

Manuscript version: Author's Accepted Manuscript

The version presented in WRAP is the author's accepted manuscript and may differ from the published version or Version of Record.

Persistent WRAP URL:

<http://wrap.warwick.ac.uk/113520>

How to cite:

Please refer to published version for the most recent bibliographic citation information. If a published version is known of, the repository item page linked to above, will contain details on accessing it.

Copyright and reuse:

The Warwick Research Archive Portal (WRAP) makes this work by researchers of the University of Warwick available open access under the following conditions.

Copyright © and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable the material made available in WRAP has been checked for eligibility before being made available.

Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

Publisher's statement:

Please refer to the repository item page, publisher's statement section, for further information.

For more information, please contact the WRAP Team at: wrap@warwick.ac.uk.

A hard nut to crack: Regulatory failure shows how rating really works

Giulia Mennillo

National University of Singapore

Timothy J. Sinclair

University of Warwick, UK

Crises create good opportunities to question flawed or outdated practices. A new era of credit rating agency regulation began with the onset of the 2008 global financial crisis. The previous ‘light-touch’ approach based on self-regulation has been abandoned for a mandatory system of credit rating agency regulation and supervision. Credit rating agencies (CRAs) are now subject to more intensified oversight on both sides of the Atlantic. In the US, the Securities and Exchange Commission (SEC) has an expanded mandate to regulate the credit rating agencies. In the EU, the European Securities and Markets Authority (ESMA) has been granted exclusive and centralized supervisory powers over these private firms (Quaglia, 2013).

Credit rating involves estimating the likely future losses for investors in securities who are not familiar with the financial condition of the issuing company or government. Rating agencies emerged in the United States in the first quarter of the Twentieth Century (Sinclair, 2005; Ouroussoff, 2010). Moody’s Investors Service and S&P Global Ratings (formerly Standard & Poor’s), both headquartered in New York City, are the two most important agencies. Fitch Ratings, owned by Hearst Corporation, with headquarters split between New York and London, has risen in importance in the last twenty years. Analysts often refer to Moody’s, S&P and Fitch as the ‘Big Three.’

Increased oversight, ongoing evaluation of rating performance data, models and methodology, and the statutory authorization to conduct on-site investigations, seem, at first glance, promising avenues to reduce the probability of ‘rating failure’ and enhance rating quality. But will the new regulations really make a difference? Whether these reform efforts are effective in addressing the fundamental problems of rating, is, as this article argues, highly questionable. The higher regulatory costs might not contribute to ‘better’ ratings or make ‘rating failure’ less likely. ‘That isn’t to say that nothing has been done, just that what’s been done is disturbingly beside the point,’ as Michael Lewis (2016) puts it regarding the financial regulatory response to the crisis in general.¹

We claim that an erroneous understanding of rating as metrics, private goods, independent and neutral third-party opinions contributes to the ineffectiveness of credit rating agency regulation, and indirectly, to reinforcement of the credit rating agencies’ authority. Effective credit rating agency regulation instead would provide the means to challenge the credit rating agencies’ authority. It would put in place institutional checks and balances, preventing credit rating from being a systemic risk factor in the global economy, as is still the case. Despite the rating failures experienced during the last fifteen years, CRAs ‘still matter’ in the aftermath of the global financial crisis (Roubini, 2015). Turning to credit rating agencies for spotting rising credit risk has remained a common practice in financial markets. Whether debt issuers are corporates, financial institutions or sovereigns, the continuing reliance on ratings by market participants and regulatory authorities suggests the agencies’ authority is intact.

To understand this outcome, the explanation advanced here goes

beyond market participants' individual motivations to use ratings rather than alternatives for credit risk assessment. We show how dominant cognitive constructions can be consequential, as commonly shared understandings of rating and CRAs affect the actions and non-actions of regulators and market participants. In other words, how we conceive of ratings and CRAs is constitutive of their authority.

We first show how the regulatory license approach – a common way of thinking about credit rating agencies – in its ‘reversed’ version continues to contribute to misunderstanding the agencies’ authority. Second, we examine the dominant understandings of rating underlying the avowed goals of credit rating agency regulation, including competition, transparency and disclosure, plus reduction in market and regulatory reliance on ratings. We discuss how understanding ratings as metrics, private goods, independent and neutral third-party opinions contribute to regulatory ineffectiveness. Third, we illustrate how these understandings can also account for the ‘non-events’ of regulatory reform, as the persistence of established rating analytics, the traditional business model and the non-establishment of a public credit rating agency demonstrate. The article ends by suggesting better ways of thinking about credit rating agencies, and consequently, of regulating them.

The regulatory license hypothesis ‘reversed’

Post-crisis credit rating agency regulation has generated criticism since it began (McVea, 2010). In terms of its ability to prevent the failures leading up to the global financial crisis, De Haan and Amtenbrink (2011: 33) question whether the regime under Regulation 1060/2009 in the EU will

make ‘a decisive difference compared to the previously existing mix of regulation and self-regulation.’ Barducci and Fest (2011: 55) conclude the

credit rating industry itself would have been able to cure its reputation damaged by current financial turmoil. Accordingly, recent regulations have, if any, solely the effect to conciliate the (sic) public opinion.

Amtenbrink and Heine (2013: 13) argue the legislative initiatives both in the United States and the EU ‘aimed at increasing the regulatory oversight over credit rating agencies activities, where non-binding international standards and self-commitment were thought to have failed’ are not a surprising ‘reaction to market failure.’ Such a ‘countermovement towards regulation’ was predictable. The authors question whether registration and certification systems are ‘not in fact counterproductive.’ Insights from behavioural science suggest to them public regulation triggers even ‘further overconfidence’ in credit ratings and, accordingly, increases over-reliance; ‘by introducing numerous measures geared towards increasing the quality and reliability of credit ratings, investors are not exactly discouraged from relying on ratings’ (Amtenbrink and Heine, 2013: 12).

The argument that an intensified regulation of credit rating agencies signals public approval of ratings, and, therefore, contributes to even greater rating use resembles, as we call it, the regulatory license hypothesis ‘reversed.’ According to the original formulation of the ‘regulatory license hypothesis,’ the credit rating agencies’ authority is the consequence of delegating credit risk regulation to private firms (Partnoy, 2006). This delegation allowed the CRAs to fulfil a quasi-public governing function,

although not themselves subject to regulation.

In view of the regulations implemented after the global financial crisis, the ‘regulatory license hypothesis reversed’ suggests regulation of credit rating agencies is important to the reproduction of the credit rating agencies ‘as recognized and trustworthy private authority’ (Kruck, 2016: 765) and complicit in a ‘progressive institutionalization [...] of their role as private governors’ (Kruck, 2016: 754). Both versions of the regulatory license hypothesis, whether the original or the reversed, regard the involvement of public authorities—be it in the form of the regulatory use of ratings *only*, or of additional regulation of credit rating agencies themselves—as supporting and expanding credit rating agencies’ authority.

Understandings of rating implicit in regulations

‘Competition’ and ‘transparency’ have ever been prevailing regulatory goals in the discourse of rating regulation, in both the past and present. Since the global financial crisis, there is also an explicit effort to reduce ‘over-reliance’ on credit ratings in market and regulatory practices. We argue these prominent goals reveal an underlying understanding of rating that accounts for the ineffectiveness of these regulations. The understanding of what rating is – and, implicitly, how the credit rating agencies’ authority is conceived – influences the view of how rating works, and when it does not work. These ideas establish a notion of what rating failure is, predetermining the spectrum of regulatory measures thought appropriate remedies. If the underlying understanding of rating is erroneous, then the regulations that follow will not work.

Competition

Conventional accounts interpret the credit rating agencies' commercial success as arising from weak competition. The idea that the enhancement of competition can reduce the flaws in the rating industry and promote rating 'objectivity' is not new. In the US, it goes back at least to the Credit Rating Agencies Reform Act of 2006. In the EU, the promotion of competition and more market players in the credit rating market is part of post global financial crisis regulation (European Commission, 2013). The scholarly literature never tires of recommending 'a competitive environment' as the 'means to achieve better credit ratings' (Darbellay, 2013: 9; Amtenbrink and Heine, 2013: 2).

