Journal of Contemporary Management
Submitted on 01/03/2015
Article ID: 1929-0128-2015-03-53-14, Radhouane Kammoun, and Amir Louizi

Credit Rating Agencies: Development and Analysis of Business Models

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Abstract: Recent crises highlighted the influence of credit rating agencies (CRAs) on the international financial system. In the last decade, we witnessed a major expansion of international capital movements. Following these changes, we observed an increase of the CRAs activity. In this context, investors, firms and authorities are more and more interested in the business model of CRAs, their methods and the measures used to evaluate credit risk. The current business model presents some limits such as the conflict of interest since CRAs are paid by issuers for rating them. This research analyses the viability of the different business models that provide accurate ratings of the risk for investors. It examines several models used by CRAs and proposes some alternative models instead of investor-pays model and issuer-pays model. This study aims to focus on the CRAs and their business model. The analysis is based on a review of the literature on business model and a series of reports published by the CRAs and financial experts. The speeches' analysis allows us to find the criteria of relevance for the CRAs' business model: the agencies' independence, the transparency of the methods and criteria used in rating, the economic incentive related to the quality of financial ratings and the acceptance of the model by the market.

Keywords: Business model; Credit rating agencies; Investors; Issuer; Interest conflict; Value creation

JEL Classifications: G24, G34, M21, O16

1. Introduction

The recent market changes gave a powerful role to credit rating agencies (CRAs). Recent crises highlighted the influence of the CRAs on the entire international financial system. Indeed, these agencies are rating not only firms but also governmental institutions and countries. Thus, the ratings provided by these agencies are important for both securities issuers and investors aiming to increase their profitability and to manage the risk. Having a high rating is a good signal emitted to the potential investors about the asset value. For the governmental institutions, high rating is a means to issue bonds and contract loans on international financial markets with low interest rates.

The business model of CRAs is essentially based on a fee paid by rated entities in counterpart of the rating service and the disclosure of information related to financial scoring. If CRAs exist since the 1920s, their business model has changed considerably. The role of these agencies was to analyze the companies and give statistics about its performance and future perspectives. Financial notation was considered as an optional financial service. Initially, investors who want to obtain the rating of an investment (i.e. a stock or a bond) pay for it. These investors considered that ratings are reliable and accurate. In fact, CRAs have experts analyzing firms' information for long periods and having access to private information while other investors have access only to public information. In addition, any investor has not enough expertise, information and time to realize the firm evaluation by himself.

Moreover, as CRAs usually realize a rating that will be sold to many clients, then costs supported by each investor are too much lower than those one if the investor realized the rating. However, this model presented some limits. For example, how the credit rating agency could determine the fees to be charged to the first client given that the number of clients asking for the same rating is not known in advance and is variable according to company and the time periods.

In the seventies, three main changes had an impact on CRAs models and incited the change of the investor-pays model. The first one is technological and related to the development of the photocopy. It became easy to transfer information to other investors. The second evolution is related to the high growth of market activity and the multiplication of new complex financial instrument. Finally, the third development is legal and related to transparency requirements: contracts that involve identical information must be proposed at the same price to investors (Richardson and White, 2009). In such a context, Moody's and Standard & Poor's began to charge issuers for obtaining their own notation.

Recent researches pointed the weaknesses of such model. The crucial problem is the existence of conflicts of interest as well as the permanent temptation of insider trading. As CRAs are generally paid by the issuer of the evaluated security, agencies can no longer be totally independent (Griffin and Tang, 2011). CRAs are not public organization publishing information freely. They are companies looking for clients' satisfaction and looking for profits. There is a relationship between clients (issuers) and service suppliers (CRAs). Of course, the client satisfaction is primordial to agencies survival. How do not suspect that some agencies note their customers better than other competitors have done?

Initially, investors paid the CRAs for their analyses. But with the arrival of the photocopier and computer, agencies were no longer able to ensure the confidentiality of the scores. The new system is that the issuer has to pay for his rating. This model allows having access to much more important information easily since the score is issued by the credit rating agency. However, this business model poses problems of conflicts of interest: the credit rating agency would penalize less the borrowers that would pay more than others.

The purpose of this paper is therefore to clarify the different components of CRAs business models. Specifically, our central research problematic would be: which business model can be adopted by CRAs in the credit risk valuation? The objective of exploratory part is to have a general overview on CRAs. In the first section, we present a review of literature on the concept of business model. In the second section, we expose the business models of CRAs. Then, we conduct an exploratory analysis of these business models. Finally, we study some alternative models and we conclude.

