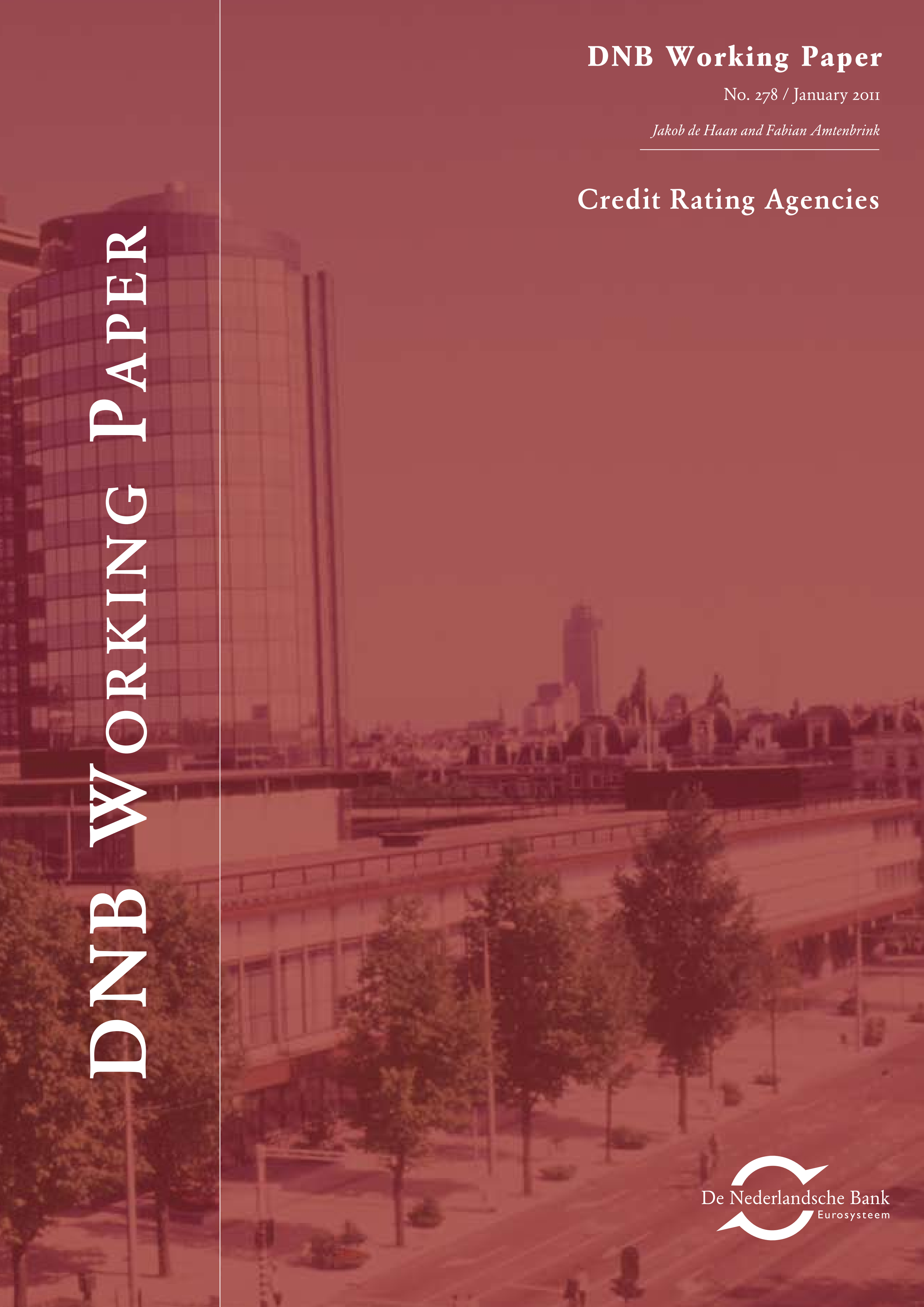


DNB Working Paper

No. 278 / January 2011

Jakob de Haan and Fabian Amtenbrink

Credit Rating Agencies

DNB WORKING PAPER

De Nederlandsche Bank
Eurosysteem

Credit Rating Agencies

Jakob de Haan and Fabian Amtenbrink *

* Views expressed are those of the authors and do not necessarily reflect official positions of De Nederlandsche Bank.

Working Paper No. 278

January 2011

De Nederlandsche Bank NV
P.O. Box 98
1000 AB AMSTERDAM
The Netherlands

Credit Rating Agencies

JAKOB DE HAAN AND FABIAN AMTENBRINK *

ABSTRACT

This paper critically reviews the debate on CRAs and, in the light thereof, analyses the European regulatory approach to CRAs, thereby combining insights from economics and law. We first provide some basic background on the function of CRAs. Thereafter, we focus on the two main tasks for which CRAs have come under criticism, namely the issuing of sovereign ratings and the rating of structured instruments. Finally, we zoom in on the question of whether and how CRAs should be regulated given their function, focusing on recent European legislation that aims to standardize the conduct of CRAs.

Keywords: Credit rating, regulation.
JEL Codes: G21, G18.

* Dr. De Haan is Head of Research of De Nederlandsche Bank (DNB) and Professor of Political Economy at the Faculty of Economics and Business, University of Groningen, The Netherlands. He is fellow of SOM (University of Groningen) and CESifo (Munich, Germany). Dr. Amtenbrink is Professor of European Union Law of the Erasmus School of Law, Erasmus University Rotterdam, The Netherlands. He is also Visiting Professor at the College of Europe (Bruges). The views expressed do not necessarily reflect the views of DNB. Contact: j.de.haan@dnb.nl & amtenbrink@law.eur.nl.

1. Introduction

Since John Moody started in 1909 with a small rating book, the rating business has developed into a multi-billion dollar industry. Credit rating agencies (CRAs) play an important role in financial markets through the production of credit risk information and its distribution to market participants. Issuers, investors and regulators use the information provided by rating agencies in their decision-making. For instance, sovereigns seek ratings so that they can attract foreign investors. Likewise, ratings of structured products have been a key factor in the development of the originate-to-distribute model.[1] Credit ratings also play an important role in financial market regulation. For instance, under Basel II financial institutions can use credit ratings from approved agencies when calculating their capital requirements.

CRAs essentially provide two services. First, they offer an independent assessment of the ability of issuers to meet their debt obligations, thereby providing "information services" that reduce information costs, increase the pool of potential borrowers, and promote liquid markets. Second, they offer "monitoring services" through which they influence issuers to take corrective actions to avert downgrades via "watch" procedures.[2]

CRAs have come under attack due to their role in the recent financial crisis. According to many observers, CRAs underestimated the credit risk associated with structured credit products (see, for instance, Pagano and Volpin, 2010). For instance, according to the International Monetary Fund (IMF), more than three quarters of all private residential mortgage backed securities issued in the United States from 2005 to 2007 that were rated AAA by Standard & Poor's are now rated below BBB-, i.e., below investment grade. The IMF concludes that "While downgrades are expected to some extent, a large number of them—in particular when they involve several notches at the same time or when the downgrading takes place within a short period after issuance or after another downgrade—are evidence of rating failure."[3]

Pagano and Volpin argue that the ratings of securitized instruments played a crucial role in the drying up of the markets for these instruments, once the crisis had set in: "in the process

[1] IMF (2010).
[2] Ibid.
[3] Ibid, at p. 4.

of securitization and rating much detailed information about the risk characteristics of the underlying assets was lost: ratings provide very coarse and limited information about these characteristics. This information loss is particularly serious in view of the heterogeneity of the collateral and the great complexity of structured debt securities. Once a scenario of widespread default materialized, this detailed information would have been essential to identify the 'toxic assets' in the maze of existing structured debt securities, and to price them correctly. Absent such information, structured debt securities found no buyers, and their market froze." [4]

CRAs have also been criticised for responding with a considerable time lag, i.e., ratings were not immediately downgraded once the problems in the sub-prime market became clear. Also on many other occasions, CRAs were slow in adjusting their ratings. For instance, the day before Lehman went bankrupt the major CRAs gave the bank still investment grade ratings. To be sure, at that time this issue had been long recognised. Already following the 2000-2001 collapse of Enron, a 2002 Staff Report of the U.S. Senate Committee on Governmental Affairs had noted that "Not one of the watchdogs was there to prevent or warn of the impending disaster: […] not the credit rating agencies, who rated Enron's debt as investment grade up until four days before the company filed for bankruptcy; and not the SEC, which did not begin to seriously investigate Enron's practices until after the company's demise became all but inevitable."[5] Moreover, criticism has been raised concerning the CRAs communication with users of credit ratings, affecting market participants' confidence in the performance of CRAs and the reliability of their ratings.

CRAs have also come under fire for their sovereign rating activities. CRAs were condemned for failing to predict the Asian crisis, and for exacerbating the crisis when they downgraded the countries in the midst of the financial turmoil.[6] More recently, in the context of the euro area crisis, CRAs have been criticised for downgrading European sovereigns thereby exacerbating the fiscal problems of countries like Greece, Ireland, Portugal and Spain. Some of these adjustments surprised markets, in particular with regard to their scale. Specifically, the four-notch downgrade of Greece by Moody's in June 2010 caught markets by surprise,

[4] Pagano and Volpin (2010), at p. 404.
[5] Senate Committee on Governmental Affairs (2002), p. 2. The Staff Report meticulously plots the chronology of Enron's ratings by CRAs.
[6] However, Mora (2006) questions the view that credit rating agencies aggravated this crisis by excessively downgrading countries, reporting that ratings were, if anything, sticky rather than pro-cyclical.

with spreads widening significantly following the event.[7] According to the President of the European Commission, "ratings appear to be too cyclical, too reliant on the general market mood rather than on fundamentals - regardless of whether market mood is too optimistic or too pessimistic."[8]

This chapter critically reviews the debate on CRAs and, in the light thereof, analyses the European regulatory approach to CRAs, thereby combining insights from economics and law. Section 2 provides some basic background on the function of CRAs. Thereafter, sections 3 and 4 focus on the two main tasks for which CRAs have come under criticism, namely the issuing of sovereign ratings and the rating of structured instruments. Section 5 zooms in on the question of whether and how CRAs should be regulated given their function, focusing on recent European legislation that aims to standardize the conduct of CRAs. Finally, section 6 offers our conclusions.

2. The Function of Credit Rating Agencies[9]

CRAs assess credit risk of borrowers (governments, financial, and non-financial firms). A credit rating can be defined as 'an opinion regarding the creditworthiness of an entity, a debt or financial obligation, debt security, preferred share or other financial instrument, or of an issuer of such a debt or financial obligation, debt security, preferred share or other financial instrument, issued using an established and defined ranking system of rating categories'.[10] A rating only refers to the credit risk; other risks, like market risk (the risk due to unfavourable movements in market prices) or liquidity risk (the risk that a given security or asset cannot be traded quickly enough in the market to prevent a loss) are not covered.