According to economic theory, regulation constrains 'monopoly power and [aids] the prevention of serious distortions to competition' (Brunnermeier et al., 2009: 2). Weak competition leads to poor analysis as the credit rating agencies lack incentives to reinvest in their product. From this perspective, regulatory measures should increase the degree of competition to bring about a 'better' market outcome, i.e. higher quality ratings.

Striving for a level playing field and reducing entry barriers for smaller market players—noble as these goals may be—will not automatically diminish the probability of rating failure and improve rating quality. The global rating market consists of more than 80 players, but the Big Three still hold more than 90 percent of market share (Matarocci, 2014: 121). This suggests a stable equilibrium between smaller market players and the Big Three, where the former either operate locally or are specialized in

niche markets and specific sectors (Coffee, 2011: 248). Building strategic alliances with the Big Three benefits small agencies in terms of reputation, publicity, and credibility, whereas the large credit rating agencies can reinforce their dominant global market position through these relationships. This ‘win-win situation’ seems to underpin the oligopolistic market structure of the status quo.

Empirical evidence suggests a high concentration in the CRA market (European Commission, 2016: 8). Not only are the revenues of credit rating activity in general highly concentrated, market concentration also exists across different rating types, whether corporates, sovereigns or in structured finance. There exists a ‘general preference towards large CRAs’ and a ‘common view among investors (and issuers) that small credit rating agencies provide lower quality ratings compared to large credit rating agencies’ (European Commission, 2016: 5-6). Against this background, it is not surprising regulations aimed at promoting competition and increasing the number of smaller market players are not effective in diminishing the probability of rating failure and improving rating quality. Instead, the oligopoly seems to be a constitutive feature of the rating market.

A rating provides a *centralized* judgment about creditworthiness. By definition, this function can only be fulfilled with a limited number of rating suppliers. With an infinite number of suppliers, as perfect competition implies, the raison d’être of the industry would evaporate. Therefore, reputational entry barriers are not only the cause for the low degree of competition, but a necessary feature of how rating has worked for the last century. The concentration of market share is the inevitable consequence.

One regulatory lesson to draw from this is that fostering competition

will not automatically lead to the desired ends. Regulators must acknowledge the constitutive character of the reputational entry barriers, which cannot simply be regulated ‘away.’ Related to this, they should beware of equating these barriers with a presumptive track record of the incumbent oligopoly. Reputation is inherently exclusive and not necessarily ‘meritocratic.’ It favours the status quo. Therefore, the idea that smaller agencies can catch up with the Big Three by ‘developing a track record score’ over time is an empty promise (European Commission, 2016: 8).

Transparency and disclosure

What Kessler (2016: 359) describes as the ‘transparency discourse,’ which traces back at least to the Asian financial crisis of the late 1990s, continues in the realm of credit rating agency regulation. ‘Higher transparency’ is one of, if not *the* dominant theme of credit rating agency regulation. The idea that transparency can cure the flaws of the rating industry is a recipe to be found, for example, in the first version of the IOSCO Code (IOSCO, 2004: 3) and in the Credit Rating Agencies Reform Act of 2006. There may be differences between jurisdictions regarding scope, or debates about whether more ‘process’ or ‘output’ oriented approaches are better. But the perception that there is a fundamental transparency deficit in the industry in need of repair is widely shared among regulators, policymakers, and scholars alike. Given this, the CRAs themselves, independently of regulations imposed on them, have put transparency measures in place. Embracing transparency, one of the much-heralded values in the market place, has allowed the CRAs to signal their learning ability and, with it, their epistemic authority, is still intact.

In the following, let us have a closer look at the different areas suffering from a presumptive transparency deficit, and where regulations are supposed to make a difference.

... in terms of registration

The Credit Rating Agency Reform Act of 2006 put an end to the ‘old (and vague) NRSRO system’ establishing criteria for NRSRO recognition (Brummer and Loko, 2014: 160; Sinclair, 2013: 88). In the aftermath of the crisis, the US has formalized registration to facilitate market access for new NRSRO candidates further. The SEC has enhanced disclosure requirements for the registration process as a quality-safeguarding mechanism (Hiss and Nagel, 2014: 140). Also, the EU introduced a registration duty for credit rating agencies in the wake of global financial crisis reform efforts. Before the financial crisis, European countries *de facto* adopted the CRA recognition model from the US without defining formal procedures of their own. This ‘free-riding on American regulatory efforts’ was facilitated by the fact that the largest agencies were headquartered in the United States (Sinclair, 2013: 88).

Nobody can seriously claim the rating failures of the past happened because of a ‘shadow’ credit rating industry operating off the regulatory radar. The Big Three were anything but unknown or unacknowledged players. Against this backdrop, it is questionable whether institutionalized registration and recognition procedures are effective tools to prevent a future rating fiasco.

... in terms of methodology

Increasing the transparency of rating methodology has also been a popular reform measure since the global financial crisis (IOSCO, 2015; European Commission 2013).² Proponents of such ‘process-based’ approaches emphasize the importance of opening the ‘black box’ of rating to increase rating quality and prevent rating failure (Kiff et al., 2012; Vernazza et al., 2014).

Credit rating agencies themselves have put great effort into publicizing the rating process, as a cursory glance at their websites shows. Given the criticism the agencies faced during the crisis, some described these efforts as a ‘pretty-looking PR campaign’ to restore reputation, without effect on the actual practices (Blodget, 2011).

Roubini (2015) advocates objectivity is best achieved if rating becomes the product of verifiable statistical models and algorithms. These ideas suggest a probabilistic understanding of rating, which gets wrong the reality of what rating is. Unlike mere calculation, qualitative and quantitative components are mixed in a way that renders their differentiation ex post impossible. Ratings involve judgement; they are not unambiguous figures, but products of deliberation. If ratings were computable and predictable, there would be no business case for credit rating agencies. If promoting rating preciseness, correctness and absence of errors, is the ultimate end of enhancing transparency of rating methodology, such measures will be ineffective in fostering rating quality and preventing rating failure.

... in terms of conflicts of interest

New regulations aim to mitigate the distorting impact of conflicts of interest on rating quality. Given that eliminating conflicts of interest altogether is out of reach under the current business model of ‘issuer-pays,’ enhanced ‘disclosure’ requirements are treated as an alternative means to address the issue. While the EU adopts a more general approach, the US requires detailed descriptions depending on the type of conflicts of interest (Hiss and Nagel, 2014: 140).

As these transparency and disclosure measures mainly affect the conflicts of interest at the individual analyst level, critics have been quick to point out that structural conflicts of interest continue to exist. The new transparency requirements are ‘a distraction from the principal conflict of interest that distorts ratings, namely, the NRSROs’ imperative to maximize revenues and earnings’ (Gaillard and Harrington, 2016: 52). Indeed, the European Commission maintains that ‘none of the requirements related to conflicts of interest affected [credit rating agencies and issuers] in a significant way, and as such they cannot be described as either positive or negative’ (European Commission, 2016: 6). Based on market participants’ views, there is little evidence ‘to draw any firm conclusions on the effectiveness of the disclosure provision’ borne by issuers (European Commission, 2016: 9).

Why should enhanced transparency make a difference beyond the purely symbolic? Rendering conflicts of interest more transparent does not mean they cease to exist. Conflicts of interest in the industry were not a secret in the years preceding the crisis.

The attempt to boost rating quality by making conflicts of interest more transparent reveals a certain conception of rating failure. Rating failure is constructed as the inevitable consequence of the rent-seeking behaviour of rational, profit-maximizing firms. It is taken for granted that credit rating agencies are incentivized to please issuers more than investors, resulting in less severe ratings. Conflicts of interest and their consequences are thus accepted as given. Increased transparency is therefore not supposed to erase, but to mitigate the distorting effects of conflicts of interest on the quality of ratings. The underlying logic is that the public eye has a disciplining effect on credit rating agencies' 'natural' behaviour of profit-maximization.

