

Regulating Credit Rating Agencies in the European Union

Lessons from Behavioural Science

Fabian Amtenbrink & Klaus Heine*

1. Introduction

Since the beginning of the global financial and economic crisis, the search for its causes has been in full flight on both sides of the Atlantic. Exemplary for the direction that debates have taken in this regard is the 2009 De Larosière Report mandated by the European Commission, which identified a number of non-exclusive explanations, including, *inter alia*, fundamental failures in the evaluation of risk and the role that Credit Rating Agencies (CRAs) play in the assessment of credit risk.¹ On a global level the G-20 members have recognized the need to regulate CRAs.² This raises the question as to what the role of CRAs is in the financial markets, why this role may be problematic and how the main weaknesses of the present system can be addressed in the European Union (EU) and elsewhere.

The basic hypothesis at the outset of this contribution is that the current EU regulatory framework and what has been proposed by the European Commission in November 2011 does not fully succeed in effectively tackling failures in the CRA market and does not (sufficiently) take into account insights from behavioural economics into how market participants perceive credit ratings. Therefore, the main thrust of this paper is to point to insights from behavioural science, which might be important, when one is out to find new ways of regulating CRAs effectively. Strangely enough, behavioural issues have so far been largely neglected in the reform debates about CRAs. This contribution may not only add to the debate, but also give it a “behavioural turn”.

The paper proceeds as follows: In Section 2 an outline of the economic core explanations for the existence of

CRAs as well as of the key issues surrounding credit ratings are provided. In Section 3 insights from behavioural science into the workings of credit ratings will be included in the discussion. Section 4 proposes “competition” and “due diligence” of CRAs as a means to achieve better credit ratings. Against the background of the previous sections, in Section 5 the effectiveness of the current EU regulatory framework on CRAs and credit ratings is assessed.

2. The Economics of Credit Ratings: A Short Review

From the outset the question may be raised as to why commercial entities issuing credit ratings exist in the first place. For this it is necessary to understand the role that CRAs play in the marketplace. In doing so this section does not aim to provide an in-depth discussion of all theoretical aspects that might be involved in an economic analysis of CRAs, but rather to give an outline of the economic core explanations for the existence of CRAs as well as to point to some basic institutional features. In doing so, while being mainly descriptive in nature and referring to well-known ideas, some critical issues are raised that are yet unsolved.

2.1 The Market Structure of CRAs

The credit rating industry is highly concentrated. There are three major firms in the United States that dominate the market for credit ratings worldwide: Moody's; Standard & Poors (S&P); and Fitch. Moody's is an independent company exclusively issuing ratings. S&P's credit rating activities are only part of the larger financial information services that are provided. The company is owned by the publishing house McGraw-Hill. Fitch is owned by the French company FIMALAC. These three firms have branches all over the world. While Moody's and S&P provide extensive ratings coverage in Europe, Moody's has more coverage in Asia than does S&P, but S&P has more relative coverage in Latin America. In addition to the major U.S. rating firms and their branch offices, there are about

* Dr. Amtenbrink is Professor of European Union Law at the Erasmus School of Law, Erasmus University Rotterdam, The Netherlands. He is also Visiting Professor at the College of Europe (Bruges). Dr. Heine is Professor of Law and Economics and Jean Monnet Chair of Economic Analysis of European Law at the Erasmus School of Law, Erasmus University Rotterdam, The Netherlands. Both authors are founding members of *ECFIS* – The European Centre for Financial Market Integration.

1. De Larosière Report 2009, pp. 7 *et seq.* See also already International Monetary Fund (2008).

2. <www.g20.org/en/news-room/press-releases/235-communique-meeting-of-finance-ministers-and-central-bank-governors>.

35–40 additional credit rating firms in operation outside the United States.³

The market structure of CRAs has the characteristics of a natural oligopoly. The three leading CRAs (Moody's, S&P and Fitch) control about 94% of the world market.⁴ The oligopolistic market structure becomes sustained and reinforced as a result of the large sunk costs of the reputational capital of CRAs.⁵ Since reputation has to be built up over long periods, it is very difficult for newcomers to enter the market for credit ratings and to contest the market position of the incumbent CRAs. Beyond this “economic” barrier to entry, in 1975 a “legal” barrier to entry followed. The U.S. Securities and Exchange Commission (SEC) designated seven CRAs (including the big three) as Nationally Recognized Statistical Rating Organizations (NRSRO). Being labelled as an NRSRO is supposed to serve as a signal to the capital market that the CRA is of good quality in general. An NRSRO label qualifies a CRA also to testify for certain financial products; for example, SEC regulations require that money market funds contain only securities with a good NRSRO rating. To that extent it pays to be an NSRO. But whether the concept of NRSRO is also beneficial for the public is disputable. While in 1975 seven CRAs got the NRSRO status, in 2003 only the big three CRAs remained after a wave of merger in the years before. Currently, ten CRAs are accredited as NRSROs, after some efforts of the SEC to raise the number of NRSROs.⁶

It is obvious that the introduction of NRSRO and linking it to certain financial products has the effect of deterring competition on the market for credit ratings. As a result, economic and legal barriers to entry protect incumbent CRAs and stabilize an uncontested oligopoly with apparently low incentives to engage in price competition or competition for a better or different rating quality.

2.2 The Business Case for CRAs

Next to the actual market structure of the credit ratings business, the economic characteristics of the product CRAs are offering need to be understood. Here, in a nutshell the question arises as to why there is a demand for such a product in the first place.

Arguably one of the economic arguments in favour of credit ratings is that they reduce informational asymmetries between buyers and issuers of debt securities.⁷ In line with that task is the definition of the International Organization of Securities Commission (IOSCO) that “a credit rating is an assessment of how likely an issuer is to make timely payments on a financial obligation”.⁸

It can be contended that CRAs are appropriate bodies to provide financial assessment, as they not only have large experience in assessing issuers, but also realize economies of scale in the assessment of the creditworthiness of issuers with the help of large research facilities.⁹ This means that a CRA can provide financial assessment at a much lower cost than a single investor who intends to buy a debt security. Consequently, a single financial investor who is confronted with the problem of informational asymmetry in most instances will opt to buy financial advice rather than to collect and to assess the necessary information by himself.¹⁰

Another feature of credit ratings is that they are informational goods, which have largely the characteristics of a public good: After the production of the information about the debt issuer has taken place, the information can be shared with others without incurring any additional production costs. In fact, in the face of today's available information technology, it is not feasible to exclude others from using the rating for free.¹¹ A straightforward consequence is that CRAs typically rely on an issuer-pays business model, whereby the services of CRAs are not paid by investors but by the issuers of debt securities. Investors get the rating information for free, thereby relying on the reputation of the CRAs not to sugarcoat the rating in the interest of the issuer.¹² Yet CRAs have to reconcile two at least potentially conflicting interests in this regard.¹³ On the one hand, in order to safeguard the credibility of its ratings CRAs should have every interest not to soften their assessments of the creditworthiness. On the other hand, it has been observed that the business relationship that CRAs have with the issuer of debt securities, and particularly any ancillary services they may offer, means that they face the “incentive to overstate the creditworthiness of a particular product in order to build a good relationship with the issuer”.¹⁴

Besides the (disputed) view that credit ratings can be useful, in order to overcome informational asymmetries between issuers and investors of securities, there is the argument that credit ratings can help to lower the costs of monitoring agents; for example, tying pension fund managers to the will of the dispersed fund owners. Investors can tie asset managers contractually to buy only those debt securities that have been rated to be of a certain quality (investment grading).¹⁵ Of course, this mechanism is economically meaningful only if credit ratings truly measure and reveal all risks attached to debt securities. Yet this was not the case, for example, for the structured financial products, which triggered the financial crisis in 2008, where it has been observed that the same criteria for assessing quality were applied

3. White 2001.

4. European Commission 2008.

5. *E.g.* *The Economist* 2005; Herring 2009.

6. Including A.M. Best Company, Inc., DBRS Ltd., Egan-Jones Rating Company, Fitch, Inc., Japan Credit Rating Agency, Ltd., Kroll Bond Rating Agency, Inc., Moody's Investors Service, Inc., Morningstar Credit Ratings, LLC, and Standard & Poor's Ratings Services. As stated in U.S. Securities and Exchange Commission 2012, p. 8.

