from the webpage datosmacro.com. Here we find the risk premium of both countries, expressed in basis points; and its variation.

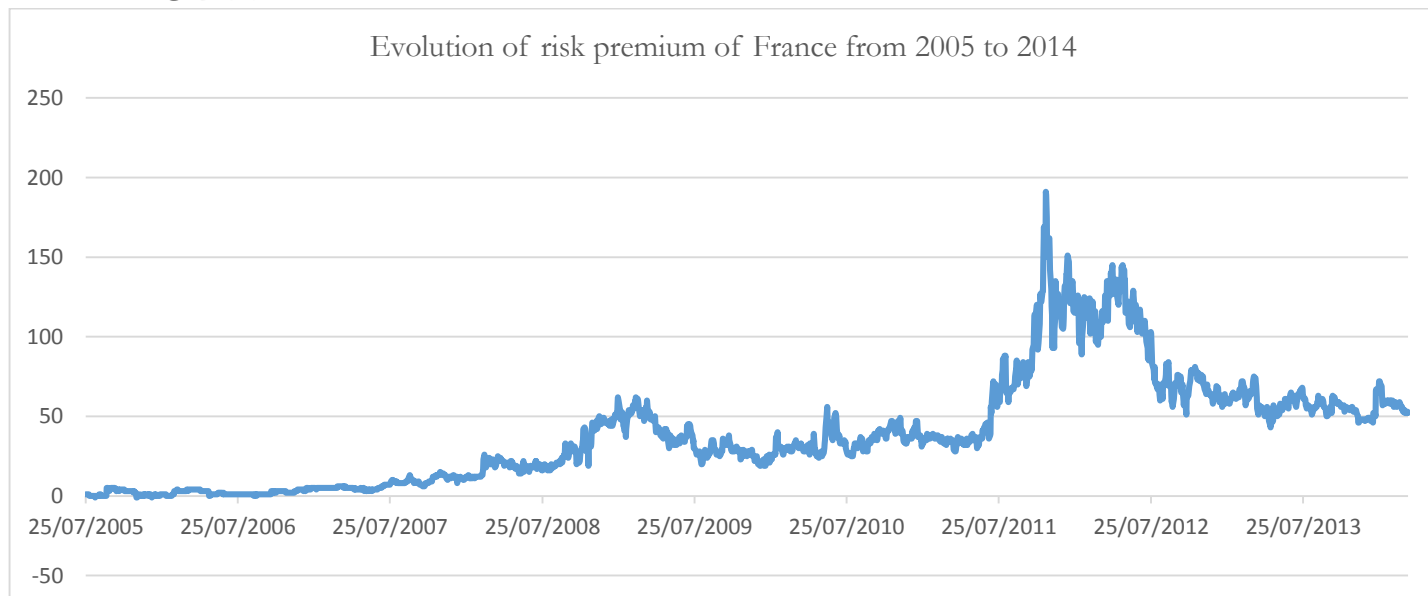
7.1 France

7.1.1 Risk premium

Talking about France, our sample period spans from 25/07/2005 to 02/04/2014. The sample has been focused on this period because it was not significant to take previous ratings.

As it can be noticed, France's premium risk has evolved in a moderate ascending way until July 2011. During this period the risk premium did not exceed the 60 points, a figure that only reached in January and March, 2009.

GRAPH 1



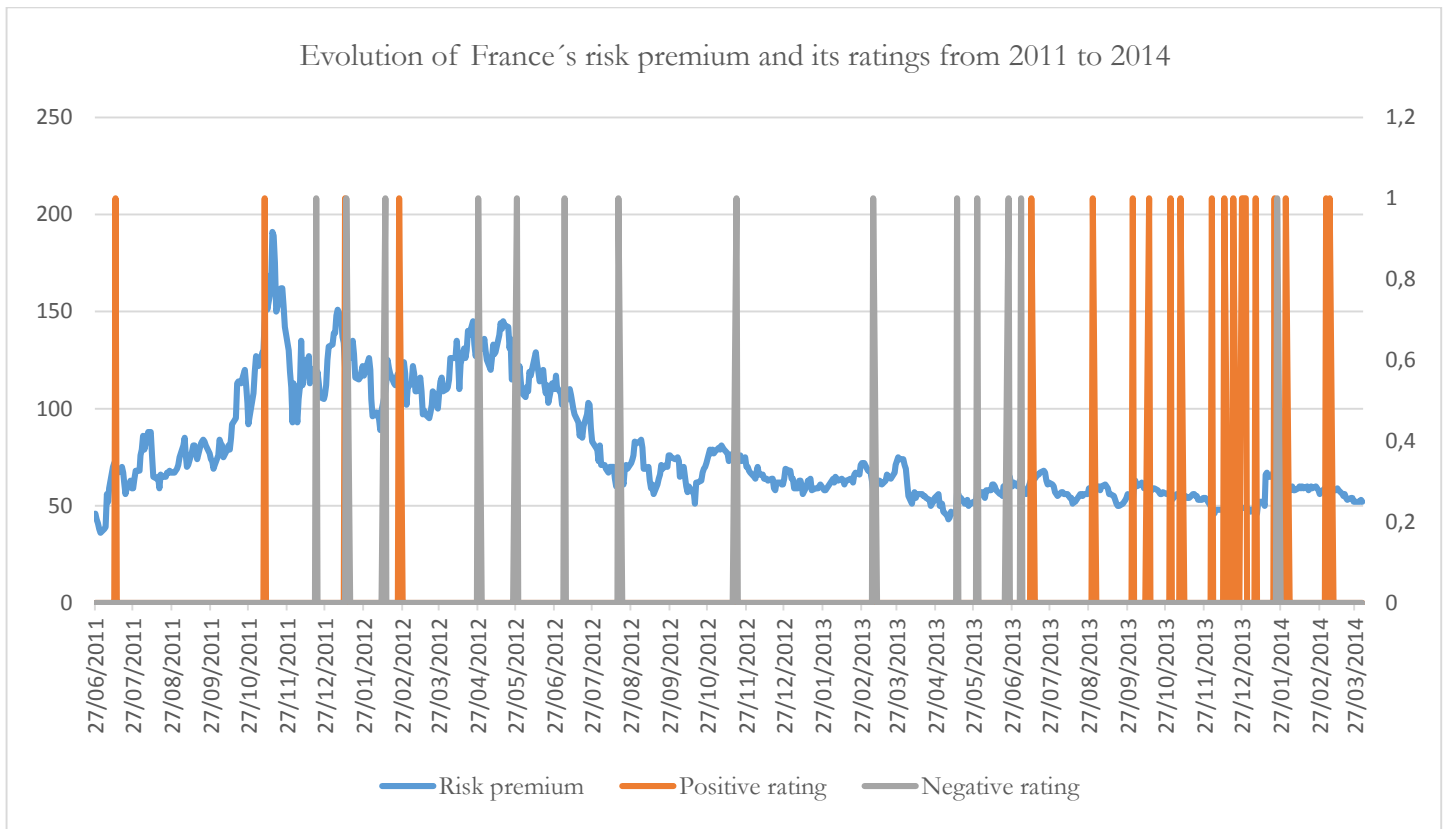
It is in July 2011 when it exceeded the previous maximum (60 basis points). From that moment on, the risk premium evolution is sharply upwards until 16/11/2011, when it reaches a peak point, 189 points.