There are around 150 CRAs, but the three largest competitors share roughly 95 percent of the market. Standard & Poor's Ratings Services and Moody's Investors Service have 40 percent of the market while Fitch Ratings holds 15 percent.[11] Table 1 illustrated how the three largest CRAs regard their ratings. While most CRAs are regional or product-type specialists, the

---

[7] IMF (2010).
[8] Barroso (2010).
[9] This section builds on previous work by the authors, mainly Amtenbrink and De Haan (2009).
[10] Article 3(1) (a) Regulation (EC) 1060/2009 of the European Parliament and of the Council of credit rating agencies (O.J. 2009, L 302/1).
[11] White (2010).

three biggest players are truly global and broad in their product coverage. What is more, the sovereign rating coverage of the big three dwarfs that of other CRAs. As of July 30, 2010, Standard & Poor's rated 125 sovereigns, Moody's 110, and Fitch 107.[12]

Table 1. Credit ratings by the big three

Fitch	"Credit ratings express risk in relative rank order, which is to say they are ordinal measures of credit risk and are not predictive of a specific frequency of default or loss. Fitch Ratings' credit ratings do not directly address any risk other than credit risk, ratings do not deal with the risk of a market value loss on a rated security due to changes in interest rates, liquidity and other market considerations."
Moody's	"There is an expectation that ratings will, on average, relate to subsequent default frequency, although they typically are not defined as precise default rate estimates. Moody's ratings are therefore intended to convey opinions of the relative creditworthiness of issuers and obligations...Moody's ratings process also involves forming views about the likelihood of plausible scenarios, or outcomes—not forecasting them, but instead placing some weight on their likely occurrence and on the potential credit consequences. Normal fluctuations in economic activity are generally included in these scenarios, and by incorporating our views about the likelihood of such scenarios, we give our ratings relative stability over economic cycles and a sense of horizon."
Standard & Poor's	"Standard & Poor's credit ratings are designed primarily to provide relative rankings among issuers and obligations of overall creditworthiness; the ratings are not measures of absolute default probability. Creditworthiness encompasses likelihood of default and also includes payment priority, recovery, and credit stability."

Source: IMF (2010)

Credit ratings are expressed on a scale of letters and figures (see Figure 1). The Standard & Poor's rating scale is, for example, as follows: AAA (highest rating), AA, A, BBB, BB, B, CCC, CC, C, D (lowest rating). Modifiers are attached to further distinguish ratings within classification. Whereas Fitch and Standard & Poor's use pluses and minuses, Moody's uses numbers. CRAs typically signal in advance their intention to consider rating changes, using 'outlooks' and rating reviews (so-called 'watchlists'). Whereas outlooks represent agencies' opinions on the development of a credit rating over the medium term, watchlists focus on a much shorter time horizon – three months, on average. The watch and outlook procedures are considered to be generally strong predictors of rating changes relative to other public data.[13]

Two explanations have been provided for the introduction of outlooks and watchlists.[14] First, their introduction may reflect a heightened demand for accurate and timely credit risk information from financial markets.[15] Second, they may be interpreted as an agency's means of engaging in an implicit contract with the borrowing firm. In a theoretical model, Boot et al.

[12] IMF (2010).
[13] Hill et al. (2010).
[14] Bannier and Hirsch (2010).
[15] Also referred to as the 'delivery of information' argument.

show that the watchlist procedure is the institutionalized form of monitoring.[16] By threatening the listed companies with imminent rating deteriorations, the agencies may induce them to abstain from further risk-enhancing actions in order to uphold the initial rating level. Bannier and Hirsch find that particularly for low-quality borrowers, the watchlist instrument seems to have developed into an active monitoring device that allows CRAs to exert real pressure on the reviewed companies.[17]

CRAs frequently provide different ratings for the same entity. Alsakka and ap Gwilym show that rating disagreements across agencies are more frequent for sovereign ratings than for corporate ratings.[18] The authors report that in their sample of sovereign ratings, Moody’s and Standard and Poor’s disagree on 50.6 percent of daily rating observations.[19] Moody’s and Fitch have different sovereign ratings in 46.9 percent of the observations. Standard and Poor’s and Fitch have by far the lowest frequency of disagreement (35.9 percent). In seeking an explanation for the high frequency of disagreements across agencies three reasons have been identified. Firstly, rating agencies use different factors and place different weights on these factors.[20] Secondly, rating agencies may disagree to a greater extent about more speculative-grade rated issuers, and, finally, some agencies may tend to rate issuers in their “home region” more favorable. As to the last argument however, Güttler and Wahrenburg come to the conclusion that credit ratings by Moody’s and Standard and Poor’s are not subject to any home preference.[21] Their analysis is based on near-to-default issuers with multiple ratings by both CRAs for the period 1997 to 2004. In fact, the authors find that both CRAs assigned more conservative ratings to U.S. issuers than to non-U.S. issuers. This might be due to their better forecasting ability in the home market, or to the high quality of accounting information in the U.S., or to different national bankruptcy legislation.

[16] Boot et al. (2006).
[17] Bannier and Hirsch (2010).
[18] Alsakka and ap Gwilym (2009).
[19] Alsakka and ap Gwilym (2010).
[20] See IMF (2010) for further discussion.
[21] Güttler and Wahrenburg (2007).

Figure 1. Credit ratings

Interpretation	Fitch and S&P	Moody's
Highest quality	AAA	Aaa
High quality	AA+	Aa1
	AA	Aa2
	AA–	Aa3
Strong payment capacity	A+	A1
	A	A2
	A–	A3
Adequate payment capacity	BBB+	Baa1
	BBB	Baa2
	BBB–	Baa3
Likely to fulfill obligations, ongoing uncertainty	BB+	Ba1
	BB	Ba2
	BB–	Ba3
High-risk obligations	B+	B1
	B	B2
	B–	B3
Vulnerable to default	CCC+	Caa1
	CCC	Caa2
	CCC–	Caa3
Near or in bankruptcy or default	CC	Ca
	C	C
	D	D

Source: IMF (2010)

Ratings play a crucial role in financial markets as investors use them to evaluate the credit risk of financial instruments (see section 3 for more details). The assessment of these instruments requires specific knowledge and is highly time-consuming, making it attractive for individual investors to rely on the rating of the CRAs. The ratings have an important influence on the interest rate that borrowers have to pay. A downgrading may lead to a higher interest rate on loans. Portfolio manager performance is often benchmarked against standard indices that are usually constructed on the basis of credit ratings. This implies that a downgrade to below the investment-grade threshold often triggers immediate liquidation, leading to herd behaviour. This kind of behaviour may increase market volatility and may even cause a self sustaining downward spiral of asset prices with potential negative effects for financial stability.[22]

[22] European Commission (2010b).

CRAs also play a role in the supervision of financial institutions and as such arguably serve a public function both in the EU and the U.S.. In the EU, in order to cover various risks, financial institutions are required to hold a minimum level of own financial resources, i.e., capital. These capital requirements serve as a buffer against unexpected losses, thereby protecting depositors and contributing to the overall stability of the financial system. The EU Capital Requirements Directive, which effectively implements the Basel II framework, provides for the use of external credit assessments to determine capital requirements applied to a bank or investment firm's exposure. An external credit assessment may only be used for this purpose, if the institution providing the risk assessment has been recognised by the competent authorities.[23] In a nutshell, this requires that the agency's assessment methodology complies with the requirements of objectivity, independence, on-going review and transparency, and that the resulting credit assessments meet the requirements of credibility and transparency. Moreover, based on the Capital Requirements Directive, the Committee of European Banking Supervisors (CEBS) in the past has issued non-legally binding guidelines on the recognition of external credit assessment institutions with the aim of a consistent decision-making across jurisdictions, the enhancement of the single market level playing field, and the reduction of administrative burdens for all participants, including potentially eligible credit rating agencies, institutions, and supervisory authorities. In the U.S., CRAs play a similar role. Only the ratings of a nationally recognized statistical rating organization (NRSRO) can be used for regulatory purposes.[24] In fact, White concludes that: "Essentially, the creditworthiness judgments of these third-party raters had attained the force of law."[25]

The key-role of CRAs is moreover underlined by the fact that central banks often require that assets have a minimum rating to be acceptable as collateral for financial institutions if they want to borrow from the central bank. For instance, until recently the European Central Bank (ECB) required marketable assets to have at least one BBB- credit rating from one of the four accepted external credit assessment institutions (with the exception of asset-backed securities, for which the credit rating at issuance should be AAA).

[23] Critically on the effects of ratings-depend banking capital requirements on the financial system: Weber and Darbellay (2008).

[24] For a brief overview see Senate Committee on Governmental Affairs (2002), p. 97 et seq.; Richards (2009).

[25] White (2010), at p. 213.

Given the crucial role of CRAs for the functioning of today's financial markets it is vital that ratings are indeed as objective and reliable as possible.[26] Yet, arguably the current practice reveals serious shortcomings. In the early half of the twentieth century, ratings were subscription-based, and purchased by the investors, but later on CRAs switched to an issuer-based compensation scheme, meaning that the agencies are paid by the issuers of these instruments to publish a rating. Currently, the 'issuer pays' model is by far the dominant remuneration model used by credit rating agencies, generating more than two-third of total CRAs revenues.[27] While CRAs also provide unsolicited ratings, i.e., CRA-initiated ratings, they are generally thought to be less reliable and less accurate than solicited ratings due to the fact that they are based on publicly available data.[28] The 'issuer pays' model is not unproblematic, as it creates partly irreconcilable incentives (Pagano and Volpin, 2010). On the one hand, with CRAs being paid by the issuers of financial products, agencies face an incentive to overstate the creditworthiness of a particular product in order to build a good relationship with the issuer. On the other hand it may be argued that CRAs must safeguard their credibility with investors as their ratings would otherwise be of no value in the market. In this perspective CRAs must balance any short-term gain from satisfying the issuer with its long-run reputation in the market.[29] Yet, it is doubtful whether the potential loss of reputation sufficiently restrains CRAs and can indeed function as an effective form of sanction. Caprio et al. argue that CRAs in the past faced a moral hazard problem as the fees too strongly influenced their evaluations.[30] As a consequence in the context of the subprime mortgage crisis the undervaluation of the riskiness of pools of mortgages led buyers to purchase very risky assets they assumed had low risk. Likewise, Mathis et al. argue that when rating complex financial products becomes a major source of income for a CRA, the latter is always too lax with a positive probability that it inflates its ratings.[31] What is more, CRAs may be manipulated by issuers by outsmarting the rating standards and by rating shopping.[32]

[26] Cantor and Mann (2007) argue that there is a trade-off between accuracy and stability. This is due to the preference for stable ratings: "Users of rating systems value stability because they sometimes take actions based in part on rating changes. These actions imply costs that may be unrecoverable if they need to be reversed in response to future rating changes. Stability is important because ratings affect behavior, and the actions taken in response to rating changes have consequences." (p. 60).
[27] European Commission (2010b) at p. 26.
[28] Kornos (2008).
[29] European Economic Advisory Group (2009), at p. 67.
[30] Caprio et al. (2008).
[31] Mathis et al. (2008).
[32] Issing Committee (2008).