7. *E.g.* Katz, Salinas & Stephanou 2009; Cinquegrana 2009.

8. IOSCO 2003, p. 3.

9. Gonzalez *et al.* 2004; Cinquegrana 2009.

10. White 2010.

11. Mathis, McAndrews and Rochet 2009; Cinquegrana 2009.

12. Diamond 1989; Kuhner 2001.

13. Pagano & Volpin 2010.

14. De Haan & Amttenbrink 2011, p. 8.

15. Gonzalez *et al.* 2004.

as with corporate bonds.¹⁶ In effect, fund managers were forced to buy structured financial products, because they got high ratings. But the applied rating technology was inappropriate and important additional information on liquidity and volatility risk of structured products was not released by the CRAs. Only when the financial crisis set in did it turn out that the ratings of structured products were calculated with very thin data samples and optimistic assumptions on default probabilities. Without that additional information it was not possible to make a correct risk assessment of structured products, neither for financial investors nor for their agents, such as portfolio managers.¹⁷

The informational deficiency of structured products in the event of the financial crisis points to a more general problem of credit ratings that is concerned with the transparency of the rating methodologies.

Transparency of rating methodologies and disclosure of critical assumptions of ratings may help to overcome informational asymmetries and principal agent problems. The idea is that with that extra information, investors would be able to assess more accurately whether the ratings are properly mirroring risk. Moreover, the transparency of the rating methodologies could also trigger more competition between CRAs.¹⁸ However, the disclosure of rating methodologies has a severe drawback. Since in case of disclosure the competitors of the inventor can copy the research methodology, the incentive to innovate and to develop new rating methodologies might be severely mitigated. That is, a CRA will not itself take the initiative to invest in new research methods if the profits of that investment have to be immediately shared with competing CRAs.

What derives from these observations is that while credit ratings are, in general, a means to overcome informational asymmetries between issuers and purchasers of debt securities and, moreover, can be useful in tying the actions of portfolio managers (agents) to the will of investors (principals), the current market for credit ratings has severe market failures, which thwart self-organizing market processes between CRAs. The two most prevalent imperfections on the market for credit ratings are the economies of scale in the production of ratings in combination with sunk investments into the reputation of CRAs and the fact that credit ratings are informational goods.

3. Putting Life Into the Debate: Insights from Behavioural Science

From a methodological point of view, introducing insights from behavioural science into the debate on

credit ratings implies that the rationality assumption of mainstream economic reasoning becomes relaxed. The relaxation of the rationality assumption will be carried out hereafter in three steps. In a first step the small literature on herd behaviour will be presented that is directly concerned with credit ratings. That survey will be followed, in a second step, by a short review of the psychological literature on giving and receiving advice. Although there is no consensus yet on how the availability of advice affects the actions of receivers of advice, it has been observed that the availability of advice has non-trivial effects on the actions of agents.¹⁹ In a third and final step, the so-called lulling effect will be introduced.²⁰ That effect is concerned with the empirical finding that when persons are confronted with regulations, which have the purpose of protecting them, they often relax their own protective measures. This can result in the paradox outcome that persons were better off without regulatory protection. With regard to credit ratings and CRAs, the lulling effect points to the possibility that financial advice in combination with tough financial regulations may result in financial transactions that are less efficient than transactions that are not regulated and affected by financial advice.

The suggestion that less regulatory oversight and less reliance on credit ratings may lead to better decisions of financial investors is certainly provoking at a time when market intervention is on the return, and thus calls for substantiation. To this end, recent findings from neuroeconomics are introduced into the debate, which show that the proper processing and evaluation of financial information becomes hampered in the brains of decision-makers if they receive financial advice. They mentally “offload” the burden of properly evaluating a financial decision by believing overly in the recommendations of expert witnesses.²¹

3.1 Herd Behaviour and the Psychology of Advice

Until now there is no branch of economic literature that is specifically concerned with the behavioural economic aspects of credit ratings. However, there are some insights from behavioural science that have been connected to the analysis of economic effects of credit ratings. The most important finding is that credit ratings may trigger herd behaviour of investors and issuers of debt securities.²² Moreover, there is an overreliance of decision-makers on the advice of others.

3.1.1 Herd Behaviour

The meaning of the term herd behaviour, in general, is that agents follow each other, like animals in a herd. Thereby, the term has a negative connotation; it implies that it would be wiser for agents to reflect their situation thoroughly and to deviate from the track of the herd. Herd behaviour is also sometimes termed as the lem-

16. Coval, Jurek & Stafford 2009.

17. Cinquegrana 2009.

18. E.g. Blaurock 2007; Cinquegrana 2009.

19. Bonaccio & Dalal 2006.

20. Peltzman 1975; Viscusi 1985.

21. Engelmann, Capra, Noussair & Berns 2009.

22. European Commission 2010.

mings-effect, which stresses the negative consequences of herd behaviour.²³

The overall insight of the literature on herd behaviour is that agents, who act sequentially on the basis of private and public information about the behaviour of other agents, can be stuck to socially undesirable decisions. In the end all agents choose the socially non-optimal alternative.²⁴ Herding is an effect that is very common in financial markets. It has been theoretically analysed in the financial literature, and its evidence has been proved empirically in numerous studies.²⁵

Credit ratings can influence the issuers of securities as well as the purchasers of securities. Starting with investors, the literature probes whether the public availability of credit ratings may help investors to overcome a lock-in into deficient decision-making due to false or incomplete private information. However, in an experimental laboratory study, Ferri and Morone show that credit ratings may not in every case prevent the herd behaviour of agents.²⁶ The effect of credit ratings is rather that they contribute to a quicker convergence of security prices to their fundamental value, which leads to welfare gains. Yet, arguably, a limitation of this study is that it is assumed that the rating agency has always superior and correct information about the security, while single investors have only limited and maybe false information. As the recent financial crisis has taught, this is a quite heroic assumption.

Issuers of debt securities may also tend to a sort of herd behaviour, when they try to place the majority of their securities as AAA deals. The rationale for their efforts to engineer financial products that appeal to the highest quality standards of CRAs does not primarily lie in their desire to be recognized as esteemed issuers of securities as such or in some kind of benevolence on their part. Instead this behaviour can be explained by the fact that investors often use heuristics to classify assets, which means that they routinely buy AAA assets because these assets were not problematic in the past.²⁷ Thereby, only AAA-rated securities are perceived to be riskless and thus of investment grade. In such an environment, issuers will try to ensure that most of their deals are rated as AAA, regardless of whether such deals in reality qualify for this highest rating. Put differently, investor demand triggers herd behaviour of issuers to carve out large portions of their deals as the highest investment grade rating.²⁸ That kind of demand-driven herd behaviour of issuers can be socially wasteful, as investors will often purchase AAA securities that are in fact of a lower quality. If thereafter it turns out that the rating of certain products has led to a false allocation of these products,

reallocation decisions of investors support the advent of financial crisis.²⁹

3.1.2 *The Psychology of Advice*

To better understand the behavioural aspects of credit rating information, it is also useful to observe the cognitive processing and evaluation of credit rating information. Credit ratings can be understood as a sort of financial advice, which is given by CRAs. The recipients of that advice are investors or their agents, such as portfolio managers.

There are various psychological findings that point to the fact that advice not only complements incomplete information of decision-makers, but may also have other non-trivial effects on decisions. As this contribution surely cannot cover all facets of the psychology of advice, it will focus on the (main) findings that are related to CRAs.³⁰

In this context a first question is when do decision-makers utilize advice and when do they not? Surely, decision-makers will make use of advice to make better decisions, but they also seek advice to share responsibility.³¹ Decision-makers feel more comfortable if they incorporate advice from others into their decision-making. However, that kind of emotional “offloading” incurs the risk that decision-makers may uncritically and falsely rely on advice. That is, investors of debt securities may rely overconfidently on credit ratings because they have a better emotional feeling, if they can share responsibility.

