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Why performativity limits credit rating reform

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Abstract

The 2008 crisis made clear that credit rating agencies (CRAs) can contribute to systemic financial risk. Surprisingly, post-crisis reforms have hardly addressed the underlying problems, including rating agencies' methodologies, their ratings' homogeneity, and widespread market reliance on these signals. Current scholarship on CRA regulation blames policymakers' *unwillingness* to fix systemic problems. This article draws on insights from the social studies of finance literature to provide a different explanation: the key obstacle is policymakers' *inability* to fix these problems. The regulatory problem stems from performativity: risk assessments (including ratings) shape the risks they purport to merely describe. Adding to this literature, the article spells out how performativity limits credit rating reforms by making sweeping changes potentially harmful. Standardizing methodologies or setting up a public CRA could reinforce ratings' homogeneity. Replacing ratings in regulation with market-based indicators might create worse systemic problems. The article then empirically details how EU policymakers, confronted with these dilemmas, ultimately steered clear of bold reforms.

Keywords

Credit rating agencies, performativity, regulation, financial crisis, systemic risk, procyclicality

Introduction

The 'Big Three' credit rating agencies (CRAs) – Standard & Poor's, Moody's and Fitch – play a crucial role in global financial markets.[1] It took the global financial crisis of 2007-9, however, to convince policymakers that ratings can contribute to systemic risk. Observers argued that ratings' systemic problems had their roots in CRAs' rating methodologies, market participants' overreliance on these ratings (partly induced by their inclusion in regulations), and the homogeneity of the Big Three's ratings (Morris, 2008; Sy, 2009).

While these issues had surely been recognized before, policymakers had hitherto focused primarily on CRAs' governance, in addition to their transparency to outside investors.

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Policymakers hoped this would ensure that investors were not duped by CRAs' integrity problems, rooted in their issuer-pays business model (Mügge, 2011). The magnitude of the crisis led many to expect a fundamentally different approach: bold regulatory actions to tackle systemic problems. Critics argued that the pre-crisis focus on governance requirements would not suffice: regulators would have to get involved in the substance of both CRAs' and firms' risk assessment practices. They pleaded for a full removal of ratings from regulations, public control over CRAs' methodologies, and a public alternative to the Big Three (Bofinger, 2009; Partnoy, 2009; Sy, 2009; Kruck, 2011). Surprisingly, only limited reforms were actually implemented. Policymakers have barely made progress in reducing (regulatory) reliance on ratings. They have also avoided prescriptive rules on the content of CRAs' methodologies. And they have shied away from setting up a public CRA. Post-crisis rules still focus mainly on the governance of CRAs (and the market participants that use ratings), and predominantly address CRAs' integrity problems. In short, there is much more continuity with the pre-crisis approach than expected.

Why were the systemic problems not tackled through ambitious, substantive measures? Scholarship on CRA regulation provides many potential explanations. Institutionalist accounts point to path dependence, arguing that the pre-crisis public endorsement of CRAs made a radical switch too costly (Chiu, 2013; Kruck, 2016). Other scholars stress how CRAs' lobbying efforts account for meagre reforms (Underhill, 2015). Yet others hold that policy continuity stems from the resilience of policymakers' pro-market beliefs (Pagliari, 2012). Despite their differences, these explanations all assume that the key obstacle to fixing ratings' systemic problems is regulators' unwillingness to do so. The normative implication is that regulators have failed to implement reforms conducive to the public interest. I argue, in contrast, that limited reforms do not stem from regulators' unwillingness – but rather their *inability* – to fix ratings' systemic problems. Regulators have shied away from intrusive reforms for fear that this would make things worse, not better. To make this point, I draw on the social studies of finance (SSF) literature, which demonstrates that risk assessments, including ratings, are performative: rather than merely reflecting risks, they shape them (MacKenzie, 2004; MacKenzie, 2006; Kregel, 2008; Sinclair, 2010; Carruthers, 2013; Esposito, 2013b; Paudyn, 2013; Svetlova, 2012). My key goal is to demonstrate performativity's *regulatory implications*, which have so far received comparably less attention in the SSF literature (De Goede, 2004; Coombs, 2016).