Understanding rating as such is not problematic per se. After all, no one can deny the conflicts of interest at work in the rating industry. Such a perspective becomes harmful, however, when it silences other causes of rating failure that go beyond the rational-choice approach. Unlike market concentration that poses the same regulatory challenge regardless of rating type, when it comes to conflicts of interest, differentiating between rating types can reveal shortcomings of dominant rating regulations.

In the case of sovereign ratings, rating agencies issue unsolicited sovereign ratings without being paid by the sovereign bond issuer. 'Rating failure' occurs nonetheless. For example, Barta and Johnston (2018) provide empirical evidence of partisan-biased sovereign rating downgrades and resulting 'partisan discrimination' in sovereign bond markets. Likewise, the Asian financial crisis and the sovereign debt crisis in Europe gave rise to a body of literature that discusses further facets of 'sovereign rating failure.' Fuchs and Gehring (2017) show how sovereign ratings have

suffered from a ‘home bias’ in the aftermath of the global financial crisis 2008. The ‘Big Three’ have given European states excessively severe sovereign ratings compared to the U.S. sovereign rating. Similarly, Gärtner and Griesbach (2012) suggest that ratings have a nonlinear effect on interest rates, facilitating self-fulfilling prophecy scenarios in sovereign debt markets.³ In another study, Gärtner et al. (2011) find that economic fundamentals cannot explain sovereign ratings during the European sovereign debt crisis. Variation differs both in the past and across countries.

In the wake of the East Asian financial crisis 1997-98, CRAs were criticized for being ‘excessively conservative’ and downgrading countries more than economic fundamentals would justify (Ferri et al., 1999). Attaching ‘higher weights to their qualitative judgment’ than to economic fundamentals, Ferri et al. (1999: 394) identify a procyclical role of the rating agencies on the market’s credit risk perception, which aggravated the East Asian crisis.⁴

Regulators should refrain from interpreting every rating problem as one of incentives and conflicts of interest. Transparency is not a magic bullet.

... in terms of rating performance

Advocates of ‘results-based’ approaches to regulation have criticized the latest reforms for their focus on ‘process-based intervention.’ More output orientation ‘would create innovation-boosting consequences of rating failures, while keeping governments out of the ratings kitchen’ (Persaud, 2009: 16). Focusing on performance indicators, sometimes also referred to as rating history or the ‘track-record,’ is an output-oriented approach to credit rating agency regulation that has increased in popularity since the

global financial crisis. For example, the EU adopted such an approach with ESMA's establishment of a 'Central Repository (CEREP) for publishing rating activity statistics and rating performance statistics of credit rating agencies' (ESMA, 2011). Financial industry professionals such as Persaud (2009: 15) likewise welcome ratings-performance approaches, such as a 'Gini-coefficient, which measures the ordering of defaults relative to the order of ratings.'

A valid measurement of rating performance presupposes credit rating agencies' predictions are not able to interact with the social reality ratings are trying to predict. Metaphorically speaking, the hit ratio of a meteorologist's predictions is quite a valid proxy for his or her capability, as a meteorologist cannot influence the weather he or she is trying to predict. The idea that a transparent evaluation of the credit rating agencies' track record is conducive to rating quality reveals a technical understanding of rating as a metric. It neglects the understanding that ratings, as social facts, are performative and can shape the social reality they are supposed to describe (Hiss and Rona-Tas, 2010: 115-155). Instead of 'measuring' credit risks like a 'camera', ratings also shape them like an 'engine' because they influence financial market actors' subsequent decisions (MacKenzie, 2006). For instance, if a sovereign rating downgrade leads to increased interest rates for a sovereign, its refinancing ability on bond markets deteriorates, increasing the probability of a sovereign default even more, amounting to a self-fulfilling prophecy (Gärtner and Griesbach, 2012). Their pro-cyclical character turns ratings into factors of systemic instability (Sy, 2009; Paudyn, 2013). This has a straightforward implication for regulation: the impact of ratings on investors and issuers invalidates the notion of a

supposedly independent measurement of ‘rating performance.’ Applying novel regulation techniques which themselves have a blind spot towards performativity, shows how the regulatory response has fallen short of initial expectations. Regulators have not been able to cope successfully with market reflexivity, which confirms the ‘regulators’ conundrum’ according to Stellinga and Mügge (2017: 3).

Whether one prefers a higher amount of transparency of the rating process or more ‘output-orientation’, such measures have in common an understanding of credit rating agencies as neutral, informational intermediaries between borrowers and lenders who are supposed to decrease information asymmetries in financial markets. The underlying assumption is that objective knowledge about credit risk pre-exists any effort to find such knowledge. The regulators’ task is to make sure credit rating agencies can express this unbiased view by silencing the different noises generated by conflicts of interest or bad practices. The fact that rating is judgment with inherent ambiguity remains, even if absolute transparency were realized. Regulators and scholars alike should acknowledge this characteristic of rating.

Reducing market and regulatory reliance

Apart from prominent regulatory goals such as increasing competition and transparency, in the wake of the global financial crisis attempts were made to reduce market and regulatory reliance on CRA ratings to decrease the agencies’ authority. For example, the Dodd-Frank Act prescribes the removal of references to ratings in financial market regulations.⁵ Mandated

by the G20, the Financial Stability Board (FSB) started an initiative to reduce reliance on credit rating agencies' ratings (FSB, 2010). In the case of the EU, the Commission 'supports the view that sole and mechanistic reliance on the external credit ratings should be reduced' (European Commission, 2013: 11). However, reducing overreliance should not lead to 'legal uncertainty.' Hence, it adopts a 'two-step approach:' It aims to remove all references by 2020, while reporting to the European Parliament on alternatives to external credit ratings (European Commission, 2013: 11). Similarly, in the scholarly literature 'the withdrawal of rating-based regulations' and the abandonment of the credit rating agencies' quasi-regulatory function, are seen as necessary conditions for 'successful reform of the rating industry' (Darbellay, 2013: 9).

The rationale behind such initiatives is that reliance on ratings in regulatory requirements and investment standards triggers mechanistic market responses to rating actions. Especially in crises, rating over-reliance can translate into fire sales of securities under downward rating pressure. Credit rating agencies' comments, announcements, outlook changes, and actual rating changes, homogenize market participants' creditworthiness perceptions, favour herd behaviour—in the worst case, almost 'off the cliff edge.' Increasing pro-cyclicality, as mentioned above, means ratings become a factor of systemic risk (Sy, 2009; Paudyn, 2013). Consequently, the argument suggests, if reliance on credit rating agencies' ratings in regulations is reduced, rating actions will be less consequential, and herd behaviour less likely.

In practice, it has proved very difficult to abandon the hard wiring of ratings in regulations and to reduce market reliance. In the case of the US,

references were partly replaced in the legislation, however, the SEC is still working on the removal of statutory references to credit ratings and on the review of reliance on credit ratings, as mandated by Dodd-Frank.⁶

More than half a decade since the FSB's initiative, the prospects of success are questionable. Indeed, empirical evidence suggests reliance on credit rating agencies persists 'particularly in private contracts, investment mandates, internal limits, and collateral agreements' (FSB, 2014: 2). When the Basel Committee for Banking Supervision (BCBS) presented its Basel IV proposals to take ratings out of regulations, market representatives opposed them strongly (Verma, 2015).

If policymakers follow the market's preference by maintaining external ratings in regulatory frameworks, reducing the credit rating agencies' authority to a mere product of regulation does not explain the preference (Kennedy, 2008: 68). If the market continues to use external ratings even when ratings are entirely removed from regulations, this will, at least theoretically, invalidate the regulatory license hypothesis. At the same time, it cannot be denied that the outsourcing of credit risk regulation to ratings has certainly reinforced the credit rating agencies' authority and created a sort of path-dependency. As Persaud (2009: 15) aptly points out, '[i]deally, rating agencies should be taken out of bank regulation altogether, but we may not be able to put the genie back in the bottle given that ratings will still exist.' This difficulty reveals a remarkable paradox: On the one hand, the continued reliance on ratings seems to corroborate the regulatory license hypothesis - the credit rating agencies' authority appears even more a product of regulation. On the other hand, the very cause of the credit rating agencies' authority, which is distinct from the regulatory use of

ratings, prevents a reduced reliance on ratings and is keeping the regulatory license hypothesis alive.