Another finding is that the accuracy of decision-making improves if decision-makers are taking advice. In fact, the quality of decision-making depends positively on the number of advisors, and past studies suggest three to six sources of advice seem to be enough to improve decision quality considerably.³² In addition, the quality of decision-making improves, if the advice is independent and the content of advice differs.³³ However, decision-makers tend to abandon advisors whose recommendations are very different from those of the other advisors.³⁴ As a consequence, different perspectives on a given subject will not always be included into decision-making.

Applied to the context of CRAs, whereby credit ratings are considered to essentially constitute advice to investors, these insights may suggest that even the limited number of CRAs presently in the marketplace should be sufficient to ensure the quality of decision-making of financial investors. However, this conclusion rests on the assumption that advice offered by the leading CRAs is adequately independent and uncorrelated.³⁵ Moreover, the factual lack of differences in credit ratings from one CRA to the next triggers the utilization of credit ratings by investors. Therefore, it is quite possi-

23. Solow 1974; Akerlof 2001.

24. Banerjee 1992; Bikhchandani, Hirshleifer & Welch 1992; Ferri & Morone 2008.

25. Cont & Bouchou 2000; Bikhchandani & Sharma 2001.

26. Ferri & Morone 2008.

27. Barberis & Shleifer 2003.

28. Benmelech & Dlugosz 2010.

29. *Ibid.*

30. For a survey of the literature see Bonaccio & Dalal 2006.

31. Harvey & Fischer 1997; Yaniv 2004a, 2004b.

32. Budescu & Rantilla 2000; Yaniv & Kleinberger 2000.

33. Soll 1999; Johnson, Budescu & Wallsten 2001.

34. Harries, Yaniv & Harvey 2004; Sniezek & Buckley 1995.

35. Critical: White 2001.

ble that investors ground their decision-making especially on the advice of CRAs, if there is more than one credit rating available and if these ratings do not differ too much. Thereby, the recommendation of a credit rating (advisor) is preferred even more if it is (slightly) overconfident compared with other credit ratings (advisors).³⁶

Finally, advice is seen as more helpful and will be less discounted if it is delivered by an expert source that has a long-standing reputation.³⁷ As a result, less “expert power” is contributed to new CRAs entering the rating market than incumbent CRAs, even if a new CRA is reliably signalling that it can assure a high quality of its ratings.³⁸ It may be argued that this attribution of “expert power” becomes fostered if a CRA receives a sort of official label, which presumably certifies its extraordinary quality, as has been the practice for some time in the United States, where a selected number of CRAs hold the licence as an NRSRO issued by the U.S. Securities and Exchange Commission.³⁹

Overall, the literature on the psychology of advice points to some important characteristics of the circumstances under which investors are processing information of credit ratings. Recipients of advice intend to base their decisions on a more complete set of information (overcoming informational asymmetries). On the one hand, decision-makers seem to rely overconfidently on the advice of others, and, on the other hand, they emotionally “offload” responsibility for their decisions.

6

3.2 Lessons from the Lulling Effect

The findings of the psychology of advice are in accordance with the so-called lulling effect (or Peltzman effect), which points to the paradoxical empirical finding that regulations may not improve individuals’ behaviour, but may lead to recklessness.⁴⁰ In other words, after regulation the situation of individuals may be worse than without or with less regulation.

The implicit logic of the lulling effect is that the protective effect of regulations is overestimated by those affected by the regulation. Individuals who find themselves protected by regulation will falsely reduce their own measures against harm by overrelying on the protection of the regulation. Put differently, in case of tight regulations, individuals may take higher risk levels than without regulation.

Empirically, this effect has been confirmed for regulatory activities in several domains, in particular in the field of safety regulations. After making car seat belts mandatory in the United States by means of the Motor Vehicle Safety Act of 1966, fatal car accidents were not immediately reduced, because drivers overcompensated the additional safety (by using the seat belt) by now driving

more riskily.⁴¹ A similar effect was observed when child-resistant screw caps became mandatory for the storage of drugs in the United States as a result of the Poison Prevention Packaging Act of 1970.⁴² While the rule was actually aimed at the reduction of accidental self-poisoning of children, the self-poisoning of children increased after the rule had become effective. Investigations into this phenomenon revealed that the introduction of child-resistant screw caps had the adverse effect on parents of becoming more careless with the storage of drugs. Drugs were no longer kept with the same care as before the regulation, and hence children had a chance to “play” with the caps more often and to open them with sometimes fatal consequences.⁴³

However, the miscalculation of the regulatory protection level may not only affect the individual caught by the scope of the regulation. Recklessness and higher risk taking may also harm third parties. For example, using a seat belt may protect motorists even if they are taking higher risks, but pedestrians and cyclists do not profit from the better protection of motorists.⁴⁴ They have to bear the full costs of the additional harm, and thus the negative externalities, that result from the careless behaviour of motorists.

What these and other examples of the lulling effect illustrate is that regulations can sometimes have an unintended impact on human behaviour. Individuals may be systematically self-deceptive in regard to the level of protection of a certain regulation.

The insights of the lulling effect can be transferred to the regulation of credit ratings. It is reasonable to assume that investors attribute too much credibility to those credit ratings, which are tightly (publicly) regulated. Investors may have caveats about the regulatory content of public regulations, but they are confident that the public regulation aims to overcome the problems of the credit rating business.

The application of the lulling effect to credit ratings is straightforward. It leads to the proposition that investors become more confident, the more credit ratings become publicly regulated. As a consequence, investors may reduce their own efforts to evaluate the default risk of debt securities at a higher rate than the one at which the effect of this overreliance is compensated by the increased rate of public regulation. The consequence is that investors purchase more debt securities, which have a higher rate of default. Investors would not have bought these debt securities if they had not strongly believed in the publicly monitored certification of debt securities.

What is more, similar to the example of car seat belts, the false risk perception of investors may affect not only themselves, but also third parties. For example, a bank may discover that its overconfidently purchased AAA debt securities have become almost worthless. This can

36. Price & Stone 2004.

37. Goldsmith & Fitch 1997.

38. French & Raven 1959.

39. See section 2.1. As to the situation in the EU see Section 5.

40. Peltzman 1975; Viscusi 1985.

41. Peltzman 1975; Peltzman 2007; Peterson & Hoffer 1994; Cohen & Einav 2003.

42. Viscusi 1985.

43. *Ibid.*

44. Peltzman 2007.

cause not only the bank's shareholders, but also the bank's customers to suffer; for example, a medium-sized company may get loans from the bank only at a higher interest rate or some business ventures may not get any credit. In addition, as liquidity dries up, the government may eventually have to take over the role of a lender of last resort to prevent the collapse of the bank. In that case also tax payers suffer from the lulling effect in the form of a negative externality.

The conclusion that can be drawn from the lulling effect is straightforward: While tight public regulation of CRAs may be aimed at improving the quality of CRAs and their ratings, one cannot exclude the possibility that higher failure rates of investor decisions may result. In such a perspective less regulation may yield better financial investment decisions, because purchasers of debt securities will more carefully evaluate whether a debt security has really earned the specific rating (for example AAA) by a CRA.

3.3 Financial Advice and the Human Brain – Evidence from Neuroeconomics

Theoretical evidence suggests that credit ratings lead to the overconfidence of investors, who engage insufficiently in evaluating and monitoring the risk of debt securities. The question is whether such findings can be backed by empirical observations highlighting what may be considered as reckless behaviour of financial investors. One approach to finding more empirical evidence is to observe the information processing of the human brain and to ask whether these processes lead systematically to judgment errors.