At least partly explaining this lack of restrain may be the domination of the market for credit ratings by only a handful big CRAs, as “the dominant agencies do not have to fear any significant qualitative cut-throat competition, with the consequence that the temptation exists to keep their resource input down.”[33] This lack of competition has been recognised by regulators on both sides of the Atlantic.[34] Indeed, as Utzig observes: “Self-regulation does not work effectively when the pressure of reputation as a controlling power exists only to a limited degree due to a lack of competition.”[35] The Issing Committee has come to the conclusion that “the self-disciplining role of reputation cannot always be relied upon, even under normal market conditions’ and, moreover, that “It would need very long periods to verify statistically that rating standards have been compromised, and it therefore remains unclear how agencies that cheated would be punished by the market.”[36]

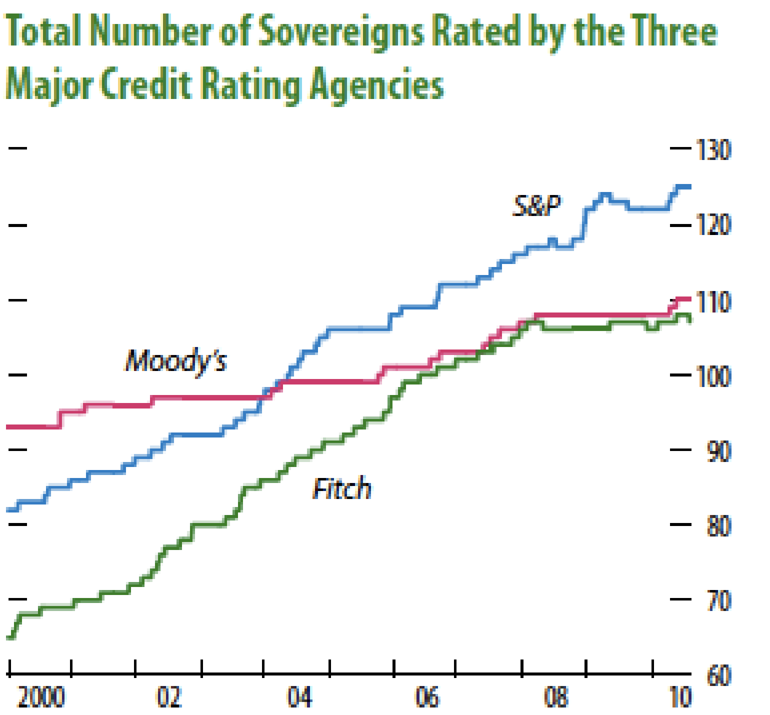
3. Credit ratings of sovereigns

Sovereign credit ratings are an assessment by rating agencies of a government’s ability and willingness to repay its public debt both in principal and in interests on time. These ratings are thus forward-looking qualitative measures of the probability of default.[37] A sovereign defaults when it fails to make timely payment of principal or interest on its debt, or if it offers a distressed exchange for the original debt.[38] Figure 2 highlights that the three major CRAs publish credit ratings for a high and increasing number of sovereigns.[39]

---

[33] Blaubock (2007), p. 6.
[34] See e.g. the preamble to the U.S. Credit Rating Agency Reform Act of 2006 (S. 3850 [109th]): “An Act … To improve ratings quality for the protection of investors and in the public interest by fostering accountability, transparency, and competition in the credit rating agency industry.” See also European Commission Proposal (2010), p. 5.
[35] Utzig (2010), p. 6.
[36] Issing Committee (2008), at p. 9-10.
[37] Afonso et al. (2007).
[38] IMF (2010).
[39] As the sovereign rating generally sets a ceiling for the ratings assigned to domestic banks and companies, it therefore also affects private financing costs (Jaramillo, 2010).

Figure 2.



Source: IMF (2010)

Hill et al. have examined differences in sovereign rating levels across CRAs employing sovereign ratings data for 129 countries spanning the period 1990–2006. The study concludes that more often than not credit rating agencies disagree about the rating of a sovereign obligor. However, disagreement tends to be within one or two notches on the finer scale. This may be explained by the fact that the available information is comparable across the CRAs.[40] Each of the big three CRAs identifies a different set of key drivers that determine its sovereign credit ratings, but there is significant overlap in the underlying information that is considered. An important factor that makes the rating of sovereigns different compared to the rating of firms is the concept of "willingness to pay." This reflects the potential risk that the sovereign may not be willing to pay if it considers the social or political costs to be too great. To capture this element, CRAs assess a range of qualitative factors such as institutional strength, political stability, fiscal and monetary flexibility, and economic vitality. In addition, a country's track record of honoring its debt is an important indicator of willingness to pay.[41] These qualitative factors are complemented with quantitative factors such as the level of debt and official international reserves, the composition of debt, and interest costs. Various

[40] IMF (2010).
[41] Ibid.

empirical studies have made an effort to infer the relative weighting of these different factors in determining the ultimate rating.[42] A good example is the study by Afonso et al., who examine the determinants of sovereign debt credit ratings of the big three rating agencies.[43] Using a panel of 130 countries from 1970 to 2005, these authors find that GDP per capita, real GDP growth, government debt, government effectiveness, external debt and external reserves, sovereign default indicator, and a dummy for EU membership, are the most important determinants of the sovereign debt ratings. Two more recent studies come to slightly different conclusions.[44] Using a random effects binomial logit model estimated with data for a sample of 48 emerging market economies during the period 1993−2008, Jaramillo finds that investment grade rating status can be explained by external public debt, domestic public debt, political risk, exports, and broad money.[45] In contrast to previous papers, the author employs a binary variable for investment grade status as dependent variable. Hill et al. find that six variables are common determinants of all three agencies' assessments of credit quality, namely GDP per capita, GDP growth and its square, debt history, the Institutional Investor rating and the risk premium.[46] The authors also find non-uniform results in relation to the external balance and external debt (significant only for Moody's and Standard and Poor's), inflation (significant only for Standard and Poor's) and the fiscal balance (significant only for Moody's).

Sovereign credit ratings have a notable effect on financial market developments, as they affect sovereign bond prices.[47] For instance, Sy finds for emerging markets sovereigns that a one-notch upgrade decreases their bond spread on average by 14 percent. Sovereign ratings also affect a country's stock market.[48] Brooks et al. report that sovereign rating downgrades have a strong negative impact on stock returns (1-day abnormal return of 197 basis points), but there

---

[42] See Jaramillo (2010) for an overview.
[43] Afonso et al. (2007).
[44] Jaramillo (2010) and Hill et al. (2010).
[45] Jaramillo (2010).
[46] Hill et al. (2010).
[47] Various studies have examined the impact of credit ratings on private sector bond prices and/or CDS spreads. See, for instance, Daniels and Jensen (2005) who examine the relationship between CDSs and bonds, using cross-sectional data covering 72 corporations spanning a wide range of industries over the period 2000-2002. They find that credit rating is a significant determinant of both CDS spreads and credit spreads for investment-grade issues and especially for non-investment-grade issues. Jorion and Zhang (2007) analyze the impact of credit rate changes on stock prices. They find that the rating prior to the announcement is extremely important for predicting the size of the stock price reaction: stock price effects are much stronger for low-rated firms relative to high-rated firms. Their sample consists of 1,195 downgrades and 361 upgrades by Standard and Poor's and Moody's during the period of January 1996 to May 2002.
[48] Sy (2002).

is limited evidence of abnormal returns linked to upgrades.[49] Furthermore, downgrades of one country may affect financial markets in other countries. For instance, Gande and Parsley, who use sovereign credit ratings from 1991 to 2000, find that a ratings change in one country has a significant effect on sovereign credit spreads of other countries.[50] This effect is asymmetric: positive ratings events abroad have no discernable impact on sovereign spreads, whereas negative ratings events are associated with an increase in spreads. On average, a one-notch downgrade of a sovereign bond is associated with a 12 basis point increase in spreads of sovereign bonds of other countries. However, Ismailescu and Kazemi, who employ daily data for dollar denominated Credit Default Swaps (CDS) written on high-yield sovereigns for the period January 2, 2001 to April 22, 2009 for 22 emerging markets, report that premiums display a strong reaction to positive announcements, but respond weakly to negative events.[51] Arezki, Candelon, and Sy have examined the spillover effects of selected European sovereign rating downgrades during the 2007–2010 period using daily sovereign CDS spreads and stock market indices.[52] The main result of this study is that sovereign rating downgrades impact not only the financial markets in the country that was downgraded but also other euro area countries. For instance, Austrian CDS spreads and stock market indices moved sharply following the downgrades of Baltic countries, while the Austrian credit rating remained unchanged. One possible explanation for this effect is the exposure of Austrian banks to the Baltic countries.

It has also been noted that financial markets may react differently to rating changes made by different CRAs. For instance, Brooks et al. report an unequal reaction to sovereign rating changes across agencies. Whereas Standard & Poor's and Fitch induce a significant market reaction only when they downgrade a sovereign rating, upgrade announcements by Moody's only are associated with a positive abnormal return.[53] Moreover, there is evidence for a certain degree of interaction between CRAs. Alsakka and ap Gwilym investigate the presence of lead–lag relationships among sovereign ratings assigned by five CRAs, namely Moody's,

[49] Brooks et al. (2004).
[50] Gande and Parsley (2005).
[51] Ismailescu and Kazemi (2010). A CDS is an insurance contract that provides protection against the risk of default by a corporation or a sovereign. The regular payment made by the CDS buyer to the CDS seller is expressed as a percentage (usually basis points) of the contract's notional value, and is known as the CDS premium (or the CDS spread). When entering into a CDS contract, the counterparties choose the settlement method (e.g., cash settlement or physical settlement) and also specify which credit event (e.g., default, repudiation, or moratorium) will trigger the settlement.
[52] Arezki, Candelon, and Sy (2010).
[53] Brooks et al. (2004).