2. Literature Review

According to Baden-Fuller and Morgan (2010), "the concept 'business model' can be said to define the business's characteristics and its activities in a remarkably concise way..." In the next session, we present the emergence of the concept of Business Model and we mention some main researches related to this topic.

2.1 The Business Model concept

Since the development of the business model concept in the nineties, many researchers were interested in studying its advantages and limits. The emergence of this concept is mainly due to the technological, economic and regulatory changes in all sectors of activity. Different mutations have necessitated the emergence of new methods of analysis. Theoretically, a significant number of studies tried to clarify the concept of business model (George and Bock, 2011; Schneider and Spieth, 2013; Teece, 2010; Zott, Amit and Massa, 2011). Indeed, the model of economic models has led to a large number of publications by journalists, investors, consultants and researchers. It was the subject of various articles in many areas such as system information, strategy and management science (Demil and Lecocq, 2010; Magretta, 2002; Pateli and Giaglis, 2003).

The business model is a concept that integrates all relations with partnerships, suppliers and interactions with different markets (Lambert, 2005; Lambert, Carter and Burritt, 2012). Malone et al. (2006) and Morris et al. (2006) argue that the business model has an impact on firms' performance. It may result in choices that determine the business success or failure. It is an effective combination between services and factors of production (Verstraete and Jouison-Laffitte, 2011). Baden-Fuller and Mangematin (2013) highlight "that business models are 'manipulable instruments' which can be used to explore cause and effect and understand the world of business better".

According to Demil and Lecocq (2010), the business model is an essential element for a business to generate profits. They consider that the business model is an important concept to make the strategy of the company operational. The authors identify six theoretical and practical components that determine the business model: the means and skills to generate income, the resources and skills, the payment for acquisition and the exploitation of resources, the structure of the profits, the remuneration from the sale or use of resources and finally the costs and the organizational structure of the business model.

The development of business model is fundamentally linked to the company value creation (Zott and Amit, 2009). Thus, a firm generates flows to create value for stakeholders. According to Shafer, Smith, and Linder (2005), the business model of a firm is considered to be a representation of the fundamental logic and its choice to create and capture value within a network of value. Some recent studies (Osterwalder, Pigneur and Tucci, 2005; Osterwalder and Pigneur, 2010) show that the business model focuses on how a firm delivers, creates and captures the value on the market.

In conclusion, we define the concept of the business model as a value generator. It is the choice to do thus the company realizes profits and creates value. This definition allows a better comprehension of the advantages and the limits of the business model currently used by CRAs.

2.2 The business model of credit rating agencies

Since the emergence of the CRAs at the beginning of the century and following the financial crises, their business model, their remuneration and scoring process have undergone an evolution. The CRAs became among the important actors of financial markets. Indeed, any agent who wishes to obtain a rating is invited first to pay fees for this service. In this context, the first business model of CRAs was proposed by Jean Moody in 1909. It was an investor-pays model. Moody's, and subsequently other CRAs, have begun to commercialize financial ratings for bonds' investors. Until

the seventies, the ratings were financed by investors wishing to inquire about the financial instruments in order to be advised in their investment choices. This type of rating is called unsolicited as the issuer of the financial instrument does not ask for it.

In the 70s, Moody's Credit rating agency opted for an issuer-pays model. It means that the bond issuer pays fees to the credit rating agency in order to be evaluated. During the last decades and mainly after the recent crises, the independence of agencies in the scoring process and the issuer-pays model were largely criticized (McDaniel, 2009).

According to CRAs, the switch from investor-pays model to issuer-pays model was justified by the development of the photocopy that makes easier to copy financial analysis's and reports, the costs of complex products rating and the establishment of new transparency requirements on financial markets (White, 2010).

The evolution of the business model was adopted by the main CRAs on the market in order to standardize their methodology and the rating scale. The rating process, which extends from the 1930s to the after war, was crucial for the development of modern finance. The standardization of rating process allows a comparison of ratings and therefore a better appreciation of financial predictions. From 1975, the Security and Exchange Commission has established the first strict rules for the activity of rating. The authorities have set up an accreditation system strengthening furthermore the three main CRAs. Indeed, this oligopoly was reinforced with numerous acquisitions of small agencies or firms specialized in financial analysis in order to acquire a predominant size on the international financial markets.