In a recent study Engelmann, Capra, Noussair and Berns examined how expert financial advice neurobiologically affects financial decision-making.⁴⁵ While undergoing functional Magnetic Resonance Imaging (fMRI) scanning, participants in an experiment had to make financial decisions. They could choose between a certain payment and a lottery. The choices had to be made under two framing conditions, whereby an expert financial advisor gave a recommendation or no advice was given. The results of this experiment showed a significant effect of expert advice on decision-making: It changed significantly the probability weighting functions of test persons in the direction of the expert's advice. This finding raises the important question whether it might be possible that receiving advice suppresses or entirely turns off an individual's valuation mechanism ("offloading" hypothesis).⁴⁶

In order to approve the "offloading" hypothesis, neuro-scans were conducted. The brains of test persons, some but not all of whom had received advice, and who had to make a financial decision (taking a fixed payment or choosing the lottery), were scanned. The neuro-scans showed that in the case where financial advice was provided, different regions of the brain were activated, compared with the cases where no financial advice was

given. Obviously, financial advice is neurally not processed as a sort of "additional information", complementing information already vested in an individual, but it is treated as distinct information, which is processed in a different area of the brain. That is, the decision-making process undergoes a fundamental change when financial advice is given.⁴⁷

The obvious question is, which areas of the brain become activated in case of (no) financial advice, and which function do these brain areas have? If no financial advice was available, brain areas of test persons were activated that are associated with decision-making under uncertainty⁴⁸ and in which elements of expected utility are processed.⁴⁹ When financial advice was released, these regions of the brain became deactivated. However, other regions of the brain became activated, which are associated with judgments of true and false beliefs that other individuals may hold. In these regions of the brain also the trustworthiness of trading partners in economic games is processed.⁵⁰ These regions of the brain became especially activated when only little information about the trading partner's character was available.

Finally, an important question is, which regions of the brain become activated if a person does not conform to the expert's advice. The experiment showed that the brain region associated with negative emotional states was activated. That means that it was emotionally uncomfortable for individuals to disregard the expert's recommendation.⁵¹ An additional finding of the experiment was that the region of the brain associated with the encoding of negatively valued affections of risk became activated.

The findings from neuro-scans corroborate the insights gained from the study of herding behaviour, the psychology of advice and the lulling effect observed above. Overall it can be summarized that individuals tend to offload their responsibility to make decisions if advice is available, whereby individuals undertake only a little effort to verify whether the content of the given advice has sufficient quality. Instead of checking the quality of a particular recommendation, the brain is concerned mainly with considering whether the advisor can be trusted or not.

Both findings support the hypothesis that credit ratings may trigger the lulling effect. Investors overly trust the expertise of CRAs, especially incumbent CRAs, which have a long-standing reputation. Thereby, public regulation triggers even further overconfidence, because publicly regulated CRAs or publicly regulated credit ratings are seen as particularly reliable.

45. Engelmann, Capra, Noussair & Berns 2009.

46. *Ibid.*

47. *Ibid.*

48. Huettel 2006; Platt & Glimcher 1999.

49. Platt & Glimcher 1999; Sugrue, Corrado & Newsome 2004.

50. Delgado, Frank & Phelps 2005.

51. Engelmann, Capra, Noussair & Berns 2009.

4. Policy Conclusions: How to Avoid Overreliance

There are a lot of proposals concerning ways in which the quality of credit ratings could be improved, not all of which can be reviewed in this contribution.⁵² What can be observed is that all proposals range between two extremes, as summarized by Brunnermeier, Crocket, Goodhart, Persaud and Shin:⁵³

“[T]here are two alternative generic approaches. The first is to remove CRAs and their ratings as far as possible from the structure of formal regulation altogether. Investment managers and bankers should take responsibility for their own decisions, and they (and their regulators) should no more be allowed to hide behind CRA forecasts than, for example, behind government forecasts of future growth. The alternative, second, approach is to register and to regulate the CRAs, but to leave them with a central role in the regulatory process.”

Yet, what factors should determine this choice? Two mechanisms that regularly emerge in the reform debates and that also seem to be important to avoid the “lulling” of debt securities investors are “competition” and “due diligence”. These two mechanisms are seen as instrumental in “nudging” investors and issuers of debt securities towards more efficient actions.⁵⁴

4.1 Competition

The meaning of competition is that customers have a choice between different products and that suppliers are forced to sell their products at a price level that generates no monopolistic rents. In addition, competition stimulates innovations. Having a choice between different products implies that customers have to consider the quality of the different products and make up their minds about which product will be the best choice for them. Surely, making choices is not a simple task and sometimes wrong choices are made. Nevertheless, in general, competition between different products/sellers improves efficiency. The same must arguably also apply to credit ratings and CRAs. Also, it can be expected that the lulling effect will be decreased if investors have to make a choice between the products of various CRAs. They have to compare which financial advice is the most prudent one or they have to rely on their own capabilities to forecast the default risk of a debt security. In any case, fostering competition between CRAs makes financial advice more uncorrelated and it can be expected that the mental “offloading” of investors is decreased. But to strengthen competition between CRAs is not a simple task. Given the market imperfections that are associated with the market for credit ratings, it cannot

be expected that a workable competition between CRAs unfolds easily, if that market becomes simply deregulated. There is rather the need for competition enabling regulations, which are designed to prevent the exploitation of informational asymmetries and the occurrence of the lulling effect. Several conclusions can be drawn from this analysis.

First, the introduction of a central regulatory authority on the regional or global level for CRAs may be counterproductive. A uniform regulation of CRAs suppresses other different approaches to regulate CRAs. The existence of only one uniform regulation may trigger the perception of investors that this regulation is the best regulatory standard available. The lulling effect may be the consequence. Therefore, it might be preferable to allow for different regulations from different countries. In that case, investors have to consider not only the quality of a certain rating, but also the quality of the regulation behind that rating. The occurrence of the lulling effect will be decreased.

Second, linked to the first point, the licensing of CRAs by government agencies may not necessarily be the best way forward. Licensing suggests that a CRA has a certain quality on which an investor can rely. From the perspective of behavioural science, this is a strong trigger for the occurrence of the lulling effect. In addition, licensing forecloses market entry of new CRAs and subsequently competition. Only those new CRAs that fulfil the pre-defined standards can become competitors, but yet it would not be clear whether these standards are the best available or whether they only reflect a pseudo-high standard that aims at preventing the market entry of newcomers. What is more, licensing may be abused by governments to intervene in the rating business.

Thirdly, the business model of asset managers and CRAs needs to be reviewed. It should not be allowed to contractually bind asset managers to purchase debt securities of a certain rating level and/or of licensed rating agencies. While it is reasonable to oblige asset managers to act in a prudent way and to monitor their conduct, it is not useful to have a rating-based automated buying and selling of debt securities. First of all, relying blindly on the opinion of a CRA may lead to severe investment failures. Second, the offloading of responsibility for investment decisions by referring to a contractual obligation is a strong trigger for the lulling effect. Placing responsibility with the asset managers will make them more aware of the actual risk of a debt security. In addition, the abandonment of the requirement to buy only debt securities that have been rated by a licensed CRA can foster competition between CRAs.

For CRAs the business model that the issuer pays for the rating seems to be the only viable business model. This is not to say, however, that the business model cannot be improved, in order to provide more incentives for competition. Issuers pay for the services of a CRA when they have received the rating. Thereafter, the issuer can decide whether he will publish the credit rating or not. Consequently, shopping around is a frequent pattern of investors who are looking for the friendliest

52. A sample of reform alternatives is given by SIFMA 2008 and Mathis, McAndrews & Rochet 2009.

53. Brunnermeier, Crocket, Goodhart, Persaud & Shin 2009, p. 54.

54. Sunstein & Thaler 2008; Jolls & Sunstein 2006; Jolls 2011.

rating. This puts pressure on CRAs to provide top-level ratings. A possible means of reducing this potential conflict of interests on the part of CRAs is to have issuers pay the CRA for its services upfront and to oblige the latter to always publish the credit rating. In that case investors will learn about the reliability of issuers; for example, investors will be informed how often an issuer has tried to create and to place a debt security with considerable quality. Making transparent which debt securities have not been placed by issuers may make investors more aware of the quality of financial products and decrease the lulling effect.

Finally, the transparency (disclosure) of the applied rating methods and the underlying dataset of ratings should be enhanced. This will enable investors to evaluate more thoroughly whether a rating has been built upon appropriate methods and data. Also, this requirement makes it possible for third parties, like academics, to criticize a used method and the data sample. With respect to the lulling effect, the transparency of methods and data makes it more salient for investors that the quality of credit ratings depends in the first place on the underlying methods and data.