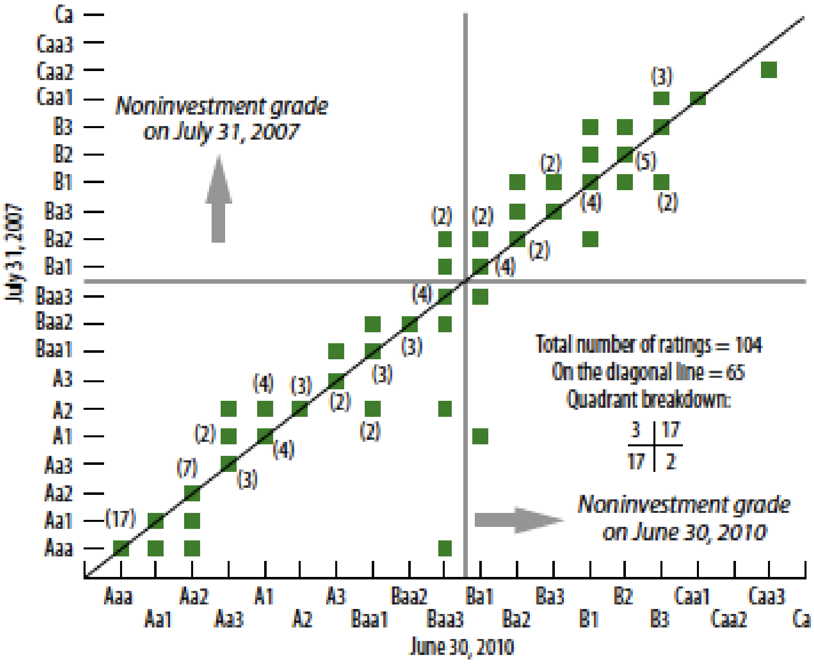
Standard & Poor's, Fitch, Japan Credit Rating Agency, and Japan Rating & Investment Information.[54] They find that Moody's seems to be the first mover in upgrading sovereign issuers, but Standard & Poor's tends to lead Moody's rating downgrades. The Japanese agencies are influenced by the rating dynamics of Standard & Poor's and Fitch, but not vice versa.

Investors prefer stable ratings due to the certification role played by ratings, and the transaction costs induced by trading when ratings change frequently. Therefore, CRAs use several mechanisms to promote stability.[55] Figure 3 summarize Moody's upgrades and downgrades during the recent financial crisis. Sovereigns on the 45-degree line maintained their ratings while those below (above) were downgraded (upgraded). The figure shows that 63 percent of ratings remained unchanged (so far). The IMF concludes that the "analysis suggests that the way that CRAs try to smooth their rating changes may make them prone to pro-cyclical cliff effects. Furthermore, the market impact of these rating changes is exacerbated by the overreliance on ratings in legislation, regulations, and private sector contracts."[56]

Finally, conflict of interest issues may not only arise in the context of the rating of (complex) financial products, but also for sovereign debt ratings. In a recent working document the European Commission observes that "Credit rating agencies' remuneration policies for sovereign debt ratings are not uniform. While most of the countries participate in the rating process, not all of them are charged for having their debt rated. The fact that many countries pay for the rating service they receive may raise concerns with regard to conflicts of interest inherent in the issuer-pays model."[57]

[54] Alsakka and ap Gwilym (2010).
[55] IMF (2010). See also Cantor and Mann (2007).
[56] Ibid, p. 27.
[57] European Commission (2010b), at p. 14.

Figure 3. Sovereigns Rated by Moody's between July 31, 2007 and June 30, 2010



Source: IMF (2010)

4. Rating structured instruments

The important role of CRAs in the financial system is highlighted by the fact that for many observers CRAs played a significant part in the making and unfolding of the recent global financial crisis. The origin of this crisis is commonly placed in a particular segment of the U.S. mortgage market, namely the subprime mortgage market. Subprime is lending to individuals with a high level of default risk, because they have a low income or a less than perfect credit history relative to the standards of 'prime' borrowers. The share of subprime in origination of all mortgages rose steadily between 2001 and 2006, from 7.2 to 20.1 percent. The outstanding stock amounted to 1.4 trillion dollars.[58] When housing prices started declining while interest increased, losses on these loans rapidly increased. According to recent estimates, these losses amounted to 1.4 trillion dollars in the course of 2008. Although these losses were huge, their magnitude was by no means unprecedented – the losses from the dot-com crash wiped out 5 trillion dollars in the market value of technology companies between March 2000 and October 2002.[59] What led to the subsequent financial turmoil was the

[58] *The EEAG Report on the European Economy 2009*, at p. 63.
[59] Ibid, p. 63.

securitization of these mortgages and it is in this securitization process that CRAs played a crucial role.

What needs to be realized in this context is that securitization developed against the background of a strong and growing demand for highly rated assets by individual and institutional investors, the latter often restricted in their portfolio choice by rules setting quality standards for the securities in their portfolios. Hence, the goal of securitization was to satisfy this demand at the least cost, i.e., by creating the largest possible pool of standardized, highly rated securities from the underlying pool of mortgages. The way in which risky cash flows from heterogeneous mortgage contracts could be turned into standardized so-called Asset Backed Securities (ABS) was by slicing the cash flow from a well-diversified pool of mortgages into tranches of increasing risk/return profiles, thereby making it possible to create a tranche with relatively low risk. The cash accruing from the pool of assets is used first to pay interest and the principal to the tranche with the highest and most senior status; the remaining cash is then used to pay the holders of a second tranche, with lower status; what is left is paid to a third tranche, and so on.[60]

According to the Financial Stability Forum (FSF), poor credit assessments of complex structured credit products by CRAs contributed to both the build-up and the unfolding of the financial crisis.[61] CRAs assigned high ratings to complex structured sub-prime debt based on inadequate historical data and in some cases flawed models. Structured credit products are designed to take advantage of different risk preferences of investors. They are therefore structured for each tranche to achieve a particular credit rating. CRAs generally give these first tranches the highest ratings possible. If during this structuring process CRAs discuss with issuers the rating implications of particular structures, there is a clear potential for conflicts of interest. These conflicts are exacerbated when CRAs also sell consulting services to entities that purchased ratings. What is more, there is increasing evidence that the methods used by agencies yielded ratings that were too high.[62] In the 2009 European Economic Advisory Group Report on the European Economy it is shown that about 80 percent of subprime mortgages' origination was converted into triple-A pools, while less than 5 percent of these mortgages were converted into triple-B or lower rate assets. As it is stated in this report:

[60] Ibid, pp. 63-64.
[61] FSF (2008).
[62] Benmelech and Dlugosz (2009) examined 4,000 structured bonds that were backed by loan portfolios. The average rating of the loans was B+, yet 70 percent of the bonds were rated AAA.

"These percentages obviously contained the seed of the crisis, as securitization flooded the market with triple-A products whose risk and prices were obviously quite sensitive to housing market conditions. The evidence [...] raises the key issue concerning the extent to which a risky cash flow from mortgages could back triple-A securities. Even after accounting for credit enhancement, a percentage as high as 80 percent may hardly survive proper stress testing of the market conditions underlying securitization. In this dimension (with the benefit of hindsight) the models adopted by financial intermediaries to assess risk appeared to be far from adequate."[63]

Investors have arguably over-relied on these ratings. A 2008 IMF report comes to the conclusion that "Credit ratings have been a key input for many investors in the valuation of structured credit products because they have been perceived to provide a common credit risk metric for all fixed-income instruments. In particular, when reliable price quotations were unavailable, the price of structured credit products often was inferred from prices and credit spreads of similarly rated comparable products for which quotations were available. For example, the price of AAA ABX subindices could be used to estimate the values of AAA-rated tranches of mortgage-backed securities (MBS), the price of BBB subindices could be used to value BBB-rated MBS tranches, and so on […]. In this way, credit ratings came to play a key mapping role in the valuation of customized or illiquid structured credit products, a mapping that many investors now find unreliable."[64] There also seems to have been a "false sense of security" concerning ratings of structured financial products despite the fact that "credit rating agencies insist that ratings measure only default risk, and not the likelihood or intensity of downgrades or mark-to-market losses".[65] Still, CRAs played a crucial role in creating this false sense of security, as they were very explicit in reassuring investors that the rating of structured securities was directly comparable with the rating of bonds: "Our ratings represent a uniform measure of credit quality globally and across all types of debt instruments. In other words, an ''AAA'' rated corporate bond should exhibit the same degree of credit quality as an ''AAA'' rated securitized issue".[66]

[63] *The EEAG Report on the European Economy 2009*, at p. 68.
[64] Brackeds added. IMF (2008), at p. 55.
[65] The IMF (2008), at p. 55 links this to "the benign performance of credit markets since the early part of this decade".
[66] Standard & Poor's (2007), at p. 4.

Not only investors, but also regulators, who tied bank capital requirements to ratings, effectively outsourced their due diligence to rating agencies without sufficient consideration of whether credit ratings meant the same thing for structured finance as for other securities. None of the key parties seemed to recognize that small errors in rating individual instruments are significantly magnified in case of structured instruments. Recently, the Financial Stability Board published a document containing principles for reducing reliance on CRA ratings, reflecting that policymakers also have come to the conclusion that serious risks are involved in relying mechanistically on ratings. According to the document, "The principles aim to catalyse a significant change in existing practices, to end mechanistic reliance by market participants and establish stronger internal credit risk assessment practices instead. They set out broad objectives, for standard setters and regulators to follow up by defining the more specific actions that will be needed to implement the changes over time."[67]

Credit rating agencies in all probability did not fully appreciate the fragility of their estimates or the possible effects of modest errors in assumptions in their models, this lack of understanding of "complex and difficult-to-value structured finance products",[68] which was also highlighted by the fact that they "were forced to make precipitous downgrades on a large number of structured finance products backed by U.S. subprime mortgages, on which default rates had risen abruptly relative to earlier assumptions."[69] They did so with a considerable time lag, i.e., ratings were not immediately downgraded, once the problems in the sub-prime market became clear.[70]

5. Regulating CRAs[71]

Until recently, CRAs were mainly governed by the International Organisation of Securities Commissions (IOSCO), which sets international standards for security markets. These standards come in the shape of the 'Code for Conduct Fundamentals for Credit Rating Agencies' (IOSCO code), which has been updated in the wake of the global financial turmoil. However, this code is based on voluntary compliance and lacks enforcement mechanisms (self-regulation). In the wake of the financial crisis, many countries have taken steps to

[67] Financial Stability Board (2010).
[68] Ibid., at p. 54.
[69] Ibid., at p. 55.
[70] Ibid., at p. 57-58.
[71] This part draws on Amtenbrink and De Haan (2009) and (2010).

enhance the regulatory framework for credit rating agencies, focusing on registration, enhanced oversight, and transparency.[72] This included very prominently also the European Union (EU) with its internal (financial) market. The question that arises in this context and that is explored hereafter for the EU regulatory initiatives is, whether these measures actually correct the shortcomings of the previously applicable regime.