The argument is that performativity hampers regulators in fixing ratings' systemic consequences. It implies that what seems to be a desirable cure – public intervention in the substance of risk assessment practices – in fact contributes to, rather than limits the problem. Replacing all rating references in regulation with another risk indicator might merely switch the source of systemic risk to this other indicator. As the main alternatives to ratings are based on market prices, this feedback loop might increase market volatility. Similarly, standardizing rating methodologies, or setting up a public CRA, may reinforce herd behaviour – either because CRAs' rating actions become more synchronized, or because participants give a disproportionate weight to the public CRA's assessments. Regulators recognize the limits of what regulation can actually do to fix ratings' systemic problems, and see no other option but to implement half-hearted reforms. These limits, I argue, ultimately derive from the performativity of risk assessments.

To substantiate this argument empirically, I focus on European Union (EU) policymakers' efforts to tackle the three key issues mentioned above: (1) addressing rating overreliance; (2) regulating rating methodologies; and (3) setting up a public CRA. Building on an analysis of policy documents, public and private position papers, and reporting in the specialized press, I

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show how policymakers have struggled to design effective regulatory approaches. To corroborate my claim that stakeholders are well aware of the problems with fixing these systemic issues through substantive involvement in firms' risk assessment practices, I also draw on confidential interviews held in Madrid, London, Paris, Brussels and Amsterdam with senior EU representatives of securities markets regulators, banking regulators, CRAs and the EU banking sector (see the appendix for an overview).[2]

Why focus on the EU's reform experience? Following the logic of dominant approaches in the CRA literature, the EU should have been especially well positioned to tackle these issues. In particular, the absence of a pre-crisis regulatory framework provided the opportunity to design a 'correct' regulatory approach almost 'from scratch', with veto players (the CRA lobby) or institutional path dependencies being substantially weaker than in the US (the obvious alternative jurisdiction to analyse). Still, similar dynamics should have hampered reform in the US, and at several points in the empirical section I also illustrate this.

It is also important to stress that EU policymakers had, in principle, the legal power to fix these systemic issues. Reducing regulatory reliance on ratings, and setting up a public CRA were both domains where the EU could 'go it alone'. Moreover, the CRA Regulation (2009) introduced after the crisis required CRAs to comply with European rules before being allowed to issue new ratings for European entities. This implies that the EU had the power to regulate rating methodologies, among other things. In short, the EU had the legal power to address the systemic issues, and according to existing explanations it was likely to do so. This makes it all the more surprising that EU policymakers ultimately struggled to tackle these systemic issues, suggesting a blind spot in these explanations.

While the article's main argument implies that scholars should be careful in dismissing post-crisis reforms as a blatant failure, it should certainly not warrant an uncritical embrace of the status quo. Indeed, if CRA regulation will unlikely prevent future problems, this necessitates a proactive rather than a fatalist policy approach; a point that I will stress in the article's conclusion.

Systemic problems, timid response

In the two decades leading up to the financial crisis, credit ratings gained a more prominent role in European financial markets. Their rise to prominence was facilitated by financial globalization and the integration of European capital markets (Brummer and Loko, 2012). The inclusion of rating references in financial regulations was a contributing factor (McVea, 2010).[3] Despite these developments, the EU refrained from regulating CRAs, trusting on US regulation and CRAs' voluntary compliance with the International Organization for Securities Commissions Code of Conduct instead (IOSCO, 2004; EC, 2006).[4] These regulatory frameworks mainly addressed internal governance and transparency issues, in order to protect investors from being duped by CRAs' potential conflict-of-interest problems (Brummer and Loko, 2012).