4.2 Due Diligence

The other important mechanism that prevents the lulling of investors is “due diligence”. The concept stands for an obligation on the part of the CRAs to make deep investigations into the creditworthiness of issuers. While yet CRAs only review publicly available material of the issuer and private information,⁵⁵ which is freely given by the issuer, the obligation of due diligence would force the CRA to review also material that is not freely presented by the issuer. A CRA that cannot prove due diligence may be liable for the released credit rating. In the first place due diligence is a provision that forces CRAs to look for more substantiated information before a credit rating is released. The obligation to prove the quality of a debt security will decrease the problem of informational asymmetry between issuers and investors. However, it can also be expected that the lulling effect will decrease, because credit ratings will become more exact through due diligence. Also, in case a debt security defaults, there will be claims against the CRA, whether the CRA can prove due diligence. In these lawsuits information will be revealed that may be helpful for investors to overcome their sometimes deceived investment decisions.

5. The European Union Regulatory Approach to CRAs: Avoiding the Pitfalls?

Against the background of the insights from behavioural economics on how market participants perceive credit

ratings, the question arises as to whether and to what extent the approach by the EU to regulating CRAs avoids the pitfalls sketched in the previous sections. Considering this focus, this part of the contribution does not aim at providing an all-embracing overview of the EU regulatory regime applicable to CRAs but rather zooms in on the main issues that have been identified above.⁵⁶ In doing so, first the background to the EU’s regulatory activities is sketched. Thereafter, the currently applicable legal regime is discussed, followed by an outlook on the November 2011 legislative proposals by the European Commission to further enhance the rules on CRAs and credit ratings.

5.1 Background

Following the global financial and economic crisis that also resulted in turmoil in the European financial markets, as has been mentioned in the introduction, fundamental failures in the evaluation of risk and the role of CRAs in the assessment of credit risk have been identified as having contributed to the crisis. On the basis of a broad consultation process in late 2008, the European Commission presented an extensive proposal for a Regulation of CRAs,⁵⁷ which in somewhat amended form was agreed upon by the Council and the European Parliament in September 2009.⁵⁸ In opting for the introduction of a regulatory regime, the European Commission most notably decided not to follow the recommendations of the Financial Stability Forum, the Committee of European Securities Regulators and the European Securities Markets Expert Group, all of which, in acknowledging the role of CRAs in the financial crisis, had advised to reinforce the existing self-regulatory regime applicable to CRAs.⁵⁹ Yet the European Commission considered self-regulation would not suffice to ensure that “failures in risk assessment and risk management” referred to *inter alia* in the De Larosière Report would be a thing of the past.⁶⁰

With Regulation 1060/2009, for the first time a European legal framework was introduced for CRAs. This is not to say, however, that previously CRAs had not been subject to any kind of regulation at all. Next to recognition of CRAs in the context of the Capital Requirements Directive for the purpose of credit assessments to determine capital requirements,⁶¹ the former Committee of European Banking Supervisors (CEBS) had issued non-legally binding guidelines on the recognition of external

55. SIFMA 2008.

56. See generally Amtenbrink & De Haan 2009.

57. European Commission, ‘Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies’, COM (2008), 704 final.

58. Regulation 1060/2009 of 16 September 2009 on credit rating agencies [2009] OJ L 302/1.

59. See European Securities Markets Expert Group (2008); Financial Stability Board (2008); European Securities Regulators and the European Securities Markets Expert Group (2008).

60. De Larosière Report 2009, p. 10.

61. Directive 2006/48/EC of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions [2006] OJ L 177/1. Namely Art. 81(1) and (2). See also Annex VI, Part 2 of Directive 2006/48/EC on the recognition of CRAs and mapping of their credit assessments Art. 80(1).

credit assessment institutions.⁶² On the basis of the CEBS guidelines, initially the shared informal view by the competent national authorities was that credit institutions and investment firms could use the ratings of three leading CRAs, namely Fitch Ratings, Standard & Poor's Ratings Services, and Moody's Investors Service, to determine the risk weights of their exposures for capital purposes and on the mapping of their credit assessments.⁶³ However, neither the Capital Requirement Directive nor the CEBS guidelines regulated the licensing and supervision of CRAs in the EU.⁶⁴ The same held true for the non-binding standards by the International Organisation of Securities Commissions (IOSCO)⁶⁵ included in the "Code of Conduct Fundamentals for Credit Rating Agencies" (IOSCO code).⁶⁶ Nevertheless the IOSCO code was considered the benchmark for assessing the conduct of CRAs, and it is thus hardly surprising that at the time when the European Commission considering regulating CRAs in the EU in a more substantial way it leaned heavily on this standard.⁶⁷

Following the introduction of the European System of Financial Supervision (ESFS), the three new European Supervisory Authorities (ESAs) Regulation 1060/2009 in 2011 became subject to substantial amendment to accommodate the new role of the European Securities and Markets Authority (ESMA).⁶⁸ Section 5.2 reflects on the Regulation as amended in 2011. What is more, in November 2011 the European Commission published a new proposal to amend the regulatory framework even further with a view to strengthening the existing legal regime.⁶⁹ This proposal is discussed separately in Section 5.3.

5.2 Towards Less Reliance on Credit Ratings, More Competition and Due Diligence of CRAs?

Overall, it can be argued that the currently applicable EU regulatory approach follows a double strategy that seems to be only partly attuned. On the one hand, from the moment of the introduction of the original 2009 pro-

posal on CRAs, the European legislator has emphasized the undesirability of the overreliance on credit ratings by investors and the need to address this development in the financial markets. On the other hand, large parts of Regulation 1060/2009 in its currently applicable form are in substance geared towards improving upon the quality and reliability of credit ratings.

In order to be recognized as an External Credit Assessment Institution (ECAI) in accordance with the Capital Requirements Directive, CRAs established in the EU have to register with ESMA.⁷⁰ In addition, the European Commission has the right to certify CRAs situated outside the EU by means of an equivalence decision.⁷¹ For this, the legal and supervisory framework of a third country must ensure that CRAs authorized or registered in that country comply with legally binding requirements that are equivalent to the EU legal requirements and that they are subject to effective supervision and enforcement in that third country.⁷² At the time of writing this contribution, a total of 31 CRAs had been registered under the European scheme, including different country branches of the three biggest CRAs, Fitch, Moody's and Standard & Poor's.⁷³

Next to this quasi-official seal of approval for CRAs operating in the EU, a rather comprehensive supervisory system has been set up geared towards ensuring compliance with the Regulation.⁷⁴ Supervisory tools range from the request for information, investigations and on-site inspections and may *inter alia* result in the temporary suspension of the use, for regulatory purposes, of credit ratings, the temporary prohibition to issue any credit ratings at all and the withdrawal of the registration of a CRA.⁷⁵

Taking into account the insights from behavioural science discussed in the previous sections, the very introduction of a registration system of CRAs may be considered somewhat counterintuitive, as it may trigger a lulling effect, but in any event is unlikely to stimulate investors to make less use of credit ratings. Regulation 1060/2009 states that the use of the name of ESMA "in such a way that would indicate or suggest endorsement or approval by ESMA [...] of the credit ratings or any credit rating activities of the credit rating agency" is not permitted, thereby excluding the use by CRAs of their official EU registration for commercial communication. Yet ESMA itself publishes a list of all registered CRAs on its webpage.⁷⁶

62. Committee of European Banking Supervisors, "Guidelines on the Recognition of External Credit Assessment Institutions", 20 January 2006.

63. In April 2007 a similar statement was issued by eleven competent European supervisory authorities for the rating agency DBRS.

64. Amtenbrink & De Haan 2009.

65. IOSCO membership is primarily made up of national central banks and financial market regulatory and supervisory agencies.

66. *Code of Conduct Fundamentals for Credit Rating Agencies*, published by the technical committee of IOSCO, revised version of May 2008. Available www.iosco.org/library/pubdocs/pdf/IOSCOPD271.pdf, accessed 24 September 2012.

67. European Commission 2008, p. 3.

68. See Regulation 13/2011 of 11 May 2011 amending Regulation 1060/2009 on credit rating agencies [2011] OJ L 145/30; Regulation 1095/2010 of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision 716/2009/EC and repealing Commission Decision 2009/77/EC [2010] OJ L 331/84.

69. European Commission, "Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EC) No 1060/2009 on credit rating agencies", COM (2011) 747 final. For an overview of the ESFS see Moloney 2010.

70. For the applicable procedure see Arts. 14-19 Regulation 1060/2009 (as amended).

71. *Ibid.*, Art. 5.