After this date, the risk premium vary a lot but without attaining a maximum as the above mentioned.

From August until the end of the sample, it has begun a gradual downward trend.

After contextualized France's risk premium, we are going to reduce and adapt our sample to the ratings issued. The first rating found in our sample is on the 13/07/2011, so we will focus on studying the period from that date on.

GRAPH 2



Also, as mentioned before, is in this date when the risk premium begins its sharply upward trend; which is a paradoxically fact, because Fitch rated France with AAA and a stable outlook. Despite the sharp rise in the risk premium (meaning distrust of the country's solvency by investors), we can see that the 09/11/2011 Fitch still rated the country with AAA and stable outlook.

The following ratings are issued the 20/12/2011 and the 13/01/2012, on the first one Fitch outlook change into a negative one and on the second date S&P does the same.

Theoretically, both ratings should affect the risk premium in a negative way; nevertheless, the impact of the first rating is positive since the risk Premium decreases in the six following days. After those days, it is true that the risk premium increases, however it is not an immediately consequence of the rating downgraded.

Therefore, at first glance there is no direct and positive relationship between France's risk premium and the ratings given by the Big Three Rating Agencies.

In the following lines a statistical analysis will be featured. It will consists on proving if there exists any relationship between France's risk premium and the ratings received by any of the Big Three Credit Rating Agencies. For it, we will use a regression model with two dummy variables:

$$\Delta Y_t = \beta_0 + \beta_1 \Delta Y_{t-1} + \beta_2 \Delta Y_{t-2} + \beta_3 \Delta Y_{t-3} + \beta_4 \Delta Y_{t-4} + \beta_5 \Delta Y_{t-5} + \beta_6 \text{DRP} + \beta_7 \text{DRN}$$

ΔY_t = Risk Premium variation

β_0 = intercept

ΔY_{t-1} = Risk Premium variation of the previous day

ΔY_{t-2} = Risk Premium variation of 2 days before

ΔY_{t-3} = ...

DRP = It is a dummy variable which takes the value 1 when the rating is positive and it takes the vale 0 when there is no rating.

DRN =It is a dummy variable which takes the value 1 when the rating is negative and it takes the vale 0 when there is no rating.

Considering by a positive rating a credit rating that has improved with respect to the previous one (see Table 1 attached for the classifications) or when the outlook of the rating has been improved.

We have considered a negative rating when the credit rating is worse than the previous one or when the outlook is worse than the previous one.

In the case that the same rating as the previous one has been broadcast, and being the outlook negative, we have considered that the rating will adversely affect the regression model; so the rating is considered as negative. However if the outlook is stable (being the rating equal as that one given previously), we will consider it as a positive rating. Obviously, with a positive outlook and being the rating equal to the one given previously, the rating is considered positive as well.

Statistical delays of 5 (one week) have been added to the model in order to fix the problems of autocorrelation in the model.

The following results were obtained:

FRANCE'S RISK PREMIUM SUMMARY

	Coefficient	Standard error	Statistical t	P-value
β_0 (Intercept)	-0,002	0,002	-0,812	0,417
β_1	-0,021	0,034	-0,624	0,533
β_2	0,006	0,034	0,185	0,854
β_3	-0,047	0,034	-1,362	0,174
β_4	0,028	0,034	0,804	0,422
β_5	-0,049	0,034	-1,429	0,153
β_6 (Positive dummy)	-0,002	0,013	-0,185	0,853
β_7 (Negative dummy)	0,026	0,015	1,719	0,086

β_6 coefficient associated with positive rating dummy variable is not significant. Thereby, the null hypothesis (coefficient equal to zero) can not be rejected.

Nevertheless, β_7 coefficient associated with negative rating dummy variable is positively presented as significant at 8.6% level. This result allows us to reject the null hypothesis and therefore, it can be said that risk premium is affected by negative ratings' emissions. So looking at the positive sign that the coefficient β_7 has, we can say that a negative rating broadcast will increase risk premium; meaning less solvency and high risk.

The other variables included in the model are not significant.