The financial crisis, however, exposed systemic problems. Widespread reliance on apparently dubious ratings issued by a small number of CRAs had contributed to the herd behaviour that led to the build up and materialization of systemic risks (Sy, 2009). Policymakers agreed that ratings' systemic problems necessitated a fundamentally different regulatory strategy. While integrity problems had surely played a role in the structured finance debacle, regulators acknowledged that the problem was bigger than CRAs' perverse incentives (White, 2010; Coffee, 2011; US Permanent Subcommittee on Investigations, 2011; cf. Kruck,

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2016: 4). This assessment was buttressed by the onset of the Eurozone sovereign debt crisis. As sovereigns generally do not pay to get rated, CRAs' actions could hardly be explained by their issuer-pays business model. The problem was more fundamental: widespread reliance on a small set of risk indicators had contributed to systemic risks.

These problems partly stemmed from the methodologies used by CRAs, both in terms of their individual methodologies as well as their general rating approach (Sy, 2009). In particular, CRAs' structured finance methodologies proved to be flawed in a number of ways: they lacked long run data on default risks for structured finance products; they missed the deteriorating quality of the underlying asset pools; they were too sanguine about the US housing market and correlations between defaults; and they erroneously supposed that risk probabilities followed a normal rather than a 'fat tail' distribution (CGFS, 2008; FSA, 2009a). Observers criticized CRAs' general risk assessment approach – their attempt to rate 'through the cycle' – for being slow to respond to changing market conditions, while overshooting once problems seemed evident (Deb et al., 2011). Systemic problems also went beyond the dominant CRAs' rating approaches to include market participants' overreliance on their ratings. Investors herded into highly rated structured finance securities, leading to the build up of systemic risks (FSF, 2008). Herd behaviour was stimulated by the inclusion of ratings in regulations, most notably in the Securitization Framework and the Standardized Approach to credit risk of the Basel II accord, and in asset management contracts (Sy, 2009). Widespread overreliance on ratings ensured that downgrades and fire sales reinforced one another in vicious downward spirals. Finally, the sector's oligopolistic structure, and CRAs' homogeneous rating actions, ensured that everything collapsed simultaneously (Deb et al., 2011).

While stability risks stemming from inadequate methodologies, market overreliance, and rating homogeneity had been recognized before, policymakers had so far been cautious to address them. Given the magnitude of the problems, one would expect the crisis to trigger a bold regulatory response. Critics pleaded for substantive remedies, urging policymakers to take control over firms' risk assessment practices. They argued for abandoning regulatory reliance on ratings (Partnoy, 2009; Kruck, 2011), setting up a public EU CRA to increase diversity in the rating sector (Bofinger, 2009), and introducing public control over ratings methodologies (Underhill, 2015). Actual reforms, however, failed to live up to these expectations. EU policymakers have only very moderately reduced regulatory reliance on ratings (Kruck, 2016). They have hardly tackled CRAs' methodology failures and have avoided regulating their content (Paudyn, 2015; Underhill, 2015). And the EU refrained from setting up a public CRA, enabling the continued dominance of the Big Three CRAs and a corresponding lack of ratings diversity (Schroeder, 2015).

To be sure, there has been regulatory action. The EU abandoned its hands-off approach and adopted a Regulation (CRA 1) in 2009 (Quaglia, 2013). These rules require CRAs to rotate analysts frequently, prohibit them from mixing consultancy and rating services, and ban analysts from rating an entity in which they have an ownership interest. The Regulation introduces procedural requirements for rating methodologies, and requires CRAs to be transparent about potential conflicts of interest and their procedures to ensure high quality ratings (García and Ruiz, 2012; Pagliari, 2012). It was amended in 2011 (CRA 2) to entrust the newly created European Securities and Markets Authority (ESMA) with the authority to register and supervise CRAs. The Eurozone debt crisis triggered a third amendment, finalized in 2013 (CRA 3). Among other things, CRA 3 introduced procedural requirements for sovereign debt ratings, introduced a civil liability regime for CRAs, and obliged market participants not to rely on ratings in a mechanistic manner (see Chiu, 2014, for an extensive discussion of these measures).

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Still, these regulatory solutions mainly consist of governance requirements aimed at addressing CRAs' integrity issues. In contrast, reforms aimed at tackling systemic problems have been limited, and policymakers have avoided becoming prescriptive on the substantive aspects of firms' and CRAs' risk assessment approaches. Instead, they encourage firms to consider other risk indicators, in addition to ratings, when deciding on investment strategies, and check CRAs' procedures for the development, application, and revision of methodologies. This policy outcome is surprising: after all, the systemic issues were the most pressing problem, and substantive measures seemed an obvious remedy. What explains this?