72. See e.g. Commission Decision of 28 September 2010 on the recognition of the legal and supervisory framework of Japan as equivalent to the requirements of Regulation 1060/2009 of the European Parliament and of the Council on credit rating agencies [2010] OJ L 254/46.

73. See www.esma.europa.eu/page/List-registered-and-certified-CRAs, accessed 24 September 2012.

74. Art. 21(1) Regulation 1060/2009 (as amended).

75. *Ibid.*, Art. 24.

76. See www.esma.europa.eu/page/List-registered-and-certified-CRAs, accessed 24 September 2012.

What is more, many of the substantive rules of conduct applicable to CRAs in the current EU framework are essentially geared towards increasing the quality of credit ratings or at least towards introducing a system of quality control at the European level. This includes, in the first place, the organizational and operational requirements geared towards ensuring the independence of CRAs and the avoidance of conflicts of interest.⁷⁷ This equally applies to the rules regarding the quality of rating analysts and other persons involved in the issuing of credit ratings.⁷⁸ Finally, also the disclosure requirements related to the methodologies, models and key rating assumptions a CRA has applied in its ratings activities,⁷⁹ as well as the introduction of rating categories for different finance instruments, may be interpreted to pursue the same aim.⁸⁰ All in all, it seems rather questionable whether any investor making the effort to acquaint itself with this regime would feel particularly discouraged to use credit ratings or not to rely on the ratings of any one CRA. If anything, the extensive regulatory regime suggests that the ratings of CRAs that adhere to the requirements under Regulation 1060/2009 can be trusted.

While Regulation 1060/2009 in its current form does not necessarily send out the signal to issuers and investors that they should rely much less on credit ratings, the quality requirements it introduces raise the standard of care that CRAs have to observe, and thus the due diligence of CRAs, at least to some extent. In the currently applicable EU regulatory framework there is, however, a notable absence of any specific civil liability regime for CRAs vis-à-vis investors.⁸¹

What is more, Regulation 1060/2009 does not include any particular measures to discourage including references in the regulatory framework to external ratings by CRAs. Put differently, the use of ratings for regulatory purposes has remained largely unaddressed. The undesired side effects of this have since been acknowledged by the European Commission, which points out in a 2010 working document that such references have the “potential to implicitly be regarded as a public endorsement of ratings and [...] to influence behaviour in an undesirable way, for instance due to sudden hikes in capital requirements resulting from rating downgrades”.⁸²

Finally, the current EU regulatory framework can be criticized for its lack of measures to increase competition in this oligopolistic sector, despite the fact that the European Commission has recognized that there is a

need to enhance competition among CRAs.⁸³ This point will be returned to in the next section.

5.3 The November 2011 European Commission Proposal: Filling in the Blanks?

The November 2011 European Commission proposal for the amendment of Regulation 1060/2009, which at the time of writing of this contribution is pending before the European Parliament in the 1st reading,⁸⁴ is *inter alia* aimed at mitigating “the risk of overreliance on credit ratings by financial market participants, the high degree of concentration in the rating market, civil liability of credit rating agencies vis-à-vis investors”.⁸⁵ As such, the goal of the proposed amendment reads like a list of omissions of the existing EU regulatory framework on CRAs.

5.3.1 Overreliance Revisited

Whereas the current regulatory regime may be considered disappointing in not including major measures to reduce overreliance on ratings, the November 2011 Commission proposal includes a number of measures that are geared towards this aim. At the same time, by proposing to include rating outlooks also in the future, the scope of the regulatory framework is somewhat broadened.

At the outset it is useful to make a distinction between overreliance on ratings as such and overreliance on an individual CRA, whereby the latter has an impact on the level of competition between CRAs. With regard to the overreliance on ratings, the measures proposed by the European Commission address not only (individual) investors, but also financial institutions and even regulators and supervisors. Investors would become obliged to mandate at least two CRAs, each of which must provide an independent credit rating.⁸⁶ This obligation is, however, limited to structured finance instruments. Issuers of finance instruments should no longer be tied to any one CRA for more than three years, and an upper limit is introduced for the number of ratings a CRA is allowed to issue for the debt instruments of a particular issuer.⁸⁷ What is thus effectively proposed is a mandatory rotation of CRAs for the rating of finance instruments, whereby at the end of a contractual relationship in principle a “cooling off” period of four years applies.⁸⁸

77. Art. 6 and Annex 1 Regulation 1060/2009.

78. *Ibid.*, Art. 7.

79. *Ibid.*, Art. 8.

80. *Ibid.*, Art. 10(3).

81. For a brief overview see Blaurock 2007, pp. 17 *et seq.*

82. Brackets added. European Commission, “Public Consultation on Credit Rating Agencies” (5 November 2010), p. 5. Available at <http://ec.europa.eu/internal_market/consultations/docs/2010/cra/cpaper_en.pdf>, accessed 24 September 2012. See Amtenbrink & De Haan 2011.

83. European Commission, Proposal for a Regulation of the European Parliament and of the Council on amending Regulation (EC) No 1060/2009 on credit rating agencies, SEC (2010) 678, p. 5.

84. At the time of writing of this contribution a draft report of the European Parliament Committee on Economic and Monetary Affairs was available in which amendments to the Commission proposals. Yet, as the fate of these amendments is unclear in the ongoing legislative process, they have presently not been included.

85. European Commission, Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EC) No 1060/2009 on credit rating agencies, COM/2011/0747 final, Explanatory Memorandum, section 1.

86. *Ibid.*, section 11, proposed Art. 8b.

87. *Ibid.*, section 8, proposed Art. 6a.

88. *Ibid.*

Next to issuers and investors and, more generally, CRAs, also financial institutions are encouraged to rely less on credit ratings. Among others, it is foreseen that credit institutions, investment firms, insurance and reinsurance undertakings, institutions for occupational retirement provisions, management and investment companies and alternative investment fund managers must make their own credit risk assessments. The European Commission proposal states in this regard that these parties “shall not solely rely or mechanically rely on credit ratings for assessing the creditworthiness of an entity or financial instrument”.⁸⁹ This measure is also supposed to reduce the so-called cliff effect in financial markets, that is, “sudden actions that are triggered by a rating downgrade under a specific threshold, whereby downgrading a single security has a disproportionate cascading effect”.⁹⁰

5.3.2 *Limiting the Use of Credit Ratings for Regulatory Purposes*

Apart from overreliance by investors and issuers on credit ratings and particular CRAs, the proposal also addresses the use of ratings for regulatory purposes. First, the three new European Supervisory Authorities (ESAs) are not supposed to credit ratings in their guidelines, recommendations and draft technical standards “where such preferences have the potential to trigger mechanical reliance on credit ratings by competent authorities or financial market participants”.⁹¹ Any existing guidelines and recommendations would have to be adapted accordingly should the proposed amendments become law. The same also applies to any recommendations and warnings issued by the newly established European Systemic Risk Board. Overall, the European Commission proposal includes some concrete measures to reduce the use of credit ratings for regulatory purposes.

5.3.3 *Additional Disclosure Requirements*

The European Commission proposal also foresees in further measures to increase the level of care that CRAs have to maintain in order to comply with the EU regulatory regime. First of all, several new provisions would be geared towards enhancing disclosure requirements. Among the most notable new requirements would be the disclosure of “any credit rating or rating outlook, as well as any decision to discontinue a credit rating, on a non-selective basis and in a timely manner”.⁹² The CRA must state its reasons for discontinuing a credit rating. Moreover, changes to the existing or the use of new rating methodologies, models or key rating assumptions have to be published by the CRA on the internet with an invitation to stakeholders to comment on the amendments.⁹³ Errors in the methodology or in its application must be notified not only to ESMA, but also to the pub-

lic at large.⁹⁴ Moreover, additional reporting requirements for CRAs have been introduced for sovereign ratings. Sovereign ratings must be accompanied by a full research report and they must not be published before the close of business.⁹⁵ What is more, if the proposal should become law, CRAs would become obliged to (re-)assess sovereign ratings every six months instead of every twelve months.⁹⁶

Interestingly, reporting requirements would not be limited to CRAs, as it is foreseen that issuers, originators and sponsors of structured finance instruments must disclose to the public, on a webpage run by ESMA,