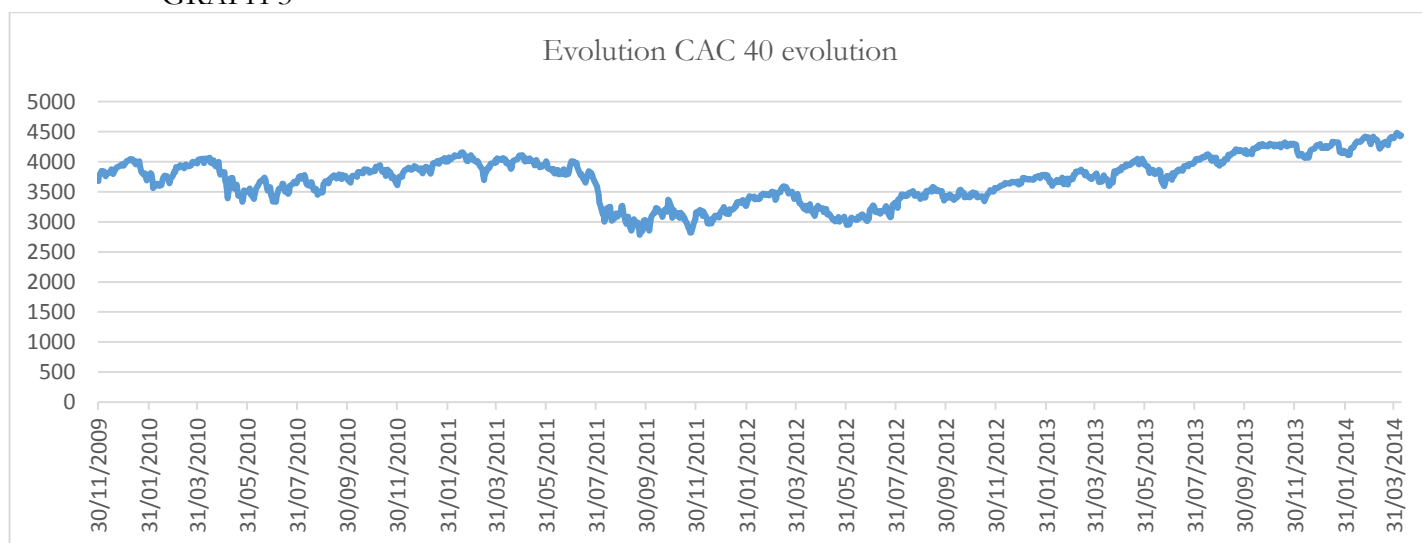
7.1.2 Stock market index – CAC 40

Another way to study the existence of a relation between the ratings received by a country and its impact on the economy, it is by using the stock market index. In this study we will

investigate the stock market index of France which is the CAC 40. Then, we will compare the results with the ones obtained by the risk premium.

The CAC 40 is a weighted measure, according to the capitalization of the 40 most significant values among the 100 largest companies traded on the Paris Stock Exchange. As it is explained in the economic dictionary of Expansion, the value of the CAC 40 index is published every 30 seconds, using the latest prices traded on Euronext real-time markets. The index value is calculated as the sum of the contribution multiplied by their corresponding weights and divided by the adjustment factor multiplied by the capitalization basis.

GRAPH 3

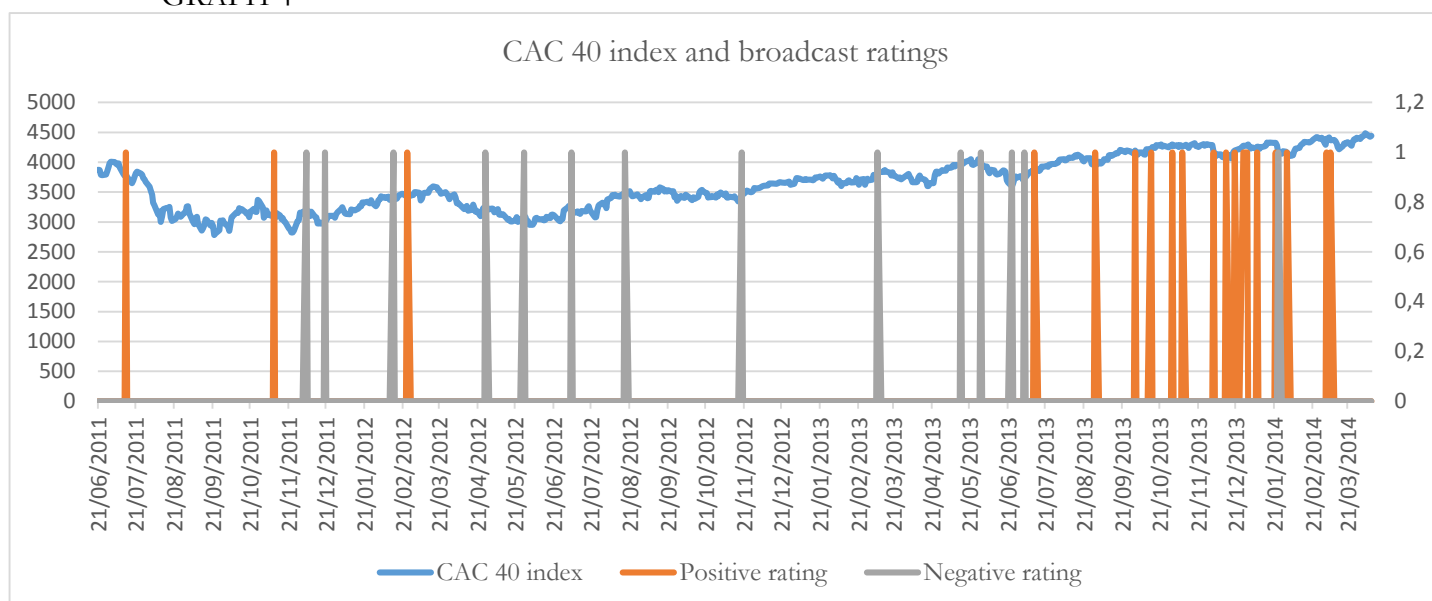


Talking about CAC 40 index, our sample period embrace the period between 2009 and 2014, particularly between 30/11/2009 and 04/08/2014.