The issuer-pays model is the traditional business model by which the CRAs evaluate a listed debt. The issuer of debt contacts credit rating agency to provide a financial rating. The bonds' rating fees are paid by the company which is often referred as the issuer. Before the 1970s, the CRAs used an economic model called "investor-pays", based on payment fees of rating by investors. The evolution to the issuer-pays model permitted the large publication of previous revenues and results. Specifically, this evolution allowed the CRAs to have an easy access to information facilitated by the issuer. Thus, all the information shared by the issuer can be given as a privilege to potential investors. The objective of rating was also to provide reliable information on the strategy of the firm, its performance and its future perspective of growth. In this context, the CRAs also argue that the use of an issuer-pays model encourages a faster disclosure of information on financial market.

In the issuer-pays model, CRAs have direct access to the data provided by the issuer. This information disclosure could be in the interest of both parties as it details the real positions of debt and the expected returns for investors. In this sense, CRAs play the role of a broker of information.

The issuer-pays business model requires a long term contract between issuers and CRAs. Thus, the ability and the temptation to hide data are limited. The issuer attaches importance to the revisions of the scores and its impacts on the cost of capital not only on a single issue but also over a long period. In addition, the issuer adjusts its strategy in order to improve its performance and its rating.

It is essential for the issuer to share information in a way that creates a positive reputation among CRAs and investors. In this context, the issuer-pays model can lead to potential conflicts of interest. In fact, as the credit rating agency is paid by the bond issuer then the bond issuer will choose the credit rating agency that will give him the highest rating. There an indirect incitation to CRAs to be less strict in its evaluation. If the clients are not satisfied with the ratings then the long term relationship "credit rating agency vs. client" ends as the client will look for an another agency with a less strict notation system. Afraid to have their clients switching to other agencies for their evaluation, the rating system is no more objective. The announced score is expected to be higher that fundamentals. The difference between the announced rating and the theoretical one is a "client

satisfaction prime". The problem is not related to the existence of such prime but on its percentage compared to the final rating. It should not be too low that the client is not satisfied and will not ask the credit rating agency for future ratings. Also, it should not be too high in order to prove the credibility and the reputation of the credit rating agency among potential investors. The client prime is very important specially if it is variable from one agency to another and depending on issuers. In fact, let's suppose that the client prime is constant. In such case the ranking of bonds will not be problematic as the relative ranking of bonds is not affected. The only bonds affected are those which do not really match legal requirements but have a rating higher than lowest legal limits. Thus, these bonds could be included in fund pension portfolios although its risk is beyond the highest legal limits. Providing good scores for risky assets allows them to be traded.

Since 1930, in the United States, banks were not allowed to invest in bonds not rated AAA. From 1975 to 2006, the most credible agencies were recognized by the SEC as Nationally Recognized Statistical Rating Organizations. Thus, the grades were considered by laws as reliable and represent an exclusive criterion for insurance company and fund pension investments. The Basel accord also considers credit rating as an input to determine liquidity ratios. This evolution reinforced the role played by credit agency.

The CRAs also argue that even an investor-pays model may cause some conflicts. In fact, investors prefer lower ratings and therefore higher yields for newly issued bonds. In case of later downgrade, investors who already own the bonds would be disadvantaged while short sellers would be advantaged. However, potential conflicts seem to be much less important than for the issuer-pays model.

Finally, CRAs state that the issuer-pays model has the advantage of rapid disclosure of credit ratings while the investor-pays model would require a delay. CRAs prefer the first model for cost and efficiency reasons. In addition, the three most important CRAs were pioneers in adopting the issuer-pays model. As these agencies are nowadays the major actor on the financial markets, other CRAs are following the leaders and adopting their business model.

In conclusion, the issuer-pays model appears as the dominant approach used by the most important credit rating agency over the last thirty years. As mentioned above, the model change was in response to the increasing complexity of financial products, the advances in information technology and the increasing demand from issuers to have their debt rated. Thus, the issuer-pays model appeared biased especially in cases of complex financial products. Trough out this analysis, focus is put on the impact of business model change on stakeholder interest.

3. Research Methodology

In this study, we analyze various speeches of stakeholders on the business model of CRAs. Throughout the first part of this work, we try to construct historical and theoretical illustration of our subject. Based on literature review, we find and identify the criteria and factors characterizing the relevance of a business model. Then, we study the interests of stakeholders to improve the current business model of CRAs.