Path-dependency aside, an aspect often neglected by advocates of the regulatory license hypothesis is that market practice of rating use preceded the reliance on ratings by national regulators, supervisors, and central banks. For example, the Bank for International Settlements legitimized regulatory reliance on ratings in the Basel II framework with ‘market practice’ given that ‘financial institutions and market players [...] already used external credit ratings extensively in their risk management processes’ (Basel Committee on Banking Supervision, 2009: 55). Likewise, although the Reform Act increased the number of NRSROs registered with the SEC with ‘licensing power’ from three to ten, the market oligopoly has continued to exist.⁷

Another explanation for the FSB’s lack of success concerns the practical difficulty of replacing ratings. This is not to say there are no viable alternatives.⁸ Incentivizing the use of alternatives to CRA ratings, including the promotion of investors’ due diligence, however, disregards the rationale behind the use of ratings in disintermediated financial markets. The disappearance of the traditional role of banks in financial intermediation and related developments such as securitisation and the trade-ability of credit risk necessitate judgmental intermediation between those having and those seeking funds. This is not apologetic about the status quo – quite the contrary. Effective credit rating agency regulation aimed at changing the status quo cannot circumvent these constitutive features of rating in disintermediated financial markets.⁹

If the root of the credit rating agencies’ authority lies somewhere else

than in its regulatory license—whether in reputational ‘first mover’ advantages or other structural features of disintermediated finance—then a successful reduction of the regulatory reliance on ratings, even if practically feasible, will not be a sufficient measure to end the credit rating agencies’ authority.

Non-events of reform

If an erroneous understanding of rating contributed to ineffective regulation, it also prevented other regulation more likely to keep a check on the agencies’ authority from emerging. In the following, we discuss three examples of such non-events: the persistence of rating analytics, the dominant business model, and the missed opportunity to establish a public credit rating agency.

Persistence of rating analytics

Conceiving the assessment of creditworthiness as a calculation of the probability of default which exists ‘out there’ – exogenously, based on a normal distribution – credit rating agencies can be construed as neutral information intermediaries and their task becomes ‘discovering’ this rating. The appearance of rating as a purely technical exercise nurtures a misunderstanding of ratings as metrics that goes beyond interpretation, undermining the regulators’ confidence in interfering with rating analytics and methodologies.

Admittedly, the rating format has played a part in this misunderstanding insofar as it facilitates the contradiction between the

credit rating agencies' assertion that ratings are opinions and their simultaneous attempt 'to objectify and offer their views as facts' (Sinclair, 2005: 46). Instead of using cumbersome text, which would fit better with the legal definition of rating as a qualitative opinion, the easy-to-understand letter grade symbol ('AAA,' 'B' or 'C') suggests ratings are unambiguous data. Thanks to their 'distinctively portable format and scientific appearance', ratings invoke the authority of quantified and calculated knowledge (Carruthers, 2013: 544). This purely perceptual association with scientific method, paradoxically, exempts the agencies from the need to *prove* their objectivity. They can even afford to deny aspirations to objectivity and relativize their product as opinion without losing credibility (which is, by the way, quite convenient in fending off liability claims), while claiming authorship of the 'common language of risk.'

It is tempting to blame the CRAs for deception, but this is too simplistic. The widespread misunderstanding of ratings as metrics is not the result of dubious corporate practices, but deeply rooted in market adoption of heuristics, rules of thumb, and other devices to guide decisions in the face of 'pervasive uncertainty' (Abdelal, 2009: 73). The letter grade symbol creates an optical illusion of 'ostensible precision' as it condenses the 'highly complex contingencies of credit risk' into a 'single measure' (Kerwer, 2002: 43). Buying into the positivist assumption that the future is knowable, an understanding of ratings as metrics conveys the impression of acting premised on measured probabilities, and thus exercising control over an uncertain future (Porter, 2010: 56). The perceived value CRAs offer as transformers of 'uncertainty into calculable risk' thus hinges on the

epistemological fallacy that calculation can domesticate uncertainty (Kerwer, 2002: 43).

Questions of to what extent CRAs really employ calculation techniques to form their judgments, or to what extent uncertainty is *de facto* absorbed, are indeed irrelevant in this context (Abdelal and Bruner, 2005: 211).

Rather, conceiving of ratings as metrics suggests ratings can turn uncertainty into something manageable and tangible, and, most importantly, to give a name to credit risk. Therefore, in order to uphold the ‘stability that makes political and economic transactions possible,’ it is in the market participants’ and regulators’ interest that the ‘veil of highly technical analysis’ around rating is preserved (Katzenstein and Nelson, 2013: 1117), and, thus, that the misunderstanding of rating as a metric is perpetuated. The tacit agreement to overlook the tension between signifier (rating symbol) and significant (opinion) helps investors navigate through the complexity of today’s financial markets. Providing orientation by creating predictability trumps the dangers of wishful thinking. The ‘value [credit rating agencies] are thought to offer seems to shield them from authority decay’ (Sinclair, 2005: 173). While investors regard the credit rating agencies’ analytical basis as reliable (Strulik, 2002), ratings reduce felt uncertainty. If regulators reaffirm the validity of rating analytics by not interfering with them, the credit rating agencies’ epistemic authority remains intact.

However, one cannot deny that in the immediate wake of the crisis, policymakers expressed the intent to interfere with the ‘production’ of ratings. In the case of the EU, Quaglia (2013: 61) maintains that CRAs successfully lobbied against ‘the most onerous parts of the proposed

legislation, such as the requirements that regulators should gather information about the model used by credit rating agencies.' Stellinga and Mügge (2017: 13) question such an account since 'this overlooks that EU regulators and supervisors themselves had from the start been deeply sceptical of vetting rating methodologies, let alone determining methodologies themselves.'

Similarly, rating analytics have remained unaffected by the Dodd-Frank Act in the US. The 'Limitation Clause' of the Credit Rating Agencies Reform Act of 2006, which prevents a substantive intervention by regulators into rating methodologies, is still alive. It can be found in the SEC's Final Rules on credit rating agency reform mandated by Dodd-Frank:¹⁰

neither the Commission nor any State (or political subdivision thereof) may regulate the substance of credit ratings or the procedures and methodologies by which any NRSRO determines credit ratings.¹¹

(Un)surprisingly, the history of this clause can be traced back to the successful lobbying by CRAs in the lead up to the Reform Act of 2006 (Langohr and Langohr, 2008: 453-454).

We cannot test the counterfactual scenario of how regulatory interference into rating analytics would have looked if CRAs' lobbying efforts in the EU or the US had been ineffective. For this scenario to come into existence it would have necessitated an acknowledgement of the structural dimension of the CRAs' authority. By implication, such an understanding would have instead been able to anticipate and counteract

the agencies' lobbying efforts.¹² Taking into account the regulators' doubt in their ability to improve rating quality through substantive involvement in rating analytics, it is, however, highly questionable whether regulators would have dared deconstruct the technical aura of ratings and resolve the dominant misunderstanding of ratings as metrics (Stellinga and Mügge, 2017: 13).

It may appear then only consistent that regulators have not interfered with the analytics themselves, but, as is the case with the EU, with the timing of sovereign ratings.¹³ True to the motto of 'not doing what you should, but what you can,' the new EU regulations attempt to limit the frequency of unsolicited sovereign ratings 'to three per year' (European Commission, 2013: 5). 'To avoid market disruption,' rating agencies are required to 'set up a calendar indicating when they will rate Member States.' Furthermore, the timing of the publication is regulated, allowing agencies to publish ratings only on 'Fridays after close of business and at least one hour before the opening of trading venues in the EU' (European Commission, 2013: 5). At the same time, reviews of sovereign ratings must occur 'at least every six months.' These regulatory steps reveal that regulators put a serious effort into making rating actions more predictable.