Over these 5 years, CAC 40 index has not exceed the 4,500 points, although since the middle of 2012 the trend of the index is bullish until now, almost reaching the maximum of this period (4,424 points).

Adding the broadcast dates of the ratings given (both positive and negative ratings), it can be highlighted that the majority of ratings are negative until July 2013. However from this date on, most of the rating issued are positive. This is consistent with the fact that if we look at the index, the economy is improving.

GRAPH 4



We will use a statistical model similar to one used for the risk premium. However, we will swap the risk premium variation by the index variation. Moreover, in this model we have not incorporated the other variables included in the previous model as they were not significant.

In any case, it have to be commented that similar results were obtained using the same statistical model (with statistical delays) as the one used for the risk premium.

$$\Delta Y_t = \beta_0 + \beta_1 \Delta Y_{t-1} + \beta_2 \text{DRP} + \beta_3 \text{DRN}$$

ΔY_t = Risk Premium variation

β_0 = intercept

ΔY_{t-1} = Risk Premium variation of the previous day

DRP = It is a variable dummy which takes the value 1 when the rating is positive and it takes the vale 0 when there is no rating.

DRN = It is a variable dummy which takes the value 1 when the rating is negative and it takes the vale 0 when there is no rating.

The results are as follow:

CAC 40 SUMMARY

	Coefficient	Standard error	Statistical t	P - value
β_0 (Intercept)	0.000	0.000	-0.019	0.985
β_1	0.015	0.035	0.443	0.658
β_2 (Positive dummy)	0.000	0.003	-0.141	0.888
β_3 (Negative dummy)	0.005	0.004	1.457	0.146

In the CAC 40 results table, the data obtained shows that β_2 and β_3 coefficients associated respectively to positive and negative rating dummy variables, are not displayed as significant.

So the null hypothesis can not be rejected. For that reason, this results will not be taken into account.

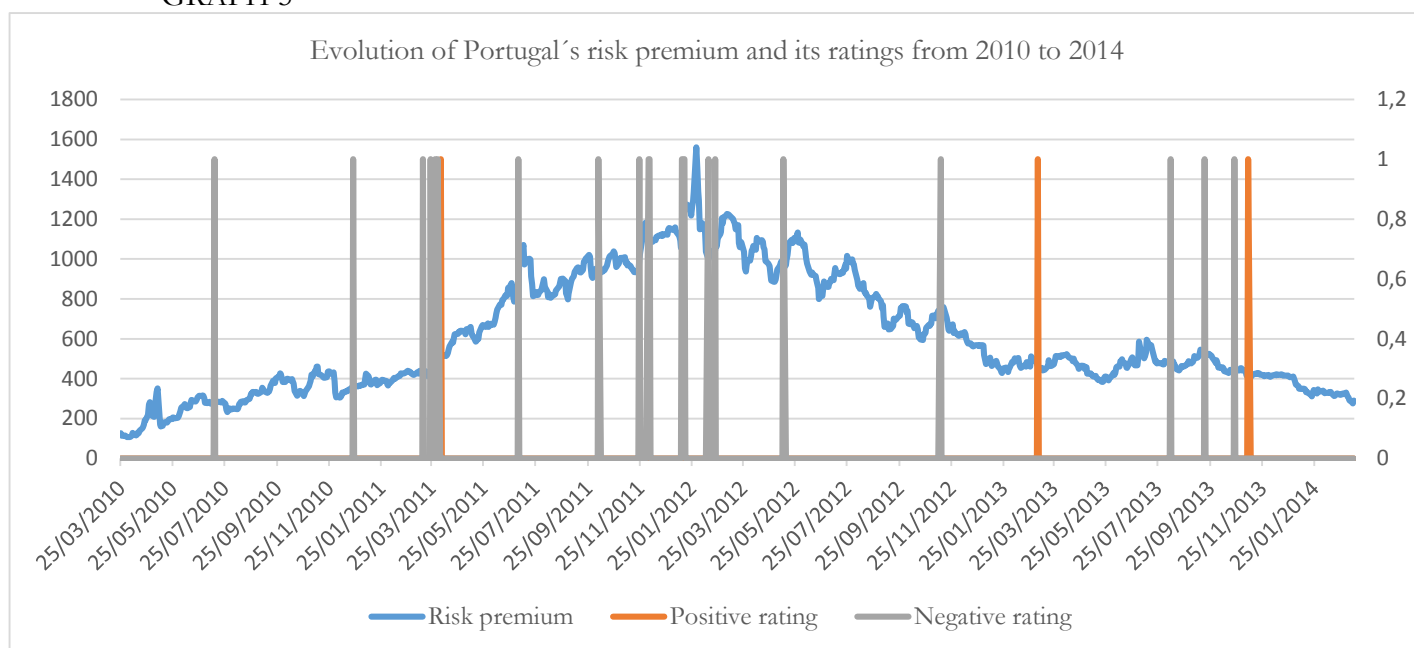
7.2 Portugal

7.2.1 Risk premium

Talking about Portugal, our sample period spans from 20/08/2009 to 10/03/2014. The sample has been focused on this period because it was not significant to take previous ratings since the previous credit rating was far away from the sample selected.

Portugal's risk premium can be divided in two periods. In the first one, the risk premium has an uphill evolution until 30/01/2012 which reaches its highest peak with 1,560 points. From that date, the evolution of the risk premium has begun to fall down.

GRAPH 5



We can observe that in the first period until 30/01/2012, there is only a positive rating on the 05/04/2011, which had a direct impact on the risk premium, resulting in a fall of 27 points on the following day.

In the first period, all the other ratings were negative, experiencing an increase in the risk premium whenever a negative rating was issued. We can observe that this happens in all broadcast except in the case of 24/03/2010, that it does not experience any change after the news.