In response to the crisis, several international expert bodies made concrete proposals for reforms. The FSF recommended that CRAs should improve the quality of the rating process and manage conflicts of interest related to the issuer-pays model; should differentiate ratings on complex structured credit products from those on 'regular' bonds as these ratings have different risk properties; and should enhance their review of the quality of the data received from issuers and of the due diligence performed on underlying assets by all parties involved.[73] The FSF stressed that investors should address their over-reliance on ratings. However, the FSF did not go as far as proposing a more stringent supervisory regime for CRAs. Instead, it advised that competent authorities should "monitor, individually or collectively, the implementation of the revised IOSCO code by CRAs, in order to ensure that CRAs quickly translate it into action."[74] In Europe this rejection of a comprehensive regulatory approach was supported by the European Securities Markets Expert Group (ESME) and the Committee of European Securities Regulators (CESR). In a 2008 report ESME expressed the opinion that the incremental benefits of regulation "would not exceed the costs and accordingly is not recommended."[75] CESR for its part shared the view of market participants that "there is no evidence that regulation of the credit rating industry would have had an effect on the issues which emerged with ratings of U.S. subprime backed securities."[76] Preference was thus given to market driven improvements, albeit under a closer supervision.[77]

In the face of this expert advice the European Commission opted for regulation, claiming that the "legislative option had clear advantages over the other policy options especially with regard to its effectiveness and certainty, because the other options (self-regulatory approaches or a recommendation) cannot produce legally binding rules and an enforcement

---

[72] See IMF (2010) for an overview.

[73] FSF (2008), p. 32-39.

[74] Ibid., at p. 58.

[75] ESME (2008). The report emphasises that this opinion is based on the assumption that an enhanced self regulatory model is made to work and is seen in the market to be effective.

[76] CESR (2008), at p. 3. However, as a quasi stick-behind-the-back the report also states that if such a body would not succeed, a regulatory response would be called for.

[77] See CESR (2008) and ESME (2008).

mechanism."[78] While the European Commission considers the revised IOSCO code to be "the global benchmark", it maintained that its substance had to be made more specific, to make it easier to apply in practice, and more efficient. In its own perception, the Commission has thus opted for more robust, stringent and enforceable rules. The Commission concluded that "EU legislation appears to be the only option that could sufficiently protect investors and European financial markets against the risk of malpractice by credit rating agencies."[79] Interestingly, neither the Commission Proposal nor the subsequent European Regulation expressly refer to sovereign credit ratings. Nevertheless it can be assumed that Regulation 1060/2009 and namely its rules referring to rating process in principle also apply to this category of ratings.

The European Regulation on Credit Agencies was finally approved by the European Parliament (EP) and the Council of the European Union in September 2009.[80] As part of a wider strategy to strengthen financial market supervision in the EU, already in June 2010 the European Commission put forward a proposal to amend this Regulation, aiming at simplifying the present regulatory framework by centralised CRA supervision and creating better access to the market for credit ratings through enhanced transparency.[81] From the outset the fact that the European Commission has proposed the amendment of a Regulation only months after it has been enacted is hardly a sign of the sustainability of EU financial market legislation. This also suggests that the initial Regulation was drafted rather hastily in the face of the on-going financial crisis. Indeed, almost in parallel to the process of seeking legislative approval for Regulation 1060/2009 the Commission could be seen making plans for a much broader approach to financial market supervision in the EU, thereby reforming the Lamfalussy framework and its committee structure.[82] Against the background of the findings of the De Larosière Group, in September 2009 the European Commission adopted a whole package of legislative proposals basically aimed at strengthening macro-prudential supervision through the establishment of a European Systemic Risk Board (ESRB) and micro-prudential supervision through the setting up of a European System of Financial Supervisors (ESFS). The supervision of financial institutions is supposed to take the shape of the cooperation between the existing competent national authorities of the Member States and

[78] European Commission (2008), Explanatory Memorandum, at p. 5.
[79] Ibid, 6.
[80] Regulation (EC) 1060/2009 of the European Parliament and of the Council of credit rating agencies (O.J. 2009, L 302/1).
[81] European Commission (2010). At the time of writing, this proposal was discussed by the European Parliament and the Council.
[82] Lastra (2003).

three new European regulatory agencies, namely the European Banking Authority (EBA), the European Insurance and Occupational Pensions Authority (EIOPA), and the European Securities and Markets Authority (ESMA). According to the corresponding Commission proposal for a Regulation of the European Parliament and of the Council, ESMA would effectively be put in charge of the registration of CRAs and – to a large extent – also of their supervision.[83]

Three main elements of the European regulatory approach to CRAs can be identified, namely the registration requirement, rules of conduct for registered CRAs, and the supervision of registered CRAs.[84]

5.1. The European registration regime

In principle the Regulation applies to credit ratings issued by CRAs registered in the EU and which are disclosed publicly or distributed by subscription.[85] Registration forms a condition for being recognised as an External Credit Assessment Institution (ECAI) in accordance with the Capital Requirements Directive,[86] and thus a precondition for an application of the separate certification procedure by the competent national authority for CRAs whose ratings are used as external credit assessments to determine risk weights and the resulting capital requirements applied to a bank or investment firm's exposure.[87] It can thus not be concluded that Regulation 1060/2009 replaces the procedure foreseen in the Capital Requirements Directive. In order for a CRA with a registered office outside the EU to be able to qualify for registration, it has to set up a subsidiary in the EU. Alternatively it can make use of the endorsement system or the equivalence procedure also foreseen in the Regulation. This approach seeks to ensure one of the aims of the Regulation that is the efficient supervision of the activities of CRAs located outside the EU. While the Regulation does not close the European market for third-country CRAs, credit rating activities by third/country CRAs are

[83] Proposal for a Regulation of the European Parliament and of the Council establishing a European Securities and Markets Authority (COM (2009) 503 final). See also Commission Proposal to amend Regulation (EC) No 1060/2009 of the European Parliament and of the Council on credit rating agencies (COM (2010) 289 final).
[84] For details, see Amtenbrink and De Haan (2009).
[85] Article 2(1) Regulation 1060/2009. At the time of writing of this contribution the first registration based on the new European regulatory regime was done by the German Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) on 16 November 2010, concerning Euler Hermes Rating GmbH.
[86] Namely Directive 2006/48/EC of the European Parliament and of the Council of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions (O.J. 2006 L 177/1).
[87] In accordance with said Directive CRAs have to comply with requirements such as objectivity, independence, continuous review, credibility, and transparency.

effectively subjected to the European supervisory standards. This becomes most notably clear from the need for an equivalence decision by the European Commission in order for third-country ratings that are not endorsed by a EU-based CRA to be used in the EU.[88]

The Regulation states the conditions and the procedure for granting or withdrawal of registration.[89] While the preamble to the Regulation refers to "a single point of entry for the submission of application for registration", it foresees in a rather complex decision-making process involving not only CESR and the Member State in which the CRA has its registered office (home Member State), but also the competent authorities of other Member States. The procedure commences with the forwarding of the application for registration by CESR, to which it has to be initially addressed, to the competent national authority of the home Member State. The Regulation foresees in the establishment of a so-called college of competent authorities on a case-by-case basis. This college consists of the competent authority of the Member State where the CRA has its registered office and the competent authorities of other Member States. The latter have the right to join the college, if either a branch which is a part of the CRA in question or of one of the undertakings in the group of credit rating agencies is established within its jurisdiction, or if the use for regulatory purposes of credit ratings issued by the CRA, or if the group of CRAs is "widespread or has or is likely to have a significant impact within its jurisdiction". The members of this college have to elect a so-called 'facilitator', whose main task is to chair the meetings of the college and coordinate its action. In principle the home country competent authority and the college have to reach an agreement on granting registration based on the compliance of the CRA concerned with the conditions set out in the Regulation. In the case of the absence of an agreement in the college, which continues after mediation by CESR, the home country has no other alternative but to adopt a fully reasoned refusal decision, whereby the dissenting competent authorities must be identified and their opinions be stated.

Arguably the current legal regime does not feature an effective mechanism to deal with disagreements between national authorities. This is particularly crucial since the criteria, which competent national authorities have to apply in assessing the compliance of the applicant with the provisions of the Regulation and its Annex I leave ample room for value judgments. CESR is not given any effective tools to challenge a decision rejecting

[88] The endorsement system and equivalence procedure are not further discussed in this contribution.
[89] Articles 14-20.

registration. As pointed out by the European Commission, the division of responsibilities between the competent authority of the home Member State and the other competent authorities is not a long-term solution for the oversight of CRAs as credit ratings are used throughout the EU.[90] Indeed, even before the Regulation had entered into force, the European Commission was preparing a package of legislative proposals aimed at strengthening financial supervision in Europe. In the future, ESMA will become the single European supervisor for CRAs, assuming competence in matters relating to the registration of registered credit rating agencies. Different to the present system, a single Member State cannot effectively block the decision to register a CRA.[91] Moreover, also the decision to withdraw a registration rests with ESMA. While the competent authorities of a Member State in which the ratings of a CRA are used can request ESMA to examine whether the conditions for withdrawal of registration are met, the latter is under no obligation to withdraw the registration. Any negative decision of ESMA following a request by a national competent authority does, however, require a full reasoning.

5.2. European rules of conduct for CRAs

The rules of conduct for registered CRAs according to the current European regime under Regulation 1060/2009 reflect in large parts the substance of the IOSCO-code. Indeed, the European Commission itself has recognised that "many of its substantive provisions are inspired by the IOSCO code."[92] The European regulatory regime builds on a combination of specific rules of conduct and, more generally, enhanced transparency.

Ratings for structured finance instruments must ensure that those credit rating categories attributed to structured finance instruments are clearly differentiated using a symbol, which distinguishes them from rating categories used for any other entities, financial instruments, or financial obligations. This coincides with the approach taken in the IOSCO code, which states that a CRA should differentiate ratings of structured finance products from traditional corporate bond ratings, preferably through a different rating symbology. This should make it clear to investors that the ratings of structured finance instruments are different from the ratings of other financial instruments. Indeed, in the past investors did not always realize that

[90] European Commission (2010).
[91] Within ESMA the registration decisions will be taken by the Board of Supervisors and therein by the heads of the competent authority in each Member State that in principle decide by simple majority.
[92] European Commission (2008), Explanatory Memorandum, at p. 6.

a triple A rating of, say a government bond, is something different than a triple A rating of a structured instrument.[93]

For the first time in the EU, registered CRAs are also obliged to disclose to the public the methodologies, models, and key rating assumptions such as mathematical or correlation assumptions used in its credit rating activities as well as their material changes. In the case of the adjustment of the methodologies, models, or key rating assumptions the CRA must immediately disclose the likely scope of credit ratings affected by this change and review and possibly re-rate them promptly. CRAs must also continually review ratings in order to prevent them from concentrating on the initial rating and neglecting subsequent monitoring against the background of macroeconomic or financial market developments, which can be detrimental to the on-going quality of the ratings. Under the current regime of Regulation 1060/2009 it is not entirely clear to what extent CRAs can be expected to reveal their methodologies. While full disclosure of methodologies can contribute to a better understanding of the value of credit ratings, full disclosure could create strong disincentives to use the best available methodologies and to invest in better rating methodologies, i.e., to innovate, since the outcome could be immediately copied by competing CRAs.