The first step consists in the collection of qualitative data related to our research. As for quantitative research, the sample size in qualitative research is important. However, the selection criteria are different. The information is obtained from the speeches published in various reports. We opted for the speeches of companies' managers listed on the Paris Stock Exchange. Particularly, we focus on the firms belonging to the SBF250 index over the period 2006-2011. We adopt a qualitative methodological approach.

In this study, the data analysis methodology is an analysis of speeches based on content analysis (Weber, 1990; Roberts, 1997). Following the approach based on a thematic analysis of speeches by items and sub-items, we extend our data by additional information from studies published in specialized journals and companies' websites. Some extracts of the interviews are presented in quotation marks. The approach that seems particularly appropriate in this context is the interpretive methodology: it consists in interpreting the speeches in order to focus on important aspects related to our research and to understand the leader perception.

According to the traditional scientific research approach, the research process starts with exploratory studies and is verified by more developments: experiments, quantitative and qualitative surveys (Royer and Zarlowski, 2001). Exploratory studies are useful to identify the theories and develop new concepts. Within this framework, our methodology was implemented progressively through methods of content analysis based on previous studies, discussions with experts using this methodology and tests conducted during the exploratory study and the preliminary work (Bardelli and Pastore-Chaverot, 2009). According to Thiéart (2001), content analysis is one of most used methods in management. In addition to content description, this analysis allows explaining some strategies or behaviours. According to this research "repeating units of analysis reveals the interests and concerns of the authors of speech".

4. Interpretation of Results

Content analysis was conducted on the Nvivo qualitative data processing software. Based on stakeholders speeches published in various reports, we identify a set of items and sub-items in order to understand the interest of business model evolution of CRAs. Our aim is to verify the existence of these criteria in the managers' speech of large French companies. This method of analysis allowed us to better understand and analyze the leaders' speeches.

In this section, we will present the results into three parts. First, we conduct an analysis of the concepts related to the business model over our study period. Then, we compare these results with the thematic analysis. Finally, we examine the results and discuss some alternatives for the future improvement of business model for CRAs.

4.1 Business model items

First of all, we present general research results related to the occurrence of expressions associated to the business model during our study period. Thus, we have identified four concepts linked to the CRAs' business model.

Table 1. Number of occurrences of concepts related to business model

	2006	**2007**	**2008**	**2009**	**2010**	**2011**
No. of Business models	14	41	42	43	33	62
Issuer-pays	06	17	23	21	14	37
Investor-pays	03	11	13	19	28	41
Alternative model	01	09	04	09	19	25
Total of occurrences	**24**	**78**	**82**	**92**	**94**	**165**

The emergence of the expressions related to the business model used in the managers' speeches of our companies' sample is quantitatively presented in table 1. However, we should highlight several major findings. The use of the term "business model" is increasing between 2007 and 2011. In 2006, this concept has been less used in the analyzed speeches. Thus, the number of occurrences of the expression "business model" in the speeches seems to be stabilized over the period 2007-

2009 while it continues growing in 2011. We note also that occurrences of the term “issuer-pays” are much more used in speeches since 2007. Finally, we note that the term “alternative model” is more mentioned over the period 2010-2011 and it is positively correlated with the concept of the “Investor-pays” model.

These first empirical observations based on historical data indicate the emergence of the business model concept in the speeches between 2006 and 2011. The steady increase in the number of occurrences highlights the importance of this concept for managers and investors. The strong mobilization of the expression “business model” suggests that the emergence of the concept can be partially explained by the arrival of the economic crisis and the desire of stakeholders to change the business model of CRAs. Indeed, in the first decade of the 21st century, there was an increasing criticism related to the role and the responsibility of CRAs. CRAs faced various difficulties during the bankruptcy of Enron and the subprime crisis. We observed a real crisis of credibility between 2000 and 2010.

In addition, this evolution can also be explained by public surveys carried out by the American financial authorities over the last decade in order to strengthen the supervision of CRAs' activities. In fact, CRAs are not responsible in case of divergence between the announced scores and the real performance of the rated companies. Usually, CRAs argue that the scores are an "opinion" about future perspective of growth. Legally, how could investors go to court and complain in case of error as the score are presented as the agency perception? American courts consider ratings as opinions protected by the first Amendment and CRAs are not legally responsible for wrong predictions.