From the peak point, there is also a predominance of negative ratings. On 13/01/2012, the risk premium increases heavily by 195 points, after the announcement of a negative rating; On the 14/02/2012, the risk premium increases by 22 points maybe due to the publication of a negative rating, the 22/02/2012 it undergoes another increase due to a negative Fitch's outlook, and so on.

As an exception, the 06/03/2013 a positive rating is issued - an S&P's stable outlook- which decreases the risk premium by 24 points. Likewise, on the 05/11/2013 we face another positive rating from Moody's which makes the risk premium decrease by 14 points next day.

In view of this observations, Portugal's risk premium is affected, in a positive direct way, by the ratings issued by the Three Rating Agencies.

As done with France risk premium, a statistical analysis will be done with the same regression model. The results are below:

PORTUGAL'S RISK PREMIUM SUMMARY

	Coefficient	Standard error	Statistical t	P - value
β_0 Intercept	0.000	0.001	-0.347	0.729
β_1	0.215	0.032	6.783	0.000
β_2	0.004	0.032	0.134	0.893
β_3	0.012	0.032	0.383	0.702
β_4	-0.129	0.032	-3.995	0.000
β_5	0.043	0.032	1.360	0.174
β_6 (Positive dummy)	0.017	0.017	0.992	0.321
β_7 (Negative dummy)	0.013	0.007	1.947	0.052

The data obtained in the above table show a different behaviour for the two variables studied (negative ratings and positive ratings).

β_6 coefficient associated with the positive rating dummy variable, is not displayed as significant. So the null hypothesis can not be rejected. However β_7 coefficient associated with the negative rating dummy variable is positively displayed as significant at 5% level. This result allows us to reject the null hypothesis and therefore it can be said that risk premium is affected by the emission of negative ratings. Meaning that a negative rating broadcast will increase risk premium (less solvency, high risk).

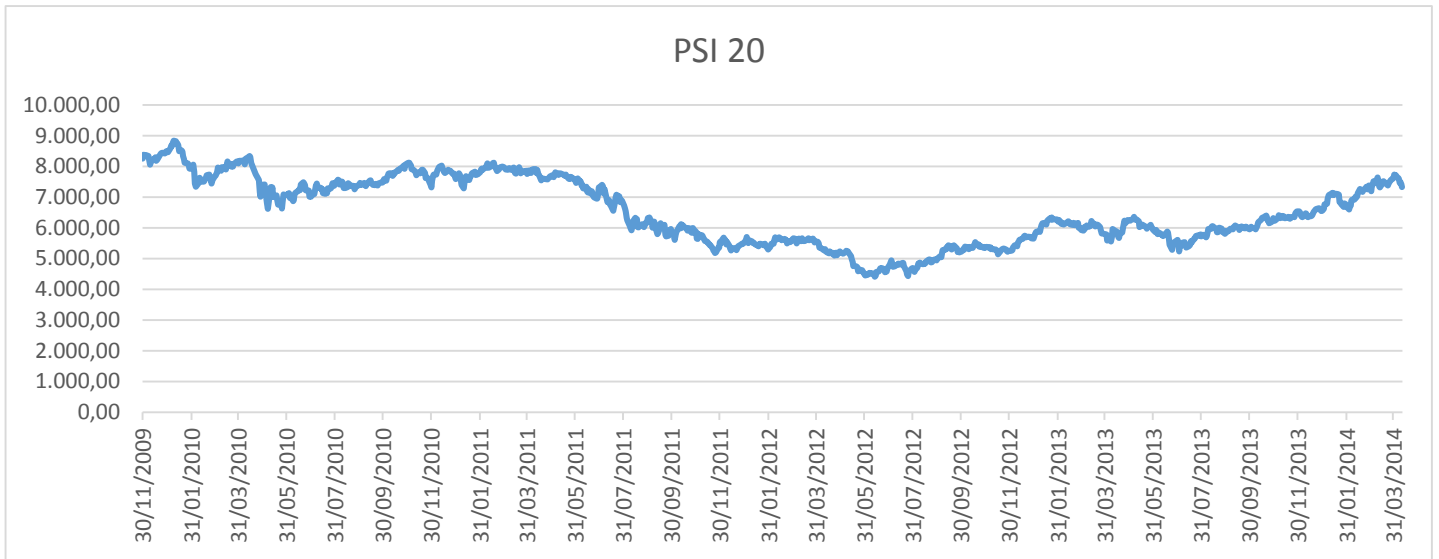
7.2.2 *Stock market index – PSI 20*

On the other hand we will also look at Portugal's index, the PSI 20 index⁶.

The study of the PSI 20 index's evolution will start in 2009, as in the case of France, due to lack of previous data. However this is not a problem since it is an appropriate date for our analysis as it is when we find more and more concentrated ratings of both countries.

⁶ The value of the PSI 20 index is published every 15 seconds, using the latest prices quoted on Euronext real-time markets. The price index may be suspended if there are circumstances that do not allow proper calculation. The official opening value is calculated as soon as each company has received at least a price. The last published value of the PSI 20 index is the official index closing value for that trading day.