The post-crisis CRA literature provides various explanations. Ideational accounts focus on changes in policymakers' regulatory beliefs (Pagliari, 2012). The argument is that pre-crisis pro-market ideas have been much more resilient than many expected. Regulators could attribute rating failures to misaligned incentives – a framing that chimes perfectly well with pre-crisis policy precepts (Mügge, 2011). Private interest accounts, in contrast, argue that successful opposition from vested interests – the dominant CRAs – has hampered more fundamental reforms. While regulators set out to fix rating flaws by designing rules conducive to the public interest, they were led astray by particularistic interests (or so the argument goes, see Underhill, 2015). Finally, the institutionalist perspective – arguably the dominant approach – argues that the lack of fundamental reform stems from path dependence (see Moschella and Tsingou, 2013). Despite CRAs' obvious mistakes, regulatory reliance on ratings has made public and private actors structurally dependent on CRAs' risk analyses. Lacking the required risk assessment expertise and capacity themselves, policymakers have found it too costly to revoke CRAs' earlier granted quasi-regulatory status (Chiu, 2013; Menillo and Roy, 2014; Kruck, 2016).

These perspectives highlight important facets of post-crisis regulatory politics. Yet they share an assumption that I argue is unwarranted – namely, that the key obstacle to fixing ratings' systemic problems is regulators' *unwillingness* to do so. This rests on a flawed notion of ratings in which they are treated as reflections of an objectively existing entity called 'risk', which the CRAs constantly get wrong. The implication is that if only regulators were willing to implement the proper rules, or if they would develop capacity to measure risks themselves, we would no longer suffer from CRAs' blunders (cf. Kruck, 2016). Yet a different take on risk assessments, drawn from the social studies of finance (SSF) literature, makes this assumption highly questionable. In particular, the concept of *performativity* throws doubt on the idea that bold regulatory actions – such as the full removal of ratings from regulation, standardization of rating methodologies, or regulators issuing risk assessments themselves through a public CRA – would contribute to financial stability. In fact, the opposite might be the case.

The regulatory implications of performativity

Rating performativity

The financial system is a reflexive system. Market participants' assessments of the system's functioning shape its functioning, in turn affecting participants' assessments. Put differently, the two-way feedback loop between assessments and outcomes ensures that the system changes under observation (Soros, 2008; Beinhocker, 2013; Bronk, 2013; Esposito, 2013b; Mügge and Perry, 2014). This implies that financial markets have no firm anchor outside of actors' assessments, despite repeated appeals to fundamental values in the so-called real economy (Keynes, 1964 [1936]; Minsky, 2008 [1986]). Reflexivity thus refers to a general attribute of the financial system: assessments affect the system's functioning, and vice versa.

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The SSF literature has done much to improve our understanding of *which* and *whose* assessments matter, as well as *how* these affect the system. MacKenzie's (2004; 2006; 2011) seminal contributions focused on the 'performativity' of financial theories. Drawing on Callon (1998), he asserted that these theories, rather than passively recording an external reality, may act as an "active force transforming its environment" (MacKenzie, 2006: 12). If a model has a high academic standing and is publicly available, market participants may start using it. The model then affects economic processes, but may do so to different degrees. 'Barnesian performativity' and 'counterperformativity' are the strongest forms. The first occurs when actors' actions lead to outcomes that confirm the financial model's assumptions: the world becomes more like the model. Counterperformativity is the opposite: over time, actions lead to outcomes that conflict with the model's assumptions (MacKenzie, 2006; Bronk, 2013).