There is a paradox: on the one hand, if the score is too low fund pension manager are not allowed to maintain such assets in their portfolio. On the other hand, the score is considered only as an opinion and there no guarantee or responsibility in case of errors. In conclusion, there are some legal rules and constraints based on scores while these scores are legally considered as opinions. A wrong opinion related to the company can have effects on its market capitalization and causes financial charges and losses. In June 2012, the federal banking agencies prohibited the use of ratings to evaluate risk exposure.

In case of downgrade, companies usually complain about it and try to convince the credit rating agency to review its score and to increase it. We observe during such periods an important mobilization of communication department. The first strategy consists in publishing information in order to reinforce investors' confidence. The second one consists in reducing the importance of scores and pointing out the limits of the rating process. This last strategy was observed when the French score was downgraded from AAA to AA.

4.2 Thematic analysis

Through this analysis we identified the criteria that qualify, according to stakeholders, the pertinence of a business model of CRAs.

4.2.1 The independence of credit rating agencies

The independence of CRAs was criticized since the bankruptcy of Enron and the financial crisis in 2008. The agencies were encouraged to upgrade the entity that pays more in order to obtain good interest rates for debt. Thus, the confidence relative to this dependence relies on the Agency's reputation and credibility towards the clients.

According to 2011 statistics, only 10% of the turnover achieved by the CRAs comes from fund holders who want to know the risk and potential profitability of their investments. Based on the analyzed speech, agencies appear increasingly subject to conflicts of interest that affect its reliability. In 2008, a SEC study shows that some agencies' analysts participated in meetings organized by debt issuers and borrowers during which rating fees and rating levels were fixed.

Finally, we highlight that the analyzed speeches show the interest of investors and stakeholders to overcome the lack of independence of CRAs and to have a business model more relevant.

4.2.2 The economic incentive of the quality of credit ratings

According to the analyzed speeches, the business models of CRAs do not provide enough information. We found in this analysis that the relationship between CRAs, issuers and other counterparts is not balanced. Indeed, investors are relatively insensitive to the dysfunctions related to scoring errors.

As some conflicts of interest were observed in ratings, stakeholders require more rules in order to improve information quality and motivate the agencies to be more responsible. In the United States, the Dodd-Frank Wall Street Reform and Consumer Protection Act proposed on the 21st of July 2010 some recommendations to reinforce transparency and disclosure of data explaining the rating process and to minimize the conflicts of interest. Ratings should help managers but it does not replace managers' role in risk measure. The "rating shopping" which consists in having feedbacks from rating agencies before hiring the most favorable one could be limited in a "credit rating agency assignment system" where the Securities and Exchange Commission, a specialized organization or credit rating agency board assigns a rating agency for each issue. As there is no direct relationship between rating agency and the issuer, the scores would be more objective.

The European Securities and Markets Authority supervise ratings. The "CRA3 Regulation" becomes effective in June 2013 and establishes new rules for the use of ratings and the governance of CRAs. In order to guarantee being independent and objective, some constraints are imposed on rating agencies For example, it is not permitted for any investor to be shareholder of a rating agency with more than 10%.

Another limit concerns the rating methods that are selected and determined by the agencies without any supervision. The rating process remains confidential and managers did not know how it works. Under the pressure of financial authorities, CRAs revealed the main factors taken into account in the scoring process. Given these factors, we are not able to recalculate the score as we ignore the selected model (linear or non-linear model) and its characteristics (the inputs variables, the associated weights...). In addition, there is a subjective component related to the analyst's perception of firm performance.

4.2.3 The transparency of the rating process

Stakeholders consider that the rating business model presents some limits in terms of transparency and methods used in the rating system. In this context, the European regulation of September 2009 requires the publication of methods, models and assumptions of CRAs registered in Europe. Thus, each credit rating agency must announce the methods and descriptions of models and key assumptions of rating used in its activities, as well as any significant changes that are made.

The lack of transparency in the methods of notation is criticized and is often referred as "black box". According to Markus Krall[1] (2012), "it is now impossible for an outsider to reach the same agencies' conclusions" even if all the evaluation elements are known because "the rating is based on a qualitative process". In addition, the notation is related not only to quantitative approach but also to qualitative criteria.

The "backward-testing" approach requires verifying if the ratings are actually related to the observed default rate. This test is a major improvement because it reinforces the relevance of the methods based on historical data. The lower is the spread between expected and observed value, the

[1] Founding CEO of the new global rating agency of European origin – initiated by Roland Berger Strategy Consultants.

better is the model. Considering a long term study with a high number of observations, the standard deviation of the error should be minimized. As CRAs adjust the scores regularly then the error risk is reduced. Looking for historical scores and comparing them to realized performance gives investor an appreciation on the reliability of information published by CRAs.