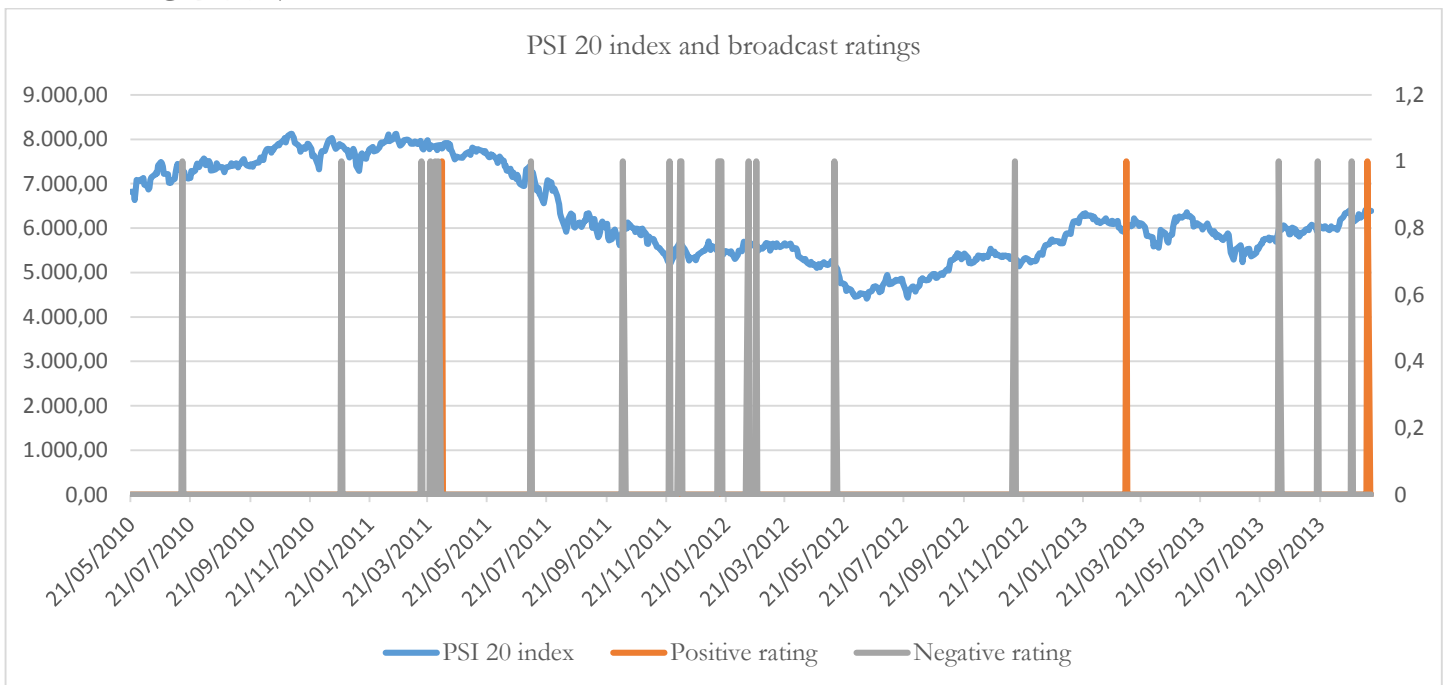
GRAPH 6



Over this period the maximum PSI 20 index is 8821.60 points on the 11/01/2010; its lowest mark otherwise, can be found on the 13/06/2012 with 4408.73 points. From this latter date, the index experiences an uptrend.

As can be seen in the graph below, negative ratings predominate throughout the period.

GRAPH 7



As commented before, using the same statistical model as with Portugal's risk premium, we obtain the following results:

PSI 20 SUMMARY

	<i>Coefficient</i>	<i>Standard error</i>	<i>Statistical t</i>	<i>P - value</i>
β_0 Intercept	0.000	0.000	0.246	0.806
β_1	0.091	0.032	2.829	0.005
β_2	-0.022	0.032	-0.694	0.488
β_3	-0.059	0.032	-1.810	0.071
β_4	-0.038	0.032	-1.178	0.239
β_5	-0.047	0.032	-1.465	0.143
β_6 Positive dummy	-0.011	0.007	-1.566	0.118
β_7 Negative dummy	0.000	0,003	-0.119	0.906

As we can appreciate neither positive broadcast nor negative broadcast are meaningful. For this reason we will reject the study of the index PSI 20 with relation to the ratings broadcast.

After the study of both countries, we can appreciate that risk premium is the best indicator to analyse the impact that a broadcast of a rating has on a country's economy. In both countries, there is a high probability (95% or more) that a negative rating broadcast increase the risk premium of the country. Therefore, we can underwrite that negative ratings imply an increase of the risk premium.

The ones who rate a country are private entities –CRAs - which have not any legal responsibility with the rates given. As they have a direct impact on the risk premium of a country, they can provoke crucial impact on a country's economy. For that reason, we are allowing them the possibility of leading a country to bankruptcy. With their opinion - as the Big Three called their ratings - they “play” with the economy without any consequences for them.

An increase in the risk premium of a country can imply different consequences:

On the one hand, an increase in the risk premium impacts directly on the country's solvency, increasing its debt. This implies that State has to pay more money to finance itself because the investors demand high profitability as risk is supposed to be higher.

What is more, risk premium also affects companies and banks. Financial institutions lend money among them. If risk premium increase, banks will lend money at higher rate among them (there is more risk, more probability of default). Meaning that banks which want to borrow money, will have to pay more, increasing their financial expenses. This will lead to

lower profit margin to the banks, which have a direct impact on their clients. Financial institutions will charge higher interest rates for borrowing to their clients (companies, other banks, particulars...)

Higher interest rates for borrowing will entail negative consequences for the management and continuity of entrepreneurship; also increasing unemployment rate.

Moreover, this situation could slow down consumption, as funding conditions would be worst. (Recio, 2011)

Furthermore, the fact that only negative broadcast are meaningful can be explained. This fact has been proven by several surveys, which explained that negative economic news' feedback is greater than responses to positive ones. However, this phenomenon does not happen only in the economic sector. According to several papers, bad news, feedback, or events in general have more impact than good ones. (Soroka, 2006).

For this reason, we can conclude that our result is reasonable.

8. HANNOVER UNSOLICITED RATING CASE

For studying the second point ii) an unsolicited rating case will be analysed.