“information on the credit quality and performance of the individual underlying assets of the structured finance instrument, the structure of the securitization transaction, the cash flows and any collateral supporting a securitization exposure and well informed stress tests on the cash flows and collateral values supporting the underlying exposure”.⁹⁷

5.3.4 *Reducing the Potential for Conflicts of Interests*

The European Commission proposal once more sets out to address the potential conflicts of interests at CRAs. The aforementioned rotation system for CRAs engaged by an issuer is an important example in this regard. The same holds true for the proposed new rule that a leading analyst should not be involved in rating the same entity for more than four years regardless of on behalf of which CRA the analyst rates the entity.⁹⁸

5.3.5 *Enhancing Competition*

In terms of enhancing competition, two more proposed measures are of interest. First, the European Commission proposal foresees the establishment of a European Rating Index (ERIX) to which CRAs have to submit rating information of all instruments rated by them. In order to make the rating outcome comparable across CRAs that may use different rating scales, the establishment of a standardized index is foreseen. However, CRAs remain free to use their own rating scales when they publish the ratings themselves.⁹⁹

Finally, it is proposed that Regulation 1060/2009 include a civil liability regime. In the future in case a CRA intentionally or with gross negligence does not live up to its obligations, and to the extent that this infringement has had an impact on a credit rating, an investor that has relied upon such a rating can bring an action for any damage caused. In the proposal a CRA is considered to act with gross negligence “if it seriously neglects duties imposed upon it” by Regulation 1060/2009.¹⁰⁰

89. *Ibid.*, section 6 proposed Art. 5a.

90. Commission Proposal 2011 n. 69, p. 4.

91. *Ibid.*, section 6, proposed Art. 5b.

92. *Ibid.*, section 11, proposed Art. 10(1).

93. *Ibid.*, section 10, proposed Art. 5a.

94. *Ibid.*, section 10, proposed Art. 8(7).

95. *Ibid.*, proposed new Part III of Annex I, section D.

96. *Ibid.*, section 10, proposed Art. 8(5).

97. *Ibid.*, section 11, proposed Art. 8a.

98. *Ibid.*, proposed point 8 in relation to Art. 7(4) of Annex I, Section C.

99. *Ibid.*, section 14, proposed Art. 11a.

100. *Ibid.*, section 20, proposed Art. 35a.

6. Conclusions

Following the global financial and economic crisis, and the role of CRAs therein, the legal regime applicable to credit ratings and CRAs have come under scrutiny both at the national and international levels. Overreliance on credit ratings, lack of due diligence and competition have been made out as major factors having contributed to the developments that put CRAs in a critical place in the crisis. Both in the United States and in the EU legislative activities could be observed aimed at increasing the regulatory oversight over CRA activities, where non-binding international standards and self-commitment were thought to have failed.

While this reaction to market failure and countermovement towards regulation may be expected, the question arises whether this approach is not in fact counterproductive to some extent. Insights from behavioural science suggest just that. As credit ratings can trigger a lulling effect, whereby public regulation triggers even further overconfidence, publicly regulated CRAs and the endorsement of the use of credit ratings by publicly regulated and bodies are perceived as particularly reliable. Competition and due diligence can be mechanisms, instrumental in pushing investors and issuers of debt securities towards more efficient actions.

Turning to the EU, the current regulatory framework applicable to CRAs falls short of effectively tackling market failures and, considering its substance, does not sufficiently take into account insights from behavioural economics into how market participants perceive credit ratings. European law seems to pursue a double strategy that is not necessarily well matched. On the one hand, the drafters of Regulation 1060/2009 intended to reduce overreliance on ratings. On the other hand, by introducing a registration and certification system of CRAs operating in the EU and whose ratings are used for regulatory purposes and, moreover, by introducing numerous measures geared towards increasing the quality and reliability of credit ratings, investors are not exactly discouraged from relying on ratings. Arguably, due diligence measures alone cannot achieve this aim. The currently applicable legal regime also does little to increase competition in the market for credit ratings.

The November 2011 Commission proposal for an amendment of Regulation 1060/2009 goes some way towards addressing some of these omissions. The obligation to use more than one CRA for the rating of a financial instrument as well as the obligation on parts of CRAs not to enter into contractual relationships with issuers for longer than three years may result in a diversification of the market for credit ratings. The introduction of EURIX may support this process. Next to this creation of more competition, the various measures to reduce the use of credit ratings for regulatory purposes and the requirement for certain financial market parties not to rely on external credit ratings can reduce the reliance on credit ratings somewhat.

To the extent that the European Commission proposal also further increases the due diligence of CRAs, it needs to be seen whether – if actually introduced – this actually results in more distinguished and exact ratings, thereby signalling to investors more clearly what the credit risks of a given financial instrument are and, moreover, what the risks of relying on a credit rating as a means of financial advice are. This is crucial as insights from behavioural science transferred to CRAs make it plausible that the EU regulatory approach will not dramatically alter the investor's conduct.

Bibliography

- G.A. Akerlof, "Behavioural macroeconomics and macroeconomic behavior", Nobel Prize Lecture, 8 December 2001.
- F. Amtenbrink & J. De Haan, "Regulating Credit Ratings in the European Union: A Critical First Assessment of Regulation 1060/2009 on Credit Rating Agencies", 46 *CML Rev*, 2009, pp. 1915-1949.
- F. Amtenbrink & J. De Haan, *Credit Rating Agencies*, DNB Working Paper No. 278, De Nederlandse Bank, January 2011.
- A.V. Banerjee, "A Simple Model of Herd Behavior", 107 *Quarterly Journal of Economics*, 1992, pp. 797-817.
- N. Barberis & A. Shleifer, "Style investing", 68 *Journal of Financial Economics*, 2003, pp. 161-199.
- E. Benmelech & J. Dlugosz, "The Credit Rating Crisis", in *NBER Macroeconomics Annual 2009*, Vol. 24, University of Chicago Press.
- S. Bikhchandani, D. Hirshleifer & I. Welch, "A Theory of Fads, Fashion, Custom, and Cultural Change as Informational Cascades", 100 *Journal of Political Economy*, 1992, pp. 992-1026.
- S. Bikhchandani & S. Sharma, *Herd Behaviour in Financial Markets*, IMF Staff Papers, Vol. 47, 2001, pp. 279-310.
- U. Blaurock, "Control and Responsibility of Credit Rating Agencies", 11 *Electronic Journal of Comparative Law*, 3, 2007. Available at: <www.ejcl.org/113/article113-16.pdf>, accessed 24 September 2012.
- S. Bonaccio & R.S. Dalal, "Advice taking and decision-making: An integrative literature review, and implications for the organizational sciences", 101 *Organizational Behavior and Human Decision Processes*, 2006, pp. 127-151.
- M. Brunnermeier, A. Crockett, Ch. Goodhart, A.D. Persaud & H. Shin, *The Fundamental Principles of Financial Regulation*, Geneva Reports on the World Economy, Vol. 11, 2009.
- D.V. Budescu & A.K. Rantilla, "Confidence in aggregation of expert opinions", 104 *Acta Psychologica*, 2000, pp. 371-398.
- Committee of European Securities Regulators, *CESR's Second Report to the European Commission on the compliance of credit rating agencies with the IOSCO Code and The role of credit rating agencies in structured finance*, May 2008. Available at: <www.esma.europa.eu/system/files/CESR_08_277.pdf>, accessed 24 September 2012.
- P. Cinquegrana, *The Reform of the Credit Rating Agencies: A Comparative Perspective*, ECMI Policy Brief, No. 12, 2009.
- A. Cohen & L. Einav, "The Effects of Mandatory Seat Belt Laws on Driving Behavior and Traffic Fatalities", 85 *Review of Economics and Statistics*, 2003, pp. 828-843.
- R. Cont & J.-P. Bouchaud, "Herd Behavior and Aggregate Fluctuations in Financial Markets", 4 *Macroeconomic Dynamics*, 2000, pp. 170-196.
- J. Coval, J. Jurek & E. Stafford, "The Economics of Structured Finance", 23 *Journal of Economic Perspectives*, 2009, pp. 3-25.