SSF scholars have not confined the study of performativity to financial theories, but have focused on a variety of market practices and models. Credit ratings are an important example (Esposito, 2013a; 2013b). Ratings can exert a key influence on financial market functioning due to several 'felicitous conditions' (Svetlova, 2012). First, ratings are *visible*: the assessments are available for all to see, and the symbols are relatively easy to understand. Second, and relatedly, they are *widely used*, in part because of their inclusion in financial contracts and regulations. Third, CRAs' methodologies ensure ratings are relatively *stable* over time, making them a reliable focal point for long-term investors. Finally, there is *limited diversity* in ratings: the Big Three CRAs dominate the sector, and their rating approaches are quite similar. All this increases the chance that market participants' beliefs converge around CRAs' assessments, thereby strengthening ratings' real-world effects (Deb et al., 2011).

Widespread reliance on a model will not ensure a strong form of performativity (Svetlova, 2012). Crucially, this depends on market participants' calculative culture and whether they follow ratings blindly or instead take them with a grain of salt. Yet ratings may be so hardwired into financial markets that individuals or firms act on them even if they consider the dominant CRAs' ratings to be 'incorrect'. As Sinclair (2010: 99) puts it, "sceptical individuals have incentives to act based on the assumption that others will use the rating agencies as benchmarks". Rating reliance thus has a self-enforcing element (Esposito, 2013a). As such, ratings have performative effects: they influence the risks that they supposedly merely describe. Positive assessments trigger easy access to cheap credit, while downgrades can exacerbate the issuer's financial strains (Kregel, 2008; MacKenzie, 2011; Mügge, 2011; Carruthers, 2013; Esposito, 2013a; Beckert, 2016; see Soudis, 2015 for a critical take).

As the crisis made painfully clear, ratings' real-world effects can contribute to the build up of systemic risk (Sy, 2009) – the risk of a "disruption to financial services that is caused by an impairment of all or parts of the financial system…" (FSB, IMF, and BIS, 2009: 2). When confronting financial innovations (such as structured finance products) or novel market developments (for example, the introduction of the Euro), market participants look for anchor points to help cope with the inherent uncertainty of future outcomes (Bronk, 2013: 346). CRAs' optimistic assessments about particular asset classes or financial innovations can then become self-reinforcing, contributing to behaviour that in turn validates these assessments (Barnesian performativity). But as Minsky already pointed out, this self-reinforcing belief-behaviour-belief feedback loop raises the fragility of the system, even though it appears increasingly stable (Borio, Drehmann, and Tsatsaronis, 2012). Initial optimism, buttressed by high ratings, has sowed the seeds for subsequent panic. A relatively minor event can be a breaking point, turning a boom into a bust (Gerding, 2014). Rating downgrades and fire sales then reinforce each other in downward spirals (Sy, 2009). Financial markets' reflexive nature thus implies that theories, models, and valuation techniques can be performative, making the

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world more similar to (or more different from) the initial assessments. We can thus think of performativity as a special facet of reflexivity more generally, as 'reflexivity in overdrive'.

Regulators' struggle with performativity

Reflexivity and performativity introduce specific challenges for public policymakers. While market reflexivity is the general context in which they have to design policies conducive to financial stability, the performativity issue looms large when developing and implementing rules for specific valuation routines, including the issuance and use of credit ratings. Can regulators ensure that these routines have benign performative effects? And what regulatory strategy is most suitable in this regard?

While the SSF literature has done much to demonstrate that valuation routines and models shape rather than reflect financial markets, it has so far paid less attention to performativity's regulatory implications – and how regulators deal with these (Coombs, 2016; Stellinga and Mügge, 2017; Kranke and Jarrow, 2018). For example, while both De Goede (2004) and Paudyn (2015) discuss global regulators' embrace of private sector risk practices, they appear to dismiss the possibility that regulators recognize potential undesirable effects and the dilemmas associated with the various policy options. The literature mostly treats regulation as an exogenous factor, although this has more recently been changing. For example, Coombs (2016) tentatively concludes that particular regulations – in this case, those aimed at financial algorithms – can ensure benign forms of performativity. Similarly, Langley (2012) shows how US regulators' financial stress testing exercises were intentionally and successfully performative.