As mentioned before, there also exists the possibility of being rated without requesting it: the rating agency rate a company or a sovereign entity with public information for free. As Van Roy (National Bank of Belgium, 2006) has proven, unsolicited ratings generally are lower than solicited ratings. This fact can be explained mainly because for obtaining an unsolicited rating, only public information is used. Also there are some issuing entities which think that unsolicited ratings are lower with the aim of pressuring debt issuers to acquire the CRA rating services. As an example we will describe, in the following lines the Hannover case.

Hannover Re is a German reinsurer company and it is one of the most important reinsurers in the world, concretely the third one. "It transacts all lines of non-life and life and health reinsurance and is present on all continents" as it is presented in their webpage.

Reinsurance is an insurance for insurance companies. The insurance company makes a contract with another special insurance company (called Reinsurance Company) for transfer to the last one mentioned part of the risk of ensuring its clients.

The reinsure is an essential instrument for several reasons:

It is a risk factor reduction, avoiding huge losses and possible bankruptcies: an insurance company signs a contract of reinsurance as the risk of its contracts exceeds the tolerable limit, called full limit, which it could bear.

Talking about finance, the reinsure is an instrument that enables insurance companies increase its business. This is due to the fact that they have a security backup of a reinsurance, meaning that they can accept greater risks and more insurance clients. Furthermore, this instrument stabilizes the insurance market by distributing the risk and responsibility against an insured entity.

Working with prestigious reinsurer companies well positioned worldwide is very important for an insurance company, as their business is backed up by the reinsurer company. Hence, the amount of years on the business, their experience and business position are crucial characteristics that a reinsurance company must have for success.

For all the above mentioned, negative ratings, negative news or any negative factor affects more those entities that any other.

As a large company, Hannover Re Company operates with two Credit Rating Companies: Standard and Poor's and A.M.Best (solicited ratings). The last one mentioned is a Credit Rating Agency focused exclusively on the insurance market. Both Agencies maintain a high rating: Standard & Poor's AA- (Very Strong) and A.M. Best A+ (Superior). As a regular client, Hannover Re pays to the two Agencies the corresponding fees.

In October 21, 1998 the Credit Rating Agency Moody's gave to Hannover Re an unsolicited rating, Aa2. Moody's asked Hannover Re to collaborate with them, however, Hannover Re had already an engagement with two Credit Rating Agencies, so they did not want to be rated by another Agency and paying more fees for the service.

Although Hannover Re did not want to be rated by another Credit Rating Agency, as they had already being rated, Moody's continued rating them. However, besides rating the company, Moody's was also pressuring Hannover to "collaborate" with them (pushing for taking on their services and therefore paying the corresponding fee).

8.1 Purpose of unsolicited rating

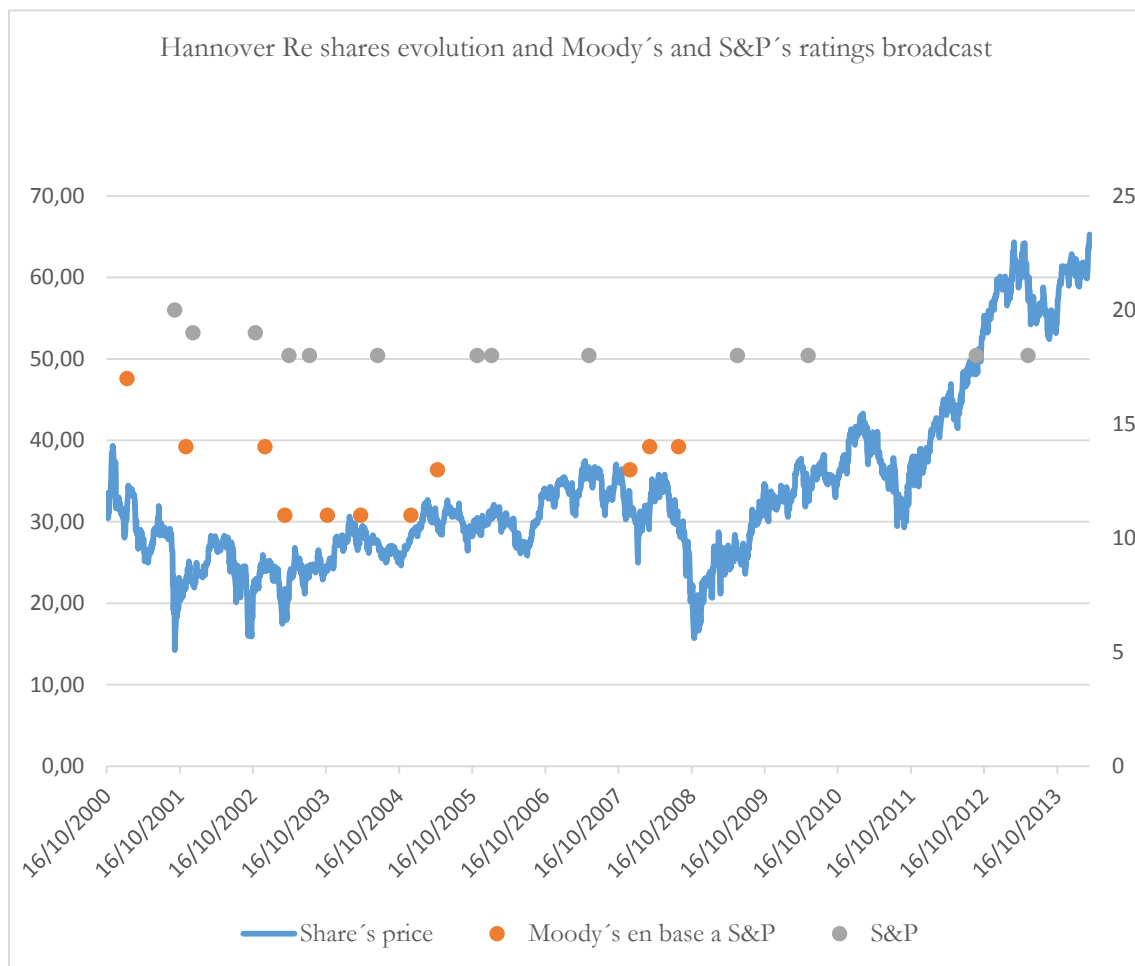
One of the theories that some economists hold is that the purpose of unsolicited ratings is making pressure on companies for making them contract rating services in the future. Even the Big Three has been accused of blackmailing for achieve its purposes.