Overall, the Regulation clearly aims at improving the transparency of CRAs, including their past performance. With regard to the latter, CRAs must also disclose ratings on a non-selective basis and in a timely manner. This also applies to ratings that are only distributed by subscription. CRAs must also make available a list of the largest 20 clients by revenue and must periodically disclose data on the historical default rates of rating categories and make available in a central repository - to be established by CESR - information on its historical performance data including the rating transition frequency and information about credit ratings issued in the past and on their changes. Finally, CRAs must publish an annual transparency report and keep extensive records of their activities.

CRAs are obliged to disclose conflicts of interest in a complete, timely, clear, concise, specific, and prominent manner and record all significant threats to the rating agency's independence or that of its employees involved in the credit rating process, together with the

[93] Goodhart (2009), p. 17.

safeguards applied to mitigate those threats.[94] For instance, the administrative or supervisory board of a CRA must include at least one third, but no less than two, non-executive members who are independent with a non-renewable term in office not exceeding five years.[95] At the same time, CRAs may no longer provide consultancy or advisory services to the rated entity or a related third party.[96] Yet this does not also exclude so-called 'ancillary services', which Regulation 1060/2009 defines as "market forecasts, estimates of economic trends, pricing analysis and other general data analysis as well as related distribution service".[97] The CRA must ensure that such activities do not result in conflicts of interest with its credit rating activity and the final ratings report must reveal any ancillary services provided for the rated entity or any related services.[98] By including at least some global indication of what these ancillary activities amount to, one of the major concerns stated in the 2008 CESR Report, i.e., that the updated IOSCO code still did not satisfactorily address the issue of ancillary and advisory services and that there is 'a need for more clarity', has been addressed to some extent.[99] At the same time, it can hardly be argued that the Regulation introduces a comprehensive definition of ancillary business and core rating services as recommended by CESR.[100] It is to be welcomed in this context that the Regulation at least obliges CRAs to disclose a list of its ancillary services.[101]

The Regulation furthermore seeks to address potential conflict of interests in the rating process by obliging CRAs to introduce adequate internal policies and procedures to insulate rating analysts, employees and other persons involved in the rating activities from conflicts of interest and ensure appropriate rotation arrangements for analysts and persons approving credit ratings for a particular entity.[102] This includes *inter alia* that the compensation arrangements of employees involved in the rating process may not be contingent on the amount of revenue that the CRA derives from the rated entities or related third parties to which the analyst or persons approving the credit ratings provide services.[103] Moreover the Regulation bans the employment by rated entities or related third parties of CRA employees

---

94 Article 6 Regulation 1060/2009 and Annex I, section A on organisational requirements and section B on operational requirements.
95 Ibid, Annex I, section A. 2.
96 Regulation 1060/2009, Annex I, section B. 4.
97 Ibid, Annex 1, section B. 4.
98 Ibid.
99 CESR (2008), at p. 3.
100 Ibid, at p. 35.
101 Regulation 1060/2009, Annex I, Section E. I.2.
102 Ibid, Article 7(4) and Annex I, Section C.
103 Ibid, Article 7(5).

in a 'key management position' for a period of 6 months after the credit rating.[104] What remains unclear and thus a potential loophole for creative workarounds is what exactly 'key' management positions amount to.

In the context of the general reform of the European financial supervisory regime, the European Commission has argued in favour of additional measures to "avoid possible conflicts of interest arising for the CRA under the issuer-pays model which are particularly virulent regarding the rating of structured finance instruments" and, moreover, "to enhance transparency and to increase competition among CRAs."[105] Next to the centralisation of the registration and supervision process, the proposed amendment of Regulation 1060/2009 is most notable for its enhanced transparency regime. It is foreseen that CRAs registered or certified in accordance with the European regulatory regime must be granted access upon request to the information that issuers of a structured finance instrument or a related third party have provided to the CRA, which has been selected to rate an instrument. For this purpose, an issuer must provide to the appointed CRA, on a password-protected website that it manages, all information necessary for the CRA to initially determine or monitor a credit rating of a structured finance instrument.[106] Other CRAs must be granted access to this information upon request without delay under two conditions:

- the CRA must have the systems and organisational structure in place to ensure the confidentiality of the information to which it gains access, and

- the CRA provides ratings on a yearly basis for at least 10 percent of the structured finance instruments for which it request access to information.[107]

CRAs other than the one that has actually rated the structured financial instrument thus will gain access to the information, which the issuer of such an instrument has given to the CRA he/she has hired for the purpose of the rating of such an instrument. Moreover, a credit rating issuing CRA has to maintain a password-protected website which includes a list of the structured finance instruments for which it is in the process of providing a credit rating, identifying the type of the structured finance instrument, the name of the issuer and the date

[104] Ibid, Annex I, Section C. 7.
[105] European Commission (2010), Explanatory Memorandum, at p. 5.
[106] European Commission (2009), Article 8a(1) of the proposed Regulation establishing a ESMA.
[107] Ibid, Article 8a(2).

when the rating process was initiated. Other CRAs must, under the same conditions stated above, be granted access to that information as well.[108]

Amtenbrink and De Haan have criticized Regulation 1060/2009 for not addressing the high concentration of the CRA market or the financing of the CRAs.[109] Arguably, these features increased over-dependence on the ratings of CRAs in the past. One of the main objectives of the proposed amendment of Regulation 2060/2009 is to "increase competition in the rating market and increase the number of ratings per instrument so that users of ratings will be able to rely on more than one rating for the same instrument."[110] Yet, it is not self-evident whether this access to information will indeed increase competition in the light of the relatively high market access barriers that will be set up both with regard to the registration system and the conditions under which CRAs can gain access to rating information. With regard to the former, the example of the U.S. CRA registration system introduced by the Credit Rating Agency Reform Act of 2006 leaves little room for optimism. White argues in this context that the designation as Nationally Recognized Statistical Rating Organization (NRSRO) was a significant barrier for entry into the rating business. New rating firms would risk being ignored by most financial institutions (the 'buy' side of the market), and since financial institutions would ignore the would-be rater, so would issuers of financial instruments (the 'sell' side of the market). Although the Credit Rating Agency Reform Act 2006 led to an increase of NRSROs, new entrants could not quickly overcome the inherent advantage of the 'Big Three'.[111] It cannot be seen why the situation should be any different in the EU.[112]

Moreover, the requirement in the proposed amendment to Regulation 1060/2009 that a CRA can ask only for all the information so that it can issue unsolicited ratings if it has a market share of 10 percent could in practice be an important entry barrier. Indeed, the wording of the

[108] Ibid, Article 8b.
[109] Amtenbrink and De Haan (2009).
[110] European Commission (2009), Explanatory Memorandum, section 4.3.2.
[111] White (2010).
[112] The European Parliament raised the issue of the creation of a new independent, preferably European, credit rating agency. Recital 73 of the Regulation states that the European Commission should submit a report to the European Parliament and the Council by December 2012 assessing, inter alia, the appropriateness of the issuer-pays model, including the assessment of the creation of a public EU credit rating agency. In a recent consultation document, the European Commission outlines some options, including a new independent European Credit Rating Agency, set up as a public/private structure. Another option mentioned is that European small and medium-sized credit rating agencies establish a European network of agencies (European Commission, 2010b).

proposed new provisions is anything but clear on the exact meaning of this condition.[113] If this provision actually has to be interpreted in such a way that a CRA must already have a market share in the rating of the structured finance instruments of least 10 percent, this raises the question how CRAs that are entirely new to the market can actually make use of this possibility. Moreover, it is also entirely unclear in what ways an access to information under these conditions can actually "mitigate conflicts of interest due to the issuer-pay model", as claimed by the European Commission.[114] Arguably, access to the information that the issuer of an instrument has submitted to the rating CRA will neither prevent nor uncover cases of conflicts of interest. It should be noted in this context that the proposed amendment does not address the current system of financing of CRAs, as the 'issuer pays model' is left untouched.

While the proposed reform of Regulation 1060/2009 is supposed to increase transparency, the European Commission proposal offers little in terms of monitoring the performance of CRAs. ESMA will host a central repository in which CRAs will become obliged to make available information on their historical performance data including the ratings transition frequency and information about credit ratings issued in the past and on their changes. ESMA must make that information publically available and must publish summary information on the main developments observed on an annual basis.[115] However, it is not envisaged that ESMA will actually undertake and publish an analysis of that performance or indeed compare the performance of different CRAs. These arrangements do thus not greatly facilitate benchmarking of CRA performance. It is clear, that the advice of the Issing Committee has not been followed. This committee recommended that "rating performance (i.e. the long-term statistics relating initial ratings to subsequent defaults) should be monitored by the regulators, applying high statistical standards. Rating performance relative to outcomes should be published regularly (e.g., once a year)."[116]

In this context, Goodhart has argued in favour of an independent institution, a CRA Assessment Centre (CRAC), whose only task would be to assess the accuracy of CRA estimates and to publish comparative studies of such accuracy.[117] All CRAs in all countries should be required to place with CRAC a record of each product rated and a measure of the

[113] In fact, according to Article 8a(3) of the proposed amendment (European Commission, 2010), the European Commission has to establish detailed rules specifying the conditions of access.
[114] European Commission (2009), Explanatory Memorandum, section 4.3.2.
[115] Ibid, Article 11(2).
[116] Issing Committee (2008), at p. 10.
[117] Goodhart (2008).

uncertainty of this rating. This might help competition. Goodhart argues that "A new entrant could establish a track record for greater accuracy (again independently assessed) in a particular niche by exploiting a comparative advantage, say in rating one particular product line, with a small staff and build from that. What investors want is forecast accuracy. At present they have no simple or straightforward way of checking that […] So most investors fall back on reliance on brand names, which reinforces oligopoly."[118] However, the IMF has pointed out that "event studies suggest that the arrival of an additional CRA to a market has led to lower rating quality/higher ratings, in part reflecting enhanced opportunities for rating shopping, while not enhancing the information content."[119] For example, Becker and Milbourn examine how the quality of ratings issued by Standard & Poor's and Moody's, responds to the new competition presented by Fitch.[120] These authors find that the ratings issued by Standard and Poor's and Moody's rose as competition increased, while the ratings are less informative about the value of bonds when raters face more competition. Finally, the ability of firm level ratings to predict default is lower when Fitch has a higher market share.