- M.R. Delgado, R.H. Frank & E.A. Phelps, "Perceptions of moral character modulate the neural systems of reward during the trust game", 8 *Nature Neuroscience*, 2005, pp. 1611-1618.
- D.W. Diamond, "Reputation Acquisition in Debt Markets", 97 *Journal of Political Economy*, 1989, pp. 828-862.
- J. De Haan & F. Amtenbrink, *Credit Rating Agencies*, DNB Working Paper No. 278 / January 2011.
- De Larosière Report, *The High-Level Group on Financial Supervision in the EU Chaired by Jaques de Larosière*, Report, Brussels, 25 February 2009.
- J.B. Engelmann, C.M. Capra, Ch. Noussair & G.S. Berns, "Expert Financial Advice Neurobiologically 'Offloads' Financial Decision-Making under Risk", *PLoS ONE* 4(3) 2009.
- European Commission, Commission staff working document accompanying the proposal for a regulation of the European Parliament and of the Council on Credit Rating Agencies – Impact assessment, SEC/2008/2746 final, 12 November 2008.
- European Commission, Public Consultation on Credit Rating Agencies, Directorate General Internal Market and Services, 5 November 2010.
- European Securities Markets Expert Group, *Role of Credit Rating Agencies*, ESME's Report to the European Commission, June 2008. Available at <http://ec.europa.eu/internal_market/securities/esme/index_en.htm>, accessed 24 September 2012.
- G. Ferri & A. Morone, "The Effect of Rating Agencies on Herd Behaviour", EERI Research Paper Series EERI_RP_2008_21, Economics and Econometrics Research Institute (EERI), Brussels, 2008.
- Financial Stability Board, *Report of the FSF on Enhancing Market and Institutional Resilience*, 7 April 2008. Available at: <www.fsf.org/publications/r_0804.pdf>, accessed 24 September 2012.
- J. French & B.H. Raven, "The Bases of Social Power", in D. Cartwright (Ed.), *Studies in Social Power*, Ann Arbor, 1959, pp. 150-167.
- D. Goldsmith & K. Fitch, "The Normative Context of Advice as Support", 23 *Human Communication Research*, 1997, pp. 454-476.
- F. Gonzalez, F. Haas, R. Johannes, M. Persson, L. Toledo, R. Violi, M. Wieland & C. Zins, "Market Dynamics Associated With Credit Ratings: A Literature Review", European Central Bank, Occasional Paper, n. 16, Frankfurt.
- C. Harries, I. Yaniv & N. Harvey, "Combining Advice: The Weight of a Dissenting Opinion in the Consensus", 17 *Journal of Behavioral Decision Making*, 2004, pp. 333-348.
- R.J. Herring, *Policy Issues Concerning the Reform of Credit Rating Agencies*, Pew Financial Reform Project, Briefing Paper 12, October 2009.
- N. Harvey & I. Fischer, "Taking Advice: Accepting Help, Improving Judgment, and Sharing Responsibility", 70 *Organizational Behaviour and Human Decision Processes*, 2, May 1997, pp. 117-133.
- S.A. Huettel, C.J. Stowe, E.M. Gordon, B.T. Warner & M.L. Platt, "Neural Signatures of Economic Preferences for Risk and Ambiguity", 49 *Neuron*, 2006, pp. 765-775.
- International Monetary Fund, "Containing Systemic Risks and Restoring Financial Soundness", in *Global Financial Stability Report*, IMF, Washington D.C., April 2008.
- International Organization of Securities Commission (IOSCO 2003), *IOSCO Statement of Principles Regarding the Activities of Credit Rating Agencies*, 23 September 2003, Madrid.
- T.R. Johnson, D.V. Budescu & Th. S. Wallsten, "Averaging Probability Judgments: Monte Carlo Analyses of Asymptotic Diagnostic Value", 14 *Journal of Behavioral Decision Making*, 2001, pp. 123-140.
- Ch. Jolls, "Behavioral Economics and the Law", 6 *Foundations and Trends in Microeconomics*, 2011, pp. 173-263.
- Ch. Jolls, & C.R. Sunstein, "Law of Implicit Bias", 94 *California Law Review*, 2006, pp. 969-996.
- Ch. Kuhner, "Financial Rating Agencies: Are They Credible? – Insights into the Reporting Incentives of Rating Agencies in Times of Enhanced Risk", 53 *Schmalenbach Business Review*, 2001, pp. 2-26.
- J. Mathis, J. McAndrews & J.-Ch. Rochet, "Rating the Raters: Are Reputation Concerns Powerful Enough to Discipline Rating Agencies?", 56 *Journal of Monetary Economics*, 2009, pp. 657-674.
- N. Moloney, "EU Financial Market Regulation after the Global Financial Crisis: 'More Europe' or more Risks?", 47 *CML Rev*, 2010, pp. 1317-1383.
- M. Pagano & P. Volpin, "Credit Ratings Failures and Policy Options", 25 *Economic Policy*, 2010, pp. 401-431.
- S. Peltzman, "The Effects of Automobile Safety Regulation", 83 *Journal of Political Economy*, 1975, pp. 677-726.
- S. Peltzman, "Regulation and the Wealth of Nations: The Connection between Government Regulation and Economic Progress", 3 *New Perspectives on Political Economy*, 2007, pp. 185-204.
- St. Peterson, G. Hoffer & E. Millner, "Are Drivers of Air-Bag-Equipped Cars More Aggressive? A Test of the Offsetting Behavior Hypothesis", 38 *Journal of Law and Economics*, 1994, pp. 251-264.
- M.L. Platt & P.W. Glimcher, "Neural Correlates of Decision Variables in Parietal Cortex", 400 *Nature*, 1999, pp. 233-238.
- P.C. Price & E.R. Stone, "Intuitive Evaluation of Likelihood Judgment Producers: Evidence for a Confidence Heuristic", 17 *Journal of Behavioral Decision Making*, 2004, pp. 39-57.
- Securities Industry and Financial Markets Association (SIFMA 2008), *Recommendations of the Securities Industry and Financial Markets Association Credit Rating Agency Task Force*, available at: <http://circa.europa.eu/Public/irc/markt/markt_consultations/library?l=/financial_services/credit_agencies/citizens/sifma-cra-recommendation/_EN_1.0_&a=d>, accessed 24 September 2012.
- J.A. Sniezek & T. Buckley, "Cueing and Cognitive Conflict in Judge-Advisor Decision Making", 62 *Organizational Behavior and Human Decision Processes*, 1995, pp. 159-174.
- J.B. Soll, "Intuitive Theories of Information: Beliefs about the Value of Redundancy", 38 *Cognitive Psychology*, 1999, pp. 317-346.
- R.M. Solow, "The Economics of Resources or the Resources of Economics", 64 *American Economic Review*, 1974 (Papers and Proceedings), pp. 1-14.
- L.P. Sugrue, G.S. Corrado & W.T. Newsome, "Matching Behavior and the Representation of Value in the Parietal Cortex", 304 *Science*, 2004, pp. 1782-1787.
- C.R. Sunstein & R. Thaler, *Nudge: Improving Decisions about Health, Wealth, and Happiness*, New Haven, 2008.
- The Economist*, "Special Report Credit-Rating Agencies", 26 March 2005, pp. 65-67.
- U.S. Securities and Exchange Commission, *Report to Congress. Credit Rating Standardization Study*, September 2012.
- W.K. Viscusi, "Consumer Behavior and the Safety Effects of Product Safety Regulation", 28 *Journal of Law and Economics*, 1985, pp. 527-554.
- L.J. White, "The Credit Rating Industry: An Industrial Organization Analysis", Working Paper, 2001.
- L.J. White, "Markets: The Credit Rating Agencies", 24 *Journal of Economic Perspectives*, 2010, pp. 211-226.
- I. Yaniv, "Receiving Other People's Advice: Influence and Benefit", 93 *Organizational Behavior and Human Decision Processes*, 2004a, pp. 1-13.

- I. Yaniv, "The Benefit of Additional Opinions", 13 *Current Directions in Psychological Science*, 2004b, pp. 75-78.
- I. Yaniv & E. Kleinberger, "Advice Taking in Decision Making: Egocentric Discounting and Reputation Formation", 83 *Organizational Behavior and Human Decision Processes*, 2, 2000, pp. 260-228.