In this case in particular, we can affirm that Hannover Re felt harassed by Moody's Agency. As an example we can stand out a conversation in which Moody's told Herbert Haas in 1998, the actual chief financial officer of Hannover Re, that if Hannover paid for a rating, "it could have a positive impact" on Hannover's rating.

Although Hannover Re did not want to be rated, Moody's continued to rate the company issuing unsolicited ratings and asking for "collaboration". Each Moody's rating emission was worse than the previous one; however, the other two CRA that rated the company: S&P and A.M Best were still given to Hannover strong and high ratings.

In graph 8, this situation can be appreciated, and also the fact, commented before, that unsolicited rating are lower than solicited ratings.

GRAPH 8



For making the graph, historical prices of Hannover Re company shares have been obtained. First, data from Sabadell Bank webpage www.bsmarkets.com has been gathered, then

historical data has been complemented with the data in Hannover Re company webpage www.hannover-re.com, where there were previous data available.

Historical Hannover ratings given by Moody's and Standard&Poor's have been obtained from their official webpage. For reaching this kind of data we had to sign up as a private company both in Moody's as in Standard and Poor's.

Hannover Re Company has collaborated providing internal reports and useful information about these ratings, bearing out the information obtained in the Credit Rating Agencies webpage.

As Credit Rating Agencies use different ways to rate, an equivalence table (See attached Table 1.1) has been used for comparing both kind of ratings. Then Moody's ratings have been equated taking the S&P model as a base.

In order to capture the differences of the ratings between both companies, we have used a numerical scale, being AAA = 21; AA+ = 20 and D = 0; as it can be appreciated in the attached Table 1.1.

A fact to be highlighted is that in mid-2008, Moody's stopped to issue unsolicited ratings to Hannover Re. From that moment on, Hannover Re shares price launched, even reaching its peak point: 64.5 euros per share.

The reason why Moody's stopped rating Hannover Re according to Moody's report was "business reasons." "This issuer [Hannover Re Company] has declined Moody's invitation to participate in the rating process, and has not communicated with Moody's on credit-related issues for at least 12 months," Moody's said in the statement.

A peculiar statement, taking into account that Moody's had been broadcasting unsolicited ratings for Hannover Re Company for at least 7 years, and that the company had refused to collaborate with them during all this years, not only in the last 12 months.

In our opinion, this kind of performance can be considered as indirect threat, so it should be a crime. Due to this threats, Hannover Re lost a lot of millions. Concretely, after Moody's announced a downgrade to Hannover until junk status, Hannover Re Company lower its market value by about 134 million euros, within hours.

Hannover Re case is not a particular or unusual case. Other companies, even countries have complained about this kind of situations.

9. CONCLUSION

As it has been proven, negative rating broadcast affects negatively the economy of a country and therefore, of any company within that country. For reaching these results, an analysis of two countries with totally different financial situation have been done. In the analysis, we have used two regression models for looking at risk premium and market index. As a result, we can conclude that economic word is clearly affected by Credit Rating Agencies.

Credit Rating Agencies influence on the economy, so if they do not act in accordance with good professional practices, they are able to harm any entity. Nevertheless, taking into account agency theory, it has to be commented that it is not a one way manipulation relationship; also important and prestigious companies can influence in the ratings given -by the Three Big- to them.

Gradually, and in particular after the economic and financial crisis of 2008, more laws have been established for regulating this entities (CRAs). However, CRAs and its surrounding sector is still an opaque field, with lack of sufficient and severe legal regulation.

From my point of view, one of the main subjects to be addressed as soon as possible is the legal responsibility of Credit Rating Agencies' performance.

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11. ATTACHED

TABLE 1 with explanation.

Moody's		S&P		Fitch		
Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	
Aaa	P-1	AAA	A-1+	AAA	A1+	Prime
Aa1		AA+		AA+		High grade
Aa2		AA		AA		
Aa3		AA-		AA-		
A1	P-2	A+	A-1	A+	A1	Upper Medium grade
A2		A		A		
A3		A-	A-2	A-	A2	
Baa1		BBB+		BBB+		
Baa2	P-3	BBB	A-3	BBB	A3	Lower Medium grade
Baa3		BBB-		BBB-		
Ba1	Not Prime	BB+	B	BB+	B	Non Investmentgrade speculative
Ba2		BB		BB		
Ba3		BB-		BB-		
B1		B+		B+		
B2		B	B	Highly Speculative		
B3		B-	B-			
Caa		CCC+	C		CCC	C
Ca	CCC	Extremely speculative				
C	CCC-	In default with little prospect for recovery				
/		D	/	DDD	/	In default
/				DD		
/				D		

Source: ftalphaville.ft.com

TABLE 1.1 with numerical scale for analysing Hannover Re case

Moody's		S&P		Fitch		
Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	
Aaa		AAA		AAA		21
Aa1		AA+		AA+		20
Aa2		AA		AA		19
Aa3		AA-		AA-		18
A1		A+		A+		17
A2		A		A		16
A3		A-		A-		15
Baa1		BBB+		BBB+		14
Baa2		BBB		BBB		13
Baa3		BBB-		BBB-		12
Ba1		BB+		BB+		11
Ba2		BB		BB		10
Ba3		BB-		BB-		9
B1		B+		B+		8
B2		B		B		7
B3		B-		B-		6
Caa		CCC+		CCC		5
Ca		CCC		CCC		4
C		CCC-		CCC		3
/		D		DDD		2
/		D		DD		1
/		D		D		0