With regard to sovereign debt ratings, a recent European Commission Public Consultations document suggests that additional measures are required to increase, first of all, the level of transparency of these rating by obliging CRAs *inter alia* to[121]

- "inform the country for which they are in the process of issuing a rating at least three working days before the publication of the rating on the principle grounds on which the rating is based, in order to give the country the opportunity to draw the attention of the credit rating agency to any factual errors and to any new developments which may influence the rating."
- "disclose free of charge their full research reports on sovereign debt ratings."
- substantially reduce the maximum time period after which sovereign debt ratings have to be reviewed

[118] Ibid., at p. 31-32. Brackets added.
[119] IMF (2010).
[120] Becker and Milbourn (2010).
[121] European Commission (2010b), at p. 15-16.

With regard to the methodology and the process of rating sovereign debt, the same European Commission document suggests that in addition to today's requirements under Regulation 1060/2009 one or more of the following new obligations should be introduced for CRAs:[122]

- a detailed explanation of the assumptions, parameters, limits and uncertainties surrounding the models and methodologies used when establishing sovereign credit ratings;

- regular (e.g. semi-annual) meetings where the CRA presents and discusses its methodologies on sovereign debt ratings, open to all interested parties (rated countries, financial institutions, and other users of ratings);

- the publication of sovereign debt ratings only after the close of business of European trading venues;

- to provide sovereign debt ratings free of charge for Member States.

5.3. Supervision of CRAs

As the authors of this contribution have argued elsewhere, it is with regard to enforcement that the binding legal regime introduced by Regulation 1060/2009 is most distinct from the previous voluntary IOSCO code.[123] While the latter had to rely on a comply-or-explain approach, Regulation 1060/2009 introduces instruments to actually enforce the new rules.

Under the European regulatory regime of Regulation 1060/2009, Member States have to identify competent national authorities, which have to ensure that CRAs comply with the Regulation.[124] EU national legislators must provide competent authorities with an arsenal of more or less severe supervisory measures at their disposal, including the temporary prohibition of issuing or suspension of the use, for regulatory purposes, of credit ratings with effect throughout the EU, the issuing of public notices when a CRA breaches the obligations set out in the Regulation, the possibility to refer matters for criminal prosecution to the competent jurisdiction, and ultimately the withdrawal of the registration.[125] For this purpose, the competent authorities have to have "all the supervisory and investigatory powers that are

[122] Ibid., at p. 17.
[123] Amtenbrink and De Haan (2009), at p. 25.
[124] Article 22 and 23 Regulation 1060/2009.
[125] Ibid, Article 24(1).

necessary for the exercise of their functions".[126] Moreover, the Member States must lay down rules on penalties in their national legislation which "at least, cover cases of gross professional misconduct and lack of due diligence", whereby these penalties must be "effective, proportionate and dissuasive".[127] Similar to the registration procedure, before taking any measures the competent authority of the home Member State must inform the facilitator of the relevant college and aim at reaching an agreement on the necessity to take any measures. In case that such an agreement cannot be reached advice can be sought from CESR. If the disagreement continues the competent authority can nevertheless take the envisaged measures, whereby any deviation from the opinions of members of the college and/or an advice issued by CESR must be fully reasoned. The Regulation enables the home country competent authority to take a final decision within 15 working days after it has notified the facilitator of the relevant college.[128]

The competent authorities of a Member State on whose territory credit ratings are used of a CRA that has its registered office in another Member State can initiate supervisory measures in case the CRA is considered to breach the obligations arising from the Regulation.[129] The competent authorities of that Member State can issue public notices and refer matters for criminal prosecution to its relevant national authorities and, more generally, adopt appropriate measures to ensure that a CRA complies with legal requirements.[130] This also includes a suspension of the use of credit ratings of a particular CRA.[131] Similar to the case of sanctions initiated by the home state competent authority, the college has to be consulted with the aim to reach agreement on the measures to be taken, whereby in the end the competent authority of the other Member State can take measures even against the will of the home Member State and/or the advice by CESR.[132]

Ultimately it is for the home Member State to effectively address misconduct by a CRA.[133] The Member State that issued the registration also has to decide on its withdrawal.[134] Apart

[126] Ibid, Article 23.
[127] Ibid, Article 36 and preamble, para. 66.
[128] Ibid, Article 24(3).
[129] See namely Article 30 Directive 2006/48/EC.
[130] Article 25(1) regulation 1060/2009. When taking measures pursuant to Article 25(1) (b), the competent authority of the other Member State has to take into account any measures already taken or envisaged by the home Member State.
[131] Ibid, Article 25(1) (c) in conjunction with Article 4(1).
[132] Ibid, Article 25(3).
[133] Ibid, Article 25(4).
[134] Ibid, Article 20.

from a breach of the operating conditions for CRAs as laid down in the Regulation, the discovery of false statements during the registration process, as well as instances in which a CRA no longer meets the conditions under which it was registered can justify a withdrawal of the registration.[135] While the competent authority in principle must withdraw the registration, if one of the situations described the Regulation[136] arises, as has been observed above for the registration process, the conditions for operations leave room for interpretation. Similar to the registration process, the relevant college has to be consulted with the aim to reach agreement on the necessity to withdraw the registration to the CRA based on a joint assessment. In case of disagreement CESR can be consulted. The competent authority of the home Member State can take an individual withdrawal decision with immediate effect throughout the EU in principle regardless of whether an agreement is reached in the college.[137] However, this decision needs to be fully reasoned in case it deviates from the opinions expressed in the college and/or the advice by CESR. While the competent authority of another Member State can thus request the withdrawal of registration, the home Member State cannot be forced to act in this regard.[138]

In line with the approach taken with regard to the registration of CRAs, in its present from Regulation 1060/2009 does not put a European body in charge of the oversight of CRA operations. Moreover, competent authorities of other Member States in which a CRA may operate are also not issued any effective instruments by the Regulation to enforce a withdrawal of registration. As to situations were cooperation between national authorities breaks down, apart from non-binding mediation, the only option left to compel a national competent authority to withdraw a registration, it seems, would be the initiation of a judicial procedure before the Court of Justice of the European Union. A CRA whose registration is refused or withdrawn would have to seek legal remedies in the national legal order of the Member State concerned.[139]

It is only after the implementation of the general supervisory reform and the establishment of the ESMA, as envisaged at the time of the writing of this contribution, that CRA supervision will be much more centralised. ESMA will gain competence in matters relating to the on-

[135] Ibid, Article 20(1) (a)-(d).
[136] Namely Article 20(1) thereof.
[137] Ibid, Article 20(2) and (4). A transitional period applies for the use of credit ratings.
[138] For more details see Amtenbrink and De Haan (2009), at p. 28-29.
[139] See, e.g., case 77-69, *Commission v. Belgium,* [1970] ECR 237. In the context of Article 258 TFEU it needs to be noted that the Commission is under no legal obligation to act, whereas natural or legal persons cannot force the Commission to act. See, e.g., case 200/88, *Commission versus Greece*, [1990] ECR I-4299.

going supervision of registered CRAs, thereby cooperating with the new European Banking Authority. The instruments at the disposal of ESMA largely correspond to those that national competent authorities have in enforcing Regulation 1060/2009 in its current form, including inter alia general investigative rights and the possibility of one-site inspections. However, even under the proposed new regime some tasks will remain with national competent authorities of the Member States of the EU. This applies *inter alia* to the enforcement of the prohibition, namely for credit institutions, investment firms and insurance undertakings, to use credit ratings other than those issued in accordance with Regulation 1060/2009 for determining capital requirements in accordance with the before mentioned Capital Requirements Directive.[140] Moreover, ESMA will have the competence to delegate specific supervisory tasks to national authorities, including in particular information request, investigations and on-site inspections.[141]

6. Conclusions

Throughout this contribution it has been argued that CRAs play a crucial role in the global financial system as it is currently organised. This role is not limited to the elimination of an information asymmetry in favour of investors that readily take over the advice provided by CRAs in the form of credit rating, but actually extents to the fulfilment of a quasi-regulatory and thus public function in determining capital requirements for financial institutions, a crucial aspect of the prudential supervision and thus ultimately of financial stability as such. What is more, CRAs do not only cast a judgment on the creditworthiness of companies, such as financial institutions and their financial products, but also on states. The current euro area crisis highlights the vast implications, which a sovereign downgrading can have not only in the financial markets but also for the respective state itself.

The recent global financial crisis highlights that assigning such a key role to CRAs bears considerable risks when not accompanied by an adequate regulatory framework. Certainly in the past, the business model of CRAs left room for conflicts of interests, while their rating methodologies remained opaque and arguably ill-suited for the application to the complex structured financial products that currently make such a large portion of the rating business of

[140] Commission Proposal (2010), Article 25a.
[141] Ibid., Article 30.

CRAs. Moreover, a large concentration in the rating business has left little or no room for new CRAs with other business models and rating methods to enter the market.

The answer to the question how these shortcomings should be addressed involves more than one dimension. Firstly, there is a clear overreliance of investors on credit ratings. In the past due diligence has not been effectively promoted by the (non-binding) regulatory regime and the insistence by CRAs that their ratings only measure credit risk seems to have been ignored by many investors. More is needed in this regard. Moreover, the acceptance of external credit assessment for the determining of capital requirements has effectively resulted in the "outsourcing of regulatory judgment", whereby not the CRA bears the final risk, but rather the taxpayer that may have to come to the rescue of a failing systemic relevant institution.

Turning to the recent efforts in the EU to address these issues, the authors of this contribution have previously expressed their doubts as to whether the regime under Regulation 1060/2009 will make a decisive difference compared to the previously existing mix of regulation and self-regulation under the Capital Requirements Directive and the IOSCO code. Indeed, it is still unclear on the basis of what evidence it is assumed that the regulation of the credit rating industry will have an effect on the issues that have emerged with ratings of U.S. subprime backed securities, which lay at the root of the global financial crisis. The main concern raised by several advisory bodies, including CESR, FSF and EMSE, that comprehensive regulation may actually result in more reliance on the ratings of structured financial instruments by investors that are given the false impression that the ratings of EU registered CRAs are more reliable, persists. Put differently, the (amended) Regulation implies that CRAs have to adhere to various requirements, creating the impression that their ratings can be trusted.[142] Also the fact that ESMA and not an independent institution monitors rating performance may add to this impression.