4.2.4 The rating feasibility

The theme of feasibility has been used in the speeches of stakeholders as a criterion of relevance of CRAs' business model. Indeed, the feasibility is considered as a key element in the process of credit rating.

Stakeholders require the feasibility of corporate ratings by agencies for a reliable rating that reflects the real position of rated companies. An overview of quantitative and qualitative variables included in scores indicates if these data are directly available from the company or the market. Otherwise, some approximations are given based on proxies and expected values. It permits an easier interpretation of scores by investors. For managers, transparency in rating process facilitates the improvement of the score of rated companies.

It is important for issuers to study the feasibility of scoring according to the business model of CRAs. Changing the business model requires the knowledge of costs, the parties which pay for it and the relative benefits compared to other models. In addition, the legal aspects should be clearly defined: the terms of the contract, the CRAs role and responsibility, the conformity of scores with the existing investment rules.

In September 2012, a SEC study focused on the feasibility and benefits of standardization of rating process. In addition to the Franken Amendment study, the SEC considered alternative model to the issuer-pays model such as: the non-solicited rating, the user-pays model, the issuer-pays model, the designation model (i.e. the rating agency is dictated by the authorities) and the investor owned rating agency.

4.2.5 The market acceptance

According to the analyzed speeches, stakeholders underline the importance of the acceptance of the business model by market participants. The business model is based on three actors: the CRAs, the issuers and the investors.

The existence of CRAs is theoretically justified by information market inefficiency. Considering the information asymmetry between issuers and investors, the CRAs role is to reduce this asymmetry. Of course, these agencies are paid for this mission by investors or issuers depending on the adopted business model.

For the issuer-pays model, the rating agencies must convince the issuers that the rating will be in their stake and that investor took it into account when composing their portfolios. In addition, the legal constraints urge issuer to be rated. If all companies on the market refuse to be rated then CRAs will disappear! It is also the case for investors-pays model. If CRAs information is worthless, then no investor will pay for it. So, the CRAs should pay attention to the reaction of stakeholders to a given rating.

Recently, the market agents tend to misinterpret or ignore the methodology and the underlying meaning of credit ratings, which are intended to determine the probability of default. Thus, it is essential to ensure the acceptance of the ratings by the market and a permanent supervision of all the actors. Finally, credit ratings should be perceived as credible and reliable by the actors of financial markets.

4.2.6 New Business Models

Based on the speeches' analysis, we highlighted the limits of the issuer-pays model. In this section, we tried to develop alternative business models that can be used taking into account the managers' remarks.

- Going back to the investor-pays model

In most of the analyzed speech, stakeholders insist on a return to the investor-pays business model. Initially, the role of the CRAs was to provide information to investors. Indeed, the model of CRAs where investors pay for information was interesting. In fact, the interests of CRAs and those of investors are positively correlated. In this case, it should prevent conflicts of interest that exist in the issuer-pays model. Responding to the needs of investors, investor-pays model encourages providing evaluation on products that interests investors. Since ratings should meet the needs of investors who accept to pay, the motivation of CRAs would be to provide accurate ratings.

In the case of investor-pays model, investors could buy rating services separately. However, the CRAs have opted for an issuer-pays model since it minimizes potential problems related to information access and facilitates scores' transmission to investors. Also, this model allows CRAs to provide different levels of subscriptions for investors and offers more steady incomes for CRAs. These incomes are invested to develop the research capacity of these agencies.

In the context of failure in accounting regulation, the investor-pays model helps investors' decisions: the market is the best assessor of the investment quality (by the classical mechanism of supply and demand). In addition, regulation should not rely on a third party judgment to authorize the bought of any asset. The former vice president Moody's, Mr. Anouar Hassoune, considers that "the investor-pays model is indefensible. When information is rare, it has a price. Today, the information is public and free... So, investor has not to pay for it. A report communicated confidentially to an investor would be spread all over the world. Once information becomes a central point... the transmitter must pay for it".