As much as it may seem a welcoming move to counteract the pro-cyclicality of ratings by imposing caps on the frequency of ratings, it is a regulatory answer that stems from a specific context. During the European sovereign debt crisis, the CRAs' sovereign rating hyperactivity exacerbated the market's perception of sovereign credit risk (Gaillard, 2014; Gaillard, 2012). The volatility of sovereign ratings was construed as a lack of quality, which necessitated regulatory intervention. The irony is that previous

criticisms of the agencies, as, for example, in the case of the Enron debacle, went in the exact opposite direction; ratings at the time were not deemed timely enough. Demands for ‘speeding up’ the rating process and the processing of information were the order of the day (Sinclair, 2005: 169). This shows there may be no ‘one-size-fits all’ solution when it comes to the ideal degree of rating volatility, which varies according to time and context. Furthermore, apart from sovereign ratings, other rating types may greatly differ in terms of their ‘default’ volatility, such as corporate and municipal ratings versus mortgage-backed security (MBS) ratings, making it even more difficult to decide when regulatory intervention is required.

Whether it is a decrease or increase in the agencies’ activism regulators aim to address with their policies, the underlying understanding of rating as a technical and predictable exercise prevails in the regulatory goal to limit rating volatility, whereas, understanding rating as reasoned judgement falls by the wayside.

Persistence of the traditional business model

In the late 1960s and early 1970s, the ‘issuer-pays’ system replaced the ‘investor-pays’ business model as the predominant remuneration model in the rating industry (Marandola and Sinclair, 2017: 479). Its inherent conflicts of interest were widely blamed for the overly optimistic ratings of structured financial products that became ‘toxic assets’ at the peak of the global financial crisis (Sinclair, 2010; White, 2010; Partnoy, 2010). Despite this consensus ‘[t]here has been little change in the use of remuneration models since the implementation of the [new] credit rating agencies regulation’ (European Commission, 2016: 7; Mattarocci, 2014: 74). ‘Issuer-

pays' has remained the dominant business model.

According to Gaillard and Harrington (2016: 38), issuer-pays and its conflicts of interest would disappear if credit rating agencies were subjected 'to expert liability as expressed in the plain language of the Dodd-Frank Act.' CRAs would be 'considered part of a registration statement prepared or certified by an expert,' putting them on the same level as other 'gatekeepers,' such as auditors.¹⁴

In the meantime, however, putting an end to the liability exemption regime is getting more and more out of reach. The Financial CHOICE Act of 2017, also informally known as the 'dismantling of Dodd-Frank,' trimmed the SEC's 'to do' list in this respect.¹⁵ We note that *de facto*, regulatory authorities continued to exempt credit rating agencies from expert liability even before the Trump presidency. The effort to repeal SEC Rule 436(g) proved a futile undertaking in Dodd-Frank. Shortly after the Dodd-Frank provision took effect in the summer 2010, CRAs were unwilling to give their consent to issuers to use their ratings in prospectuses or debt registration statements (Marandola and Sinclair, 2017: 490). Taking the heat, the SEC issued a No-Action letter on 23 November 2010 stating that 'no enforcement action will be recommended if an asset-backed issuer omits a rating disclosure newly required (...) and cites as the rationale the unwillingness of NRSROs to provide consent to being named as experts' (Gaillard and Harrington, 2016: 47).¹⁶ The credit rating agencies' successful threat to boycott proved effective in fending off liability and preserving their status as opinion issuing entities, protected by First Amendment rights under the U.S. Constitution. As in the case of rating analytics, an understanding of the CRAs that encompassed the structural dimension of

their authority would have likely been able to pre-empt the agencies' threat of boycott.

Going beyond aspects of liability and issuer-pays, there is, however, a more fundamental explanation for the persistence of the rating business model. Alternatives to issuer-pays entail other conflicts of interest, for example, the 'investor-pays' business model is susceptible to free-riding due to the public good character of rating (Coffee, 2011). Indeed, the switch to issuer-pays in the 1970s occurred because of the 'advent of copying machines' (Rivlin and Soroushian, 2017). As Persaud (2009: 15) puts it,

[i]n today's information-free, equal-disclosure world, the value of a rating is that everyone knows it. But if everybody already knows it they will not pay for it.

The resulting trade-off between profitability, transparency and rating quality produces conflicts of interest regardless of the business model. Regulators, however, have been unwilling to address these basic tensions arising from the commodification of rating. Sticking to the commodification of rating in its present form, regulators indirectly approve the business model that prevailed for the last five decades. Abandoning the commodification of rating would mean a drastic change with unknown adjustment costs that may deter regulators, notwithstanding the 'rating failures' of the past.¹⁷

The understanding of credit rating agencies as neutral informational intermediaries encourages an unproblematic view of the commodification of rating. This understanding emerges from the historical process of financial disintermediation that enhanced the demand for information

about credit risk (Sinclair, 1999: 154). Becoming ‘active market participants’ themselves, banks gradually delegated their traditional task of due diligence to a third party (Abdelal and Bruner, 2005: 196). The credit rating agencies provided an efficient solution to intermediate between lenders with funds and borrowers seeking them ‘because of the economies of specialization inherent in rating and the clearly disinterested nature of analysis’ (Sinclair, 1999: 155). As those seeking funds have an incentive to downplay financial risks, and those with funds have an incentive to overestimate the financial risks of investment possibilities, an ‘independent’ third-party opinion can minimize the distorted perceptions. From such a perspective, a credit rating agency assumes the key role as ‘neutral information provider’ (Kerwer, 2002: 43).

An exclusive focus on the role of credit rating agencies in disintermediated financial markets contributes, first, to an *isolated* understanding of credit rating agencies as neutral informational intermediaries whose function is to decrease information asymmetries between borrowers and lenders, and, second, to a neglect of the unintended consequences accompanying the commodification of rating.

Calls for a public Credit Rating Agency go unheard

The series of rating debacles over the last two decades went hand in hand with growing calls for the establishment of a ‘public’ credit rating agency, which, for example, could be run by the UN (Guardian, 2012), or the IMF. In the years preceding the global financial crisis, plans to establish a European CRA enjoyed a ‘groundswell of support’ in the financial

community and amongst politicians on the Continent (Engelen, 2004: 64). Nevertheless, rivalling the dominance of the American agencies has proved to be impossible. In the wake of crisis, former European Commissioner for Internal Market and Services Michel Barnier, and policymakers from different parts of the ideological spectrum, again, pushed for the set-up of ‘an own,’ European CRA (Spiegel, 2011; Welt 2011).¹⁸ However, the initiative did not bear fruit. Similarly, emerging economies have tried to come up with an alternative to the Big Three, but the prospects for building up a rating agency of comparable authoritative standing remain uncertain as of this writing (Mennillo, forthcoming; Helleiner and Wang, 2018). Often, attempts have been tripped up by technicalities, such as, for instance, the business model, or ‘logistical’ reasons as in the case of the initiative by the European Commission and the Munich-based consulting firm ‘Roland Berger’ (Abdelal and Blyth, 2015: 57-58).¹⁹

Further reasons the establishment of a public CRA has remained elusive, include potential ‘concerns regarding the [European] CRA’s credibility especially if a publicly funded CRA would rate the Member States which finance the CRA,’ and the simultaneous alleged concern about putting ‘private CRAs at a comparative disadvantage’ (European Commission, 2013: 9). However, a non-credible CRA will hardly be able to distort competition since recognition by market participants and reputation are the sine qua non of the chances of survival of any rating agency. Moreover, competitive dynamics are largely absent in the rating market considering the persistent oligopolistic market structure. Therefore, there is not a lot of room to distort in the first place.

The tacit unwillingness to acknowledge the actual nature of rating as

a ‘public good’, given its *de facto* non-excludability and non-rivalry in consumption, account for the non-event of establishing a public rating agency (Bruner and Abdelal, 2005: 195). The implicit assumption private companies are supposed to handle the ‘production’ of ratings thwarts the attempt to set up a public rating institution *a priori*.²⁰ Such entrenched beliefs do not appear out of nowhere. For example, mainstream economists tend to discard the idea of a public or European credit rating agency hinting at the lack of government independence such an institution would automatically suffer. Political dependence would inevitably translate into lower rating quality (Bartels and Weder di Mauro, 2013). Put differently, from a traditional economics’ perspective the damage to expect from mistaking an actual public good for a private good seems to be lower than having a public institution providing that same good; government aversion trumps the risks of centralized market authority and the potential for abuse. Consequently, a commodification of rating as if it was a private good is seen as largely unproblematic.