This article contributes to the above shift in emphasis by focusing on how regulators deal with problems pertaining to the performativity of valuation tools. The upshot is quite sobering: banking and securities market regulators struggle to find solutions to credit ratings' systemic effects. On the one hand, regulators hope that CRAs contribute to financial stability by providing relatively accurate risk assessments and allowing market participants to take precautionary measures. Indeed, regulators require banks, pension funds, insurers and asset managers to use ratings mainly to ensure prudent investment behaviour. On the other hand, they dread ratings' systemic consequences (Sy, 2009). But while it is clear that these problems exist, it is not obvious what regulators can do to fix them. The key problem is that what at first sight seems like a suitable regulatory approach – bold actions aimed at the substance of CRAs' and firms' risk assessment approaches – might be a cure worse than the disease. Put differently, regulators fear that sweeping reforms will either reinforce ratings' systemic effects, or that they will merely shift these destabilizing consequences from one set of risk indicators to another.

To be sure, my goal is not to demonstrate that regulators *think* in terms of concepts such as 'reflexivity' and 'performativity'. Instead, I want to show that they recognize the underlying point – risk indicators influence risks – and that they see this as an obstacle when designing rules conducive to financial stability. It does not matter whether regulators talk about 'the systemic risk of ratings', 'procyclicality', or 'rating performativity'. What matters is that they acknowledge that the reason why ratings are potentially destabilizing is also the reason why fixing it through regulation is inherently difficult. The next section shows that regulators see no way to solve this problem, leading them to implement half-baked reforms. Before doing so, I outline the reasons why performativity limits attempts to curtail the systemic effects of ratings. First, performativity hampers regulators in tackling rating overreliance. It is clear that

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regulatory reliance on ratings has severe downsides: it stimulates an automatic market response to rating changes, and other market participants' anticipation of this effect can set off destabilizing feedback loops. But replacing ratings with other risk indicators may be equally if not more problematic. If this reinforces market participants' blind reliance on other, more volatile indicators, the problem might become worse. The solution of increasing firms' discretion in risk assessment procedures also has downsides, especially for systemically important financial firms that tend to neglect long term solvency in order to gain short term profits or competitive advantage. In such circumstances, abandoning micro-prudential stringency is unattractive (Mügge and Stellinga, 2015). Yet even if regulators were able to reduce regulatory reliance, the systemic effects of ratings would persist. Market participants' use of ratings is not reducible to regulatory requirements. Although regulators can stimulate firms to rely on a variety of risk indicators, preventing them from using credit ratings is well-nigh impossible, let alone desirable. An outright ban on rating issuance has many downsides, not least in that it could contribute to uncertainty and market stress.

Performativity similarly makes regulatory intervention in rating agencies' methodologies problematic. Because methodologies shape ratings, they clearly warrant regulatory attention. But regulators are not necessarily better at identifying appropriate methodologies than CRAs. Consider the main critique of CRAs' methodologies: they lead to ratings that are slow to respond to market signals (Partnoy, 2009). CRAs aim to rate 'through the cycle' (TTC), meaning that ratings are usually relatively stable, contributing to their popularity among investors, thereby boosting their performative effects. But this also means that stress levels can be building up for some time before CRAs finally reconsider their ratings, meaning that downgrades are usually abrupt and substantial (Gonzales et al., 2004; Dittrich, 2007; Deb et al., 2011). This was the case in the Asian debt crisis of 1997-8, the subprime crisis of 2007-8, and the Eurozone debt crisis of 2010-2. But does this buttress the case for a regulator's prescribed shift to the alternative, 'point in time' (PIT) approach, that more quickly translates changing market signals in risk estimates? Not necessarily. Ratings would still have performative effects, but PIT-estimates' volatility during market turmoil could lead to even worse forms of instability (Gonzales et al., 2004; Hunt, 2009).

As regulator approved or prescribed methodologies are not necessarily better than those of CRAs, policymakers have good reasons to avoid substantive involvement. More importantly, prescribing methodologies could aggravate the problem it was meant to solve. Public vetting of methodologies could suggest ratings are officially approved, further bolstering market participants' reliance on them. And as ratings' systemic effects partially derive from the dominance of the Big Three CRAs, standardizing methodologies would increase ratings' homogeneity, thereby worsening the herding problem.