The risk of the investor-pays model is that the information which was initially considered as exclusive becomes public. There is also a risk that private information turns into insider trading since the agencies' analysts have access to confidential data. However, even reprocessed and synthesized in the form of a note, these data will be at the exclusive disposal of the investors who paid the agency. Nowadays, almost the whole market holds the same information. Finally, the investor-pays model provides for agencies revenues at least equivalent to the current model situation. The rating process is the same independently if one or several investors pay for it. It is therefore likely that, for bond issues interesting more investors, the incomes of CRAs will be higher than the cost of the analysis.

We could think that this model would not have altered the behavior of the CRAs. Agencies had interest to assign grades high in order to maintain the demand of their services and to provide significant revenues. However, Mr. Eric Le Coz, general assistant manager of Carmignac Gestion, believes that "investors should take the initiative of rating". Similarly, Pierre De Lauzun, Chief Operating Officer of the French Banking Federation, considers that anyone who uses the rating information must pay for it. "It is as if the student sitting for an exam paid his teacher after a direct deal.... The results would be certainly curious".

Finally, in this business model, issuers do not pay anymore for financial scores. All companies dealing with bonds would pay the CRAs according to bilateral agreements. However, in two speeches, a tax was mentioned. It should be collected from users of credit ratings by an independent centralized institution or by a government agency. This organism would give agreements to CRAs.

- A new credit rating agency

In order to reinforce CRAs transparency and increase the competition of rating activity, some studies suggest creating a public credit rating agency. In fact, the Chairman of the SEC and the Scandinavian Stock Authorities are in favor of at least one public credit rating agency. This alternative aimed to limit the risk of conflicts of interest observed in previous business model and the anti-competitive practices of CRAs. According to the SEC report in December 2012, 96% of all credit ratings are conducted by the "Big three" agencies (i.e. Standard and Poor's, Moody's and Fitch Ratings).

However, a public credit rating agency could introduce national or regional disparities in rating practices while the rating is worldwide. Some issuers and investors were skeptical about administrative delays that could be induced by the intervention of this new public authority. In addition, the willingness of states to maintain a strict control on financial markets would limit financial innovation.

Stakeholders propose the creation of a European credit rating agency. This idea was already proposed by the leader of the Finance Ministers of the Euro zone, Jean-Claude Juncker and was then mentioned on March 2010 by the German Vice-Chancellor, Guido Westerwelle. Angela Merkel evoked this proposition on Mai 2010. In France, on April 30, 2010, Michel Barnier, the European Commissioner for the internal market, was thinking of the creation of a European credit rating agency: "the landscape of the agencies is too concentrated. I am thinking about the feasibility and the added value of a European Agency". The objective is to put an end to the rating oligopoly.

However, some investors agree with the creation of a new credit agency but were refractory to the idea of public agency due to the potential negative impact of administrative delays and constraints. The Franken Amendment suggested to the SEC creating an investor owned credit rating agency. This agency will be owned by investors and will operate for their interest. Such solution might emerge new conflicts as investors are interested in downgrading the scores in order to decrease the acquisition price of the rated assets.

- The intervention of an independent third party

According to the analyzed speeches, some stakeholders in our sample suggest the interposition of a third independent. This proposal is in accordance with Fabié (2010) who proposed an intermediate solution: a market authority or a representative investors' committee that intervenes between the issuer and the credit rating agency.

Payment of rating fees would continue to be done by issuers but the market authority selects a credit rating agency to evaluate the assets. This intervention would limit the risk of conflicts of interest and end the direct relationship between the issuer and the credit rating agency. It would also facilitate the implementation of agencies' remuneration depending on their performance. This thesis is currently the subject of many debates and is defended mainly by some American investors. Section 939F of the Dodd-Frank Wall Street Reform and Consumer Protection Act suggested to the SEC some an alternative business model for CRAs such as the designation model. The SEC will implement a board of experts. The role of this board is to assign the rating of structured finance securities to the credit rating agency according to its historical performance. The most performing agency is the one which past ratings are the closest to the reality observed on the financial markets.

In such case, the fees paid for ratings cannot be freely fixed by CRAs. The issuer will not accept to pay fees related to a compulsory requirement for a rating agency imposed by a board. In fact, the "rating shopping" was based on the relationship "ratings vs. costs". Issuers look for CRAs offering the highest rating for the lowest cost. When the rating is designed, different fees will introduce a distortion on the competitively of issuers. An answer would be to fix rating fees that are

paid by issuers to the board independently of the designed credit rating agency. The CRAs would be remunerated by the board and will have no financial incentives to give subjective ratings as there is no direct relationship between the CRAs and the issuers.