In fact, the insinuated lack of independence of public CRAs cannot be easily dismissed, especially in terms of sovereign ratings. At the same time, private agencies have not been devoid of failure in this respect, as elaborated above. To mitigate the effect of ‘home bias,’ Fuchs and Gehring (2017: 1419) suggest regulation should enhance a plurality of sovereign ratings to be considered by investors, ‘ideally from different countries and cultural backgrounds.’ A new, public CRA might even be prohibited from issuing sovereign ratings at least for the first years of operation in order to accumulate credibility. The Big Three also started to engage in sovereign ratings as a complimentary service to investors only in the 1980s.²¹

Beyond ideological considerations there are, again, practical considerations that explain why a public credit rating agency may not be a viable solution. One consideration, for example, concerns operational cost-efficiency, given the CRAs' experience, expertise, and reputation – whether deserved or not – accumulated over the last century. Despite all objections of a practical nature, however, ideological predilections have played a pivotal role in acting as a break on the establishment of a public CRA. As is often the case with the power of ideas and commonly shared cognitive constructions, these are not necessarily consequential because of the validity of their content (Abdelal et al., 2010: 11; Roy et al., 2007; Denzau and North, 1994). If market participants take it for granted that a public institution lacks independence and credibility, this will be detrimental to *perceived* rating quality – dealing a deathblow to any emergent public CRA.

Conclusion

Credit rating agencies used the global financial crisis to their advantage instead of experiencing an irreversible damage to their reputation, as one would expect. They succeeded in retaining their epistemic authority even after an existential crisis. This article illustrates how the approach to regulating the CRAs has been complicit in the puzzling survival of the agencies.

Analysing credit rating agency regulations in the US, the transnational level, and the EU after the global financial crisis, we find that the scope and intensity of regulation has increased, to the cost of the credit rating agencies, those who use their services, and the taxpayer who finances the regulatory authorities in charge. What has not changed compared to the

pre-crisis years is the dominant understanding of rating underlying the regulatory goals. We show how treating ratings as unambiguous and fungible metrics, private goods, and independent and neutral third-party opinions, has led to failed efforts to regulate the credit rating agencies industry. Even though policymakers have tried to fix the ‘wrongs,’ they have only scratched the surface and got carried away mainly by treating the symptoms. The regulators’ unwillingness to interfere with rating analytics, solve the conflicts of interest inherent in the issuer-pays business model, and establish a public credit rating agency despite lip service to that idea, indicates a reluctance to address the roots of the problem.

Ratings are not material facts ‘out there’, waiting to be discovered. Rating agencies create ratings; they are social constructions that provide one possible, centralized interpretation of creditworthiness. Since the market accepts these ratings because it sees certain credit rating agencies as authoritative (and others as not), ratings become social facts – a commonly shared interpretation of creditworthiness. Rather than regulate rating practices, as if this mattered as a technical process, we need to focus regulation on the systemically risky character of the agencies. This implies a treatment of rating as judgement, authoritative opinion, public good and constitutive feature of disintermediated financial markets, which presupposes policymakers, practitioners, and the scholarly community are willing to reject the hitherto dominant understanding of rating. Otherwise, rating, regulatory failure, and the credit rating agencies’ authority will remain a never-ending story.

Acknowledgements

The authors wish to thank participants who commented on the paper at the 2015 annual meeting of the American Political Science Association, the Young Scholars Workshop on Global Finance at the University of Bremen in 2016, and the 2018 annual convention of the International Studies Association. Many thanks also to the two anonymous referees for their insightful comments on earlier drafts.

Notes

¹ See the discussion of Mervyn Kings' 'The End of Alchemy' by Michael Lewis, 'The book that will save banking from itself,' Bloomberg Businessweek, 9 May – 15 May 2016: 12–15.

² For example, see recital 42 and Section E, Annex 1, Transparency Report, par. 3 in Regulation (EC) No 1060/2009 of the European Parliament and of the Council of 16 September 2009 on credit rating agencies.

³ Economists tend to label self-fulfilling outcomes of pessimism or optimism as 'multiple equilibria' (Blanchard, 2011).

⁴ Likewise, Ferri et al. (1999) detect procyclicality in pre-crisis ratings; the agencies would have assigned too favorable ratings compared to economic fundamentals. Consequently, CRAs failed to predict the emergence of the East Asian Crisis and 'may have helped to exacerbate the boom and bust cycle' (Ferri et al., 1999: 353).

⁵ See Sec 939–939A in United States Congress, 'Dodd-Frank Wall Street Reform and Consumer Protection Act', Public Law 111-203, 111th Congress, H.R. 4173, 21 July 2010.

⁶ See Section 939 and 939A of the Dodd-Frank Act. For the status of the adoption of provisions, see SEC website: <https://www.sec.gov/spotlight/dodd-frank-section.shtml#939>; <https://www.sec.gov/spotlight/dodd-frank-section.shtml#939A> (accessed 13 December 2018).

⁷ Source: SEC website, <https://www.sec.gov/ocr/ocr-current-nrsros.html> (accessed 4 September 2017).

⁸ Alternatives to CRAs' ratings are, for example, internal ratings of financial institutions, market implied ratings, accountancy-based measures, OECD country risk classification (for sovereign ratings), or Central Credit Registers (for corporates). For further details, see European Commission (2015) Study on the Feasibility of Alternatives to Credit Ratings, Executive Summary: 4-6.

⁹ Financial disintermediation is typically associated with the replacement of the banks' 'buy-and-hold' business model by 'originate-and-distribute.'

¹⁰ See Section 932 on the 'Enhanced Regulation, Accountability, and Transparency of Nationally Recognized Statistical Rating Organizations,' Title IX, Subsection C, Dodd-Frank Wall Street Reform and Consumer Protection Act, HR 4173, 111th Congress, 2nd Session (2010). The SEC's final rules make amendments and add new subsections to Rule 17g under the Exchange Act (as well as Rule 15-Ga).

¹¹ See section 15 E(c)(2) of the Exchange Act. The Reform Act (2006) added Section 15E ('Registration of Nationally Recognized Statistical Rating Organizations') to the Securities Exchange Act of 1934. The latter is usually abbreviated as the 'Exchange Act'. Apart from minor changes, the Dodd-Frank Act draws on the CRA Reform Act of 2006 to regulate the CRAs in the aftermath of the crisis (Hiss and Nagel, 2014: 134).

¹² The same logic applies to the successful CRAs' threat to boycott in the case of the liability provisions.

¹³ See L 146/9, par. 42, European Parliament and the Council (2013) Regulation (EU) No 462/2013, amending Regulation (EC) No 1060/2009 on credit rating agencies. 21 May 2013.

¹⁴ For the planned repeal of the SEC Rule 436(g), see Dodd-Frank Section 939G. The SEC Rule 436(g), i.e. the 1982 amendment to Section 11 of the Securities Act of 1933,

provides the legal foundation for the ‘exemption regime,’ see also Gaillard and Harrington (2016): 40.

¹⁵ The Financial CHOICE Act of 2017 (Section 853) aims to repeal the Dodd-Frank Act Nullification of the SEC Rule 436(g). The bill passed the House of Representatives on 8 June 2017, but has not yet passed the Senate. In the meantime, President Trump signed ‘The Economic Growth, Regulatory Relief, and Consumer Protection Act’ (the ‘Reform Law’) on 24 May 2018. It contains only fractions of the Financial Choice Act, and does not include provisions regarding CRAs.

¹⁶ Another attempt to undo the repeal of section 939G of Dodd-Frank and to restore Securities and Exchange Commission Rule 436(g) was the ‘Asset-Backed Market Stabilization Act.’ It was introduced on 20 July 2011, but was not enacted.