More diversity in ratings seems a promising way to mitigate the herding problem. As systemic crises are often the result of a lengthy period of "cognitive myopia" (Bronk, 2013: 348), limiting rating homogeneity is one way to address this. But this strategy is also fraught with difficulties. Given the systemic relevance of the ratings produced by the Big Three, it is unlikely that smaller competitors employing different methodologies could by themselves provide a sufficiently strong counterweight, if only because their assessments would not remain unaffected by the Big Three's actions. This seems to warrant setting up a public (or publicly sponsored) CRA. But while this might be a quick way to introduce a 'new voice', there is a danger that this voice might be heard all too well. Market participants might rely exclusively on the public CRA's assessments, seeing highly rated financial instruments as publicly approved investments. By inducing herd behaviour, this would reinforce systemic risks rather than mitigate them.

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The above considerations certainly do not imply that policymakers simply ignore rating problems. They cannot. Rating methodologies, the diversity of rating assessments, and the way in which ratings are used are each fundamental to financial market functioning. Moreover, regulators have had to live up to political and societal calls for bold actions, meaning there have definitely been reform attempts. However, once policymakers had to translate high level requests to fix rating problems into actual reforms, they hit upon unescapable dilemmas. These dilemmas, I argue, ultimately reside in the 'performativity problem'.

Re-regulation and its limits

This section discusses in detail how EU policymakers have attempted to tackle rating overreliance, fix CRAs' methodologies, and tried to set up a public CRA, respectively. The EU seemed well placed to tackle these issues, as it did not have to deal with an engrained regulatory heritage. As such, it could use the lessons of the crisis to design the most effective policy response to ratings' systemic problems. As the empirical record shows, however, the actual policy response was characterized by half-baked reforms, backtracking, and regulatory indecisiveness. These patterns of behaviour do not reflect regulators' lack of ambition, but rather their appreciation that sweeping reforms may contribute to, rather than limit, systemic risks.

Reducing reliance on credit ratings

Market overreliance on credit ratings contributed to the global financial crisis (Sy, 2009; FSB, 2010; Deb et al., 2011). Policymakers identified regulatory reliance on ratings as a key problem, as it induced automatic responses to rating changes (Interview 4; Interview 8). The Financial Stability Forum therefore recommended "authorities should check that the roles that they have assigned to ratings in regulations and supervisory rules … do not induce uncritical reliance on credit ratings" (FSF, 2008: 38).

A bold response would be to *fully* remove ratings from regulations. Proponents argued that this would reduce ratings' systemic effects, as both regulated entities and other market participants would pay less attention to them. It would also stimulate market discipline in the rating sector, thereby boosting ratings' informational value (Weber and Darbellay, 2008). But this solution immediately triggered new problems: should ratings be replaced with other risk indicators? Or should policymakers simply abandon the regulatory use of risk indicators? In both the EU and the US, regulators have struggled with these questions, and ultimately adopted half-hearted – albeit different – solutions.

EU policymakers barely addressed this issue during the negotiations on CRA 1 (2008-2009). The European Commission suggested "a one-size-fits-all approach need not necessarily be followed, as ratings are used in different contexts, with varying intensity and for different purposes" (EC, 2008b: 5). However, the Eurozone crisis, which EU officials partly attributed to CRAs' sovereign debt downgrades, heightened the urgency to reduce ratings' systemic effects. The problem of rating overreliance was therefore a core aspect of the CRA 3 negotiations (2010-2013; EC, 2010).

Policymakers were thus confronted with a fundamental question: what risk indicators (if any) can replace ratings? The main alternatives are indicators based on market prices – such as bond prices, credit spreads, or the prices of credit default swaps. While some experts argue that these are more accurate than ratings (Partnoy, 2009), there are significant downsides. Even if particular market-based indicators have a better track record than ratings, this

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accuracy could become undone once they are used in regulation and more actors pay attention to them. More problematically, market-based indicators are more pro-cyclical than ratings: in good