Some limits of this model are related to the risk of board errors in choosing the credit rating agency due to the complexity of rating process. The board should be a non-profit organization in order to negotiate with rating agencies the suitable remuneration and not be tempted by designing the agencies offering the lowest fees. An additional difficulty is that CRAs can decline the board designation and the revenues should be clearly determined: Are rating agencies paid for each rating or do they receive fixed revenue each month?

All there aspects should be studied to be sure about the feasibility of this alternative business model before deciding its adoption on the markets.

- The credit rating agency fees are correlated to the spread between investors' perception of the asset and its rating

This business model involves the free choice of the credit rating agency in order to limit conflicts of interest. In this economic model, CRAs are free to grade any listing and the issuers are required to provide all available information. Based on their perception of the quality of the ratings, investors designate what agencies should be paid for its rating. However, the fees would be always paid by issuers.

This model encourages CRAs to improve their activity. Investors compare the scores announced by the agency and the market value of the asset. The lowest is this spread; the highest is the agency return.

However, adopting such model could be very risky for CRAs. In fact, the agencies revenues will not correlated to the realized work but to the "performance". First of all, it might reinforce oligopoly position of big rating agencies and it will discourage any new entrance in the rating market. The rating process is made ex-ante and the evaluation is done ex-post. In a context of high market volatility, on the short term, the agency that would be paid is not necessary the one that have "good" rating process based on fundamental evaluation of the asset but the agency that predict the future. On the long term, it is supposed to be the case unless the agency goes to bankruptcy. The rating process produces a cost that the agency cannot support for a long time and for many ratings.

Also for the issuer, the position is risky. In fact, he ignores in advance the exact amount of charges that he will support. Rationally, if the costs are higher than the benefits of issuance, the issuer should cancel his issuance decision.

- Cost-sharing between issuers and investors

In such model and according to speech analysis, the stakeholder requires that the ratings for a new issue expenses should be shared between issuers and investors. The CRAs can rate any issuance. Then, payments are assigned to agencies based on their performance. Investors prefer that the ratings present an undervaluation in order to have the asset at a low price while it worth more in reality. On the contrary, the issuer interest is to over-evaluate the asset to have a highest price. As there a distortion in the interests of issuers and investors, then the CRAs should be objective, neutral and reliable.

In order to manage the risk of high costs for the issuer, the total upper limit of cumulative costs paid to all CRAs should be fixed in advance. Such condition encourages having a large dispersion of rating agencies on the market. Otherwise, some issuance will not be rated while others will be rated by a high number of rating agencies.

In addition, as the CRAs would be evaluated according to the score, the disclosure of this score must simultaneous in order to avoid the problems of free-rider and mimetic. An additional precision should be mentioned about the investors concerned with the fees payment. Does-it applied only on initial issuance? Are secondary market purchases also concerned? Are the rating fees included in the asset price or are they collected by the authorities and given to the CRAs?

5. Conclusion

The rating sector became one of the first concerns of investors. Thus, the ratings scores provided by the CRAs are considered as strategic for securities' issuers. Investors aim to increase the profitability of their investments. As a result, studies were conducted on the CRAs business model. Depending on the business model, the fees are paid by issuers or investors.

Based on our observation, we were interested in research criteria that allow qualifying the relevance of a business model of CRAs according to stakeholders and the alternative models that could be used by these agencies. Based on a review of the literature, we have proposed a broad theoretical framework that permits to identify and to take into account the complexity of the business model of CRAs.

The speeches' analysis allowed us to find the criteria of relevance for the CRAs' business model: the agencies' independence, the transparency of the methods and criteria used in rating, the economic incentives related to the quality of financial ratings and the acceptance of the model by the market.

In addition, we propose some alternative models. The majority of analyzed speeches emphasize the possibility of going back to an investor-pays model. Others proposed the creation of a new public credit rating agency. Stakeholders prefer a new European credit rating agency. Some investors propose the intervention of an independent third party. Another model implies a free choice of the credit rating agency. The last presented model requires cost-sharing between issuers and investors.

Finally, several developments may be considered namely the experiment of alternative business models. Our work could be enriched by conducting a study on these alternative business models. Another perspective would be to conduct a quantitative study on the impact of the change in business models on the investors' strategies and the factors that explain the interest of investors for an alternative business model. Indeed, there is still much progress to be made to identify relevance criteria of business models.

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