¹⁷ Known alternatives to rating commodification are third party assessments ‘by non-commercial entities such as the OECD Country Risk Classifications and central databases owned or managed by Central Banks,’ see European Commission (2015) Study on the Feasibility of Alternatives to Credit Ratings, Executive Summary: 5. Further examples are decentralized rating platforms such as ‘Wikirating’ (<http://www.wikirating.org/wiki/Wikirating:About>, accessed 14 May 2018).

¹⁸ Against the backdrop of the CRAs’ excessive downgrading of sovereign debt issued by Eurozone countries in the aftermath of the GFC, such calls were dismissed as retaliatory tactics by European policymakers, see, for example, Bartels and Weder di Mauro (2013).

¹⁹ The European Commission estimated the cost of setting-up a public CRA around 300–500 million Euro over a period of five years (European Commission, 2013: 9).

²⁰ The apparent lack of sufficient ideational support not only by regulators, but also by large parts of the financial industry, may have tipped the balance in favor of the status quo (Spiegel, 2011).

²¹ A more disruptive solution to the sovereign rating problematic, which hinders the set-up of a

European public CRA, would be that the ECB becomes the ‘epistemic authority’ in terms of creditworthiness. This means it would not rely on independent third-party opinions to guarantee the creditworthiness of its ‘sovereign’ (euro area as a whole), but would do so in its own capacity as central bank, ‘state fiat’ (as in the case of the Fed). To what extent this is practically and politically feasible, considering the political integration this would require in the EU, is a different story.

References

- Abdelal R and Blyth M (2015) Just Who Put You in Charge? We Did: Credit Rating Agencies and the Politics of Ratings. In: Cooley A and Snyder J (eds) *Ranking the World: Grading States as a Tool of Global Governance*. Cambridge: Cambridge University Press: 39–59.
- Abdelal R, Blyth M and Parsons C (2010) *Constructing the International Economy*. Ithaca: Cornell University Press.
- Abdelal R (2009) Constructivism as an Approach to International Political Economy. In: Blyth M (ed.) *Routledge Handbook of International Political Economy (IPE): IPE as a global conversation*. London: Routledge: 62–76.

-
- Amtenbrink F and De Haan J (2011) Credit Rating Agencies. Netherlands Central Bank, Research Department, *DNB Working Papers*, No. 278.
- Amtenbrink F and Heine K (2013) Regulating Credit Rating Agencies in the European Union: Lessons from Behavioural Science, *The Dovenschmidt Quarterly* 2(1): 2–15.
- Barducci MC and Fest T (2011) Evaluation of the Regulations of Credit Rating Agencies in the United States and the European Community. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1803132 (accessed 29 August 2016).
- Barta Z and Johnston A (2018) Rating Politics? Partisan Discrimination in Credit Ratings in Developed Economies. *Comparative Political Studies* 51(5): 587–620.
- Bartels B and Weder di Mauro B (2013) A rating agency for Europe—A good idea? VOX, CEPR's policy portal. Available at: <https://voxeu.org/article/rating-agency-europe-good-idea> (accessed 15 May 2018).
- Basel Committee on Banking Supervision (2009), ‘Strengthening the Resilience of the Banking Sector: Consultative Document.’ December 2009, Bank for International Settlements.
- Batchelor V and Nicholas K (2013) Moody’s Alters Sovereign Rating Method to Better Assess Risk. Available at: <http://www.bloomberg.com/news/articles/2013-09-13/moodys-revises-sovereign-rating-method-to-better-assess-risk> (accessed 21 July 2015).
- Blanchard O (2011) 2011 In Review: Four Hard Truths. Available at: <https://blogs.imf.org/2011/12/21/2011-in-review-four-hard-truths/> (accessed 26 November 2018).
- Blodget H (2011) Moody’s Analyst Breaks Silence: Says Ratings Agency Rotten To Core With Conflicts. Available at: <https://www.businessinsider.com/moodys-analyst-conflicts-corruption-and-greed-2011-8/?IR=T> (accessed 1 February 2015).
- Brummer C and Loko R (2014) The New Politics of Transatlantic Credit Rating Agency Regulation. In: Porter T (ed) *Transnational Financial Regulation After the Crisis*. London and New York: Routledge, 154–176.
- Bruner C and Abdelal R (2005) To Judge Leviathan: Sovereign Credit Ratings, National Law, and the World Economy. *Journal of Public Policy* 25(2): 191–217.
- Brunnermeier M, Crocket A, Goodhart C et al. (2009) *The Fundamental Principles of Financial Regulation*, Geneva Reports on the World Economy, International Center for Monetary and Banking Studies.

-
- Carruthers BG (2013) From uncertainty toward risk: the case of credit ratings. *Socio-Economic Review* 11(3): 525–551.
- Coffee Jr (2011) Ratings reform: The good, the bad, and the ugly. *Harvard Business Law Review* 1: 231–278.
- Darbey A (2013) *Regulating credit rating agencies*. Cheltenham: Edward Elgar Publishing.
- Denzau AT and North DC (1994) Shared Mental Models: Ideologies and Institutions. *Kyklos* 47(1): 3–31.
- Engelen KC (2004) Das empire strikes back. *The International Economy* 18(1): 64–71.
- European Commission (2016) Study on the State of the Credit Rating Market: Final Report—Executive Summary. Available at https://ec.europa.eu/info/system/files/state-of-credit-rating-market-study-01012016_en.pdf (accessed 21 March 2018).
- European Commission (2015) Study on the Feasibility of Alternatives to Credit Ratings: Executive Summary. Available at: https://ec.europa.eu/info/system/files/alternatives-to-credit-rating-study-01122015_en.pdf (accessed 21 March 2018).
- European Commission (2013) New rules on credit rating agencies (CRAs) enter into force – frequently asked questions. Available at: http://europa.eu/rapid/press-release_MEMO-13-571_en.htm (accessed 21 March 2018).
- European Parliament and the Council (2013) Regulation (EU) No 462/2013, amending Regulation (EC) No 1060/2009 on credit rating agencies. 21 May 2013.
- European Securities and Markets Authority (2011) About the CEREP, ESMA/2011/408.
- Ferri G, Liu L and Stiglitz JE (1999) The Procyclical Role of Rating Agencies: Evidence from the East Asian Crisis. *Economic Notes* 28(3): 335–355.
- Financial Stability Board (2014) Thematic Review on FSB Principles for Reducing Reliance on CRA Ratings, Peer Review Report.
- Financial Stability Board (2010) Principles for Reducing Reliance on CRA Ratings.
- Fuchs A and Gehring K (2017) The Home Bias in Sovereign Ratings. *Journal of the European Economic Association* 15(6): 1386–1423.
- Gaillard NJ and Harrington WJ (2016) Efficient, Commonsense Actions to

-
- Foster Accurate Credit Ratings. *Capital Markets Law Journal* 11(1): 38–59.
- Gaillard N (2014) How and why credit rating agencies missed the eurozone debt crisis. *Capital Markets Law Journal* 9(2), 121–136.
- Gaillard N (2012) *A Century of Sovereign Ratings*. Springer Verlag.
- Gärtner M and Griesbach B (2012) Rating agencies, self-fulfilling prophecy and multiple equilibria? An empirical model of the European sovereign debt crisis 2009–2011, Economics Working Paper Series, No. 1215. University of St.Gallen, School of Economics and Political Science.
- Gärtner M, Griesbach B and Jung F (2011) PIGS or Lambs? The European Sovereign Debt Crisis and the Role of Rating Agencies. *International Advances in Economic Research* 17(3): 288–299.
- Guardian (2012) Time to take control of the credit rating agencies, by Chakrabortty A, 16 January 2012. Available at: <https://www.theguardian.com/commentisfree/2012/jan/16/time-control-credit-ratings-agencies> (accessed 15 May 2018).
- Helleiner E and Wang H (2018) Limits to the BRICS' challenge: credit rating reform and institutional innovation in global finance. *Review of International Political Economy* 25(5): 573–595.
- Hiss S and Nagel S (2014) Credit Rating Agencies. In: Mügge D (ed) *Europe and the Governance of Global Finance*. Oxford: Oxford University Press, 127–140.
- Hiss S and Rona-Tas A (2010) The role of ratings in the subprime mortgage crisis: The art of corporate and the science of consumer credit rating. In: *Markets on trial: the economic sociology of the US financial crisis*. Bingley: Emerald Group Publishing, 115–155.
- International Organisation of Securities Commissions (2015) IOSCO Issues Final Code of Conduct Fundamentals for Credit Rating Agencies. Available at: <https://www.iosco.org/news/pdf/IOSCONEWS375.pdf> (accessed 30 July 2015).
- International Organisation of Securities Commissions (2004) Code of Conduct Fundamentals for Credit Rating Agencies. Available at: <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD180.pdf> (accessed 21 March 2018).
- Katzenstein PJ and Nelson SC (2013) Reading the right signals and reading the signals right: IPE and the financial crisis of 2008. *Review of International Political Economy* 20 (5): 1101–31.
- Kennedy S (2008) China's emerging credit rating industry: The official foundations of private authority. *The China Quarterly*. 193(193): 65–83.