However, oversight by either competent national authorities or, in the future, the ESMA does not imply an improvement of the ratings. Utzig rightly argues that "there is broad consensus that rating methodologies should not be monitored. This is not only for competitive reasons,

---

[142] The European Commission seems to be aware of this. In a recent consultation document, it reads: "references to ratings in the regulatory framework should be reconsidered in light of their potential to implicitly be regarded as a public endorsement of ratings and their potential to influence behaviour in an undesirable way, for instance due to sudden hikes in capital requirements resulting from rating downgrades." (European Commission (2010b) at p. 5). The Financial Stability Board (FSB) recently endorsed principles to reduce authorities' and financial institutions' reliance on credit ratings (FSB (2010)).

but above all because regulation of this kind could result in the state being considered partly responsible for published ratings. This would be incompatible with the concept of private-sector credit rating agencies. Given that states themselves are also issuers of debt, moreover, a new conflict of interests would arise if the state were in a position to influence the methodologies used for assigning sovereign ratings."[143] In line with this view, the Issing Committee recommended that "Authorities should continue to review their use of structured finance ratings in the regulatory and supervisory framework und reduce the use to the extent possible in order to limit the pressure on agencies, e.g. in consumer protection regulation." White even argues that authorities should not rely on credit ratings in capital requirements. The withdrawal of these delegations would not imply that 'anything goes', but safety judgments should remain the responsibility of the regulated institutions with oversight by the regulators.[144] The IMF goes one step further, even questioning the benefits of structured financial products as such: "The conclusion of this chapter is that, although structured finance can be beneficial by allowing risks to be diversified, some complex and multi-layered products added little economic value to the financial system. Further, they likely exacerbated the depth and duration of the crisis by adding uncertainty relating to their valuation as the underlying fundamentals deteriorated."[145] The way in which the issue of the desirability of certain types of financial products takes a backseat in the current debates on regulatory reforms is conspicuous, to say the least.

Be that as it may, due diligence of investors will also not be enhanced as a result of the proposed amendment of Regulation 1060/2009. The only notable novelty is this area relates to the prohibition of CRAs in the future to use the name of ESMA or any competent authority in such a way that would indicate or suggest endorsement or approval by that authority of its credit ratings or any credit rating activities. In our view, this is a missed opportunity. It is also not in line with Directive 2009/111/EC, which enables due diligence requiring that "Sponsor and originator credit institutions shall ensure that prospective investors have readily available access to all materially relevant data on the credit quality and performance of the individual underlying exposures, cash flows and collateral supporting a securitisation exposure as well as such information that is necessary to conduct comprehensive and well informed stress tests on the cash flows and collateral values supporting the underlying exposures. For that purpose,

143 Utzig (2010), at p. 5.
144 White (2010). In a recent consultation document, the European Commission identifies several ways to reduce reliance on CRA ratings (European Commission 2010b).
145 IMF (2008), at p. 54.

materially relevant data shall be determined as at the date of the securitisation and where appropriate due to the nature of the securitisation thereafter."

References

Afonso, A., P. Gomes, and P. Rother (2007), What 'Hides' Behind Sovereign Debt Ratings? ECB Working Paper No. 711.

Alsakka, R., and O. ap Gwilym (2009), Heterogeneity of sovereign rating migrations in emerging countries, Emerging Markets Review, 10, 151–165.

Alsakka, R., and O. ap Gwilym (2010), Leads and lags in sovereign credit ratings, Journal of Banking and Finance, 34, 2614–2626.

Amtenbrink, F., and J. de Haan (2009), Regulating Credit Ratings in the European Union: A Critical First Assessment of Regulation 1060/2009 on Credit Rating Agencies, Common Market Law Review, 46, 1915-1949.

Amtenbrink, F., and J. de Haan (2010), Regulating Credit Rating Agencies in the European Union, forthcoming in: Delimatsis, F. and N. Herger (eds.), Systemic Risks and Prudential Regulations, Kluwer.

Arezki, R., B. Candelon, and A. Sy, (2010), Sovereign Ratings News and Financial Markets Spillovers, IMF Working Paper.

Barroso, J. M. Durão (2010), Statement to the European Parliament prior to the meeting of the Heads of State and Government of the Euro Area, European Parliament Plenary, Brussels, 5 May 2010.

Becker, B. and T. Milbourn (2010), How Did Increased Competition Affect Credit Ratings? Available at: http://www.hbs.edu/research/pdf/09-051.pdf

Benmelech, E. and J. Dlugosz (2009), The Alchemy of CDO Credit Ratings, Journal of Monetary Economics, 56, 617-634.

Blaubrock, U. (2007), Control and Responsibility of Credit Rating Agencies, Electronic Journal of Comparative Law, 11.3 (December 2007), http://www.ejcl.org.

Brooks, R., R. Faff, D., Hillier, and J. Hillier (2004), The national market impact of sovereign rating changes, Journal of Banking and Finance, 28, 233–250.

Boot, A.W.A., T.T. Milbourn, and A. Schmeits (2006), Credit Ratings as Coordination Mechanisms, Review of Financial Studies, 19 (1), 81–118.

Cantor, R. and C. Mann (2007), Analyzing the Tradeoff Between Ratings Accuracy and Stability, Journal of Fixed Income, 16, 4, 60-68.

Caprio, G., A. Demirgüç-Kunt and E. Kane (2008), The 2007 Meltdown in Structured Securitization: Searching for Lessons, not Scapegoats, World Bank Policy and Research Working Paper No. 4756.

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*, CESR/08-277.

Coval, J.D., J. Jurek and E. Stafford (2009), The Economics of Structured Finance, Harvard Business School, Working Paper 09-060.

Daniels, K.N. and M.S. Jensen (2005), The Effect of Credit Ratings on Credit Default Swap Spreads and Credit Spreads, Journal of Fixed Income, 14, 16-33.

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

European Commission (2009), Proposal for a Regulation of the European Parliament and of

the Council establishing a European Securities and Markets Authority (COM(2009) 503 final).
European Commission (2010), 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.
European Commission (2010b), Public Consultation on Credit Rating Agencies, 5 November 2010. Available at http://ec.europa.eu/internal_market/consultations/docs/2010/cra/cpaper_en.pdf (accessed 27 November 2010).
European Economic Advisory Group (2009), The EEAG Report on the European Economy 2009, CESifo Group Munich, Germany. Available at http://www.cesifo-group.de/portal/page/portal/ifoHome/B-politik/70eeagreport/20PUBLEEAG2009 (accessed 10 October 2010).
European Securities Markets Expert Group (2008), *The Role of Credit Rating Agencies*, June 2008, available at http://ec.europa.eu/internal_market/securities/esme/index_en.htm (accessed 6 July 2010).
Financial Stability Board (2010), Principles for Reducing Reliance on CRA Ratings, available at: http://www.financialstabilityboard.org/publications/r_101027.pdf (accessed 30 November 2010).
Financial Stability Forum (2008), *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, 7 April 2008, available at: http://www.fsforum.org/publications/r_0804.pdf (accessed 9 March 2008).
Gande, A., and D.C. Parsley (2005), News spillovers in the sovereign debt market, Journal of Financial Economics, 75, 691–734.
Goodhart, C.A.E. (2008), How, if at all, should Credit Ratings Agencies (CRAs) be Regulated?, Special papers 181, LSE Financial Markets Group Paper Series.
Goodhart, C.A.E. (2009), The Regulatory Response to the Financial Crisis, Edward Elgar, Cheltenham.
Güttler, A. and M. Wahrenburg (2007), The adjustment of credit ratings in advance of defaults, Journal of Banking and Finance, 31, 751–767.
Hill, P., R. Brooks, and R. Faff (2010), Variations in sovereign credit quality assessments across rating agencies, Journal of Banking and Finance, 34, 1327–1343.
IMF (2008), Global Financial Stability Report.
IMF (2010), The uses and abuses of sovereign credit ratings, chapter 3 in the 2010 IMF Global Financial Stability Report.
Ismailescu, I. and H. Kazemi (2010), The Reaction of Emerging Market Credit Default Swap Spreads to Sovereign Credit Rating Changes, Journal of Banking and Finance, 34, 2861–2873.
Issing Committee (2008), *New Financial Order: Recommendations by the Issing Committee*, Frankfurt: Center for Financial Studies. Available at http://www.ifk-cfs.de/fileadmin/downloads/publications/white_paper/White_Paper_No_1_Final.pdf (accessed 10 October 2010).
Jorion, P. and G. Zhang (2007), Information Effects of Bond Rating Changes: The Role of the Rating Prior to the Announcement, Journal of Fixed Income, 16, 4, 45-59.
Kormos, B.J. (2008), Quis Custodiet Ipsos Custodes? Revisiting Rating Agency Regulation, International Business Law Journal, 4, 569-590.
Lastra, R. (2003), The Governance Structure for Financial Supervision and Regulation in Europe, Columbia Journal of European Law, 10 (1), 49-68.
Mathis, J., J. McAndrews, and J-C. Rochet (2009), Rating the raters: Are reputation concerns powerful enough to discipline rating agencies? Journal of Monetary Economics, 56, 657-

674.
Mora, N. (2006), Sovereign credit ratings: Guilty beyond reasonable doubt? Journal of Banking and Finance, 30, 2041–2062.
Pagano, M. and P. Volpin (2010), Credit ratings failures and policy options, Economic Policy, April 2010, 403-431.
Richards, M.L. (2009), Credit-Rating-Agency Reforms, Mortgage Banking, 69, 7, 40-44.
Senate Committee on Governmental Affairs (2002), Financial Oversight of Enron: The SEC and Private-Sector Watchdogs, Staff Report, October 8, 2002.
Standard & Poor's (2007), Principles-based rating methodology for global structured finance securities, Ratings Direct Research.
Sy, A. (2002), Emerging market bond spreads and sovereign credit ratings: Reconciling market views with economic fundamentals, Emerging Markets Review, 3, 380–408.
Utzig, S. (2010), The Financial Crisis and the Regulation of Credit Rating Agencies: A European Banking Perspective, ADBI Working Paper Series No. 188.
Weber, R.H. and A. Darbellay (2008), The regulatory use of credit ratings in bank capital requirement regulations, Journal of Banking Regulation, 10, 1, 1-16.
White, L.J. (2010), The Credit Rating Agencies, Journal of Economic Perspectives, 24, 211-226.

Previous DNB Working Papers in 2011

No. 276 **Ronald Heijmans, Richard Heuver and Daniëlle Walraven**, Monitoring the unsecured interbank money market using TARGET2 data

No. 277 **Jakob Bosma**, Communicating Bailout Policy and Risk Taking in the Banking Industry