-
- Kerwer D (2002) Rating agencies setting a standard for global financial markets. *Economic Sociology: European Electronic Newsletter* 3(3): 1–6.
- Kessler O (2016) The failure of failure: on constructivism, the limits of critique, and the socio-political economy of economics. *Millennium: Journal of International Studies* 44(3): 348–369.
- Kiff J, Nowak S and Schumacher LB (2012) Are Rating Agencies Powerful? An Investigation Into the Impact and Accuracy of Sovereign Ratings. *IMF Working Papers* 12/23.
- Kruck A (2016) Resilient blunderers: credit rating fiascos and rating agencies' institutionalized status as private authorities. *Journal of European Public Policy* 23(5): 753–770.
- Langohr H. and Langohr P (2008) *The rating agencies and their credit ratings: what they are, how they work, and why they are relevant.* John Wiley & Sons.
- Lewis M (2016) The Book That Will Save Banking From Itself. Bloomberg Businessweek, 9 May – 15 May 2016: 12–15, Available at: <https://www.bloomberg.com/view/articles/2016-05-05/the-book-that-will-save-banking-from-itself> (accessed 21 March 2018).
- MacKenzie D (2006) *An Engine, Not a Camera.* Cambridge: The MIT Press.
- Marandola G and Sinclair TJ (2017) Credit rating agencies are poorly understood and the rules developed for them will not work. In Pollard J and Martin R (eds) *Handbook on the Geographies of Money and Finance.* London, Edward Elgar: 478–498.
- Mattarocci G (2014) *The Independence of Credit Rating Agencies: How Business Models and Regulators Interact.* Oxford: Elsevier Academic Press.
- McVea H (2010) Regulating credit rating agencies in the European Union: where might it lead?. *Amicus Curiae* 83: 2–6.
- Mennillo G (forthcoming) He who pays the piper calls the tune: And the ‘relocation of the world’s credit rating center’ goes to? In: Kim SY (ed) *BRICS and the Global Economy.* Singapore: World Scientific.
- Oroussoff A (2010) *Wall Street at war: The secret struggle for the global economy.* Cambridge, U.K; Malden, MA: Polity Press.
- Partnoy F (2006) How and why credit rating agencies are not like other gatekeepers. In: Fuchita Y and Litan RE (eds) *Financial Gatekeepers: Can They Protect Investors?* Brookings Institution Press: 59–99.

Partnoy F (2010) Overdependence on Credit Ratings Was a Primary Cause of the Crisis. Eleventh Annual International Banking Conference of The Federal Reserve Bank of Chicago and the European Central Bank.

Paudyn B (2013) Credit rating agencies and the sovereign debt crisis: performing the politics of creditworthiness through risk and uncertainty, *Review of International Political Economy* 20(4): 788–818.

Persaud A (2009) What to do about Credit Rating Agencies? Macro-Prudential and Micro-Prudential Regulation. In *Praise of Unlevel Playing Fields*, Warwick Commission on International Financial Reform. Coventry: The University of Warwick.

Porter T (2010) Risk models and transnational governance in the global financial crisis: the cases of Basel II and credit rating agencies. In: Helleiner E, Pagliari S and Zimmermann H (eds) *Global Finance in Crisis: The Politics of International Regulatory Change*. London, Routledge: 56–73.

Quaglia L (2013) Financial services governance in the European Union after the global financial crisis: incremental changes or path-breaking reform? In: Moschella M and Tsingou E (eds) *Great expectations, slow transformations: incremental change in post-crisis regulation*. Colchester, ECPR Press: 57–75.

Roy RK, Denzau A and Willett TD (2006) *Neoliberalism: national and regional experiments with global ideas*. London, New York: Routledge.

Roubini R (2015) Rating agencies still matter – and that is inexcusable. *Financial Times*, 10 August 2015.

Securities and Exchange Commission (SEC)- Current NRSROs. Available at: <https://www.sec.gov/ocr/ocr-current-nrsros.html> (accessed 4 September 2017).

Securities and Exchange Commission (SEC), Final Rule: Nationally Recognized Statistical Rating Organizations Release 34-72936 (Aug. 27, 2014). <https://www.sec.gov/ocr/ocr-nrsro-rules.html> (accessed 13 December 2018).

Sinclair TJ (2013) Global financial crises. In: Beeson M and Bisley N (eds) *Issues in 21st century world politics – Second edition*. Palgrave Macmillan, UK: 80–91.

Sinclair TJ (2010) Round up the usual suspects: Blame and the subprime crisis. *New Political Economy* 15(1): 91–107.

Sinclair TJ (2005) *The New Masters of Capital: American Bond Rating Agencies and the Politics of Creditworthiness*. Ithaca: Cornell University Press.

-
- Sinclair TJ (1999) Bond-rating agencies and coordination in the global political economy. In: Cutler AC, Haufler V and Porter T (eds) *Private Authority and International Affairs*. Albany, State University of New York Press: 153–167.
- Soroushian JB and Rivlin AM (2017) Credit rating agency reform is incomplete. Available at: <https://www.brookings.edu/research/credit-rating-agency-reform-is-incomplete/> (accessed 21 March 2018).
- Spiegel (2011) Breaking the Power of the 'Big Three': German Firm Wants to Set Up New Rating Agency by Müller P, Sauga M and Schult C, 11 July 2011. Available at: <http://www.spiegel.de/international/europe/breaking-the-power-of-the-big-three-german-firm-wants-to-set-up-new-rating-agency-a-773549.html> (accessed 15 May 2018).
- Stellinga B and Mügge D (2017) The regulator's conundrum. How market reflexivity limits fundamental financial reform. *Review of International Political Economy* 24(3): 393–423.
- Strulik T (2002) Rating agencies and systemic risk. In: Heritier A (ed) *Common Goods: Reinventing European and International Governance*. Lanham: Rowman and Littlefield: 317–335.
- Sy A (2009) The systemic regulation of credit rating agencies and rated markets, IMF Working Papers, 09/129, Washington, DC: IMF.
- United States Congress (2006), 'Credit Rating Agency Reform Act of 2006'. Public Law 109-291, 109th Congress, S. 3850, 29 September 2006.
- United States Congress (2010), 'Dodd-Frank Wall Street Reform and Consumer Protection Act'. Public Law 111-203, 111th Congress, H.R. 4173, 21 July 2010.
- Verma S (2015) *Bank regulation: 'Basel IV' sparks banker fury*. March, London: Euromoney.
- Vernazza D, Nielsen E and Vasileios G (2014) The Damaging Bias of Sovereign Ratings, UniCredit Global Themes Series, Economics Research, No. 21, 26 March 2014.
- Weaver C (2008) *Hypocrisy trap: The World Bank and the poverty of reform*. Princeton: Princeton University Press.
- Welt (2011) Brüderle fordert europäische Ratingagentur [Brüderle calls for European Credit Rating Agency], 18 December 2011. Available at: <http://www.welt.de/politik/deutschland/article13756954/Bruederlefordert-europaeische-Ratingagentur.html> (accessed 15 May 2018).
- White LJ (2010) Markets: The credit rating agencies, *The Journal of Economic Perspectives* 24(2): 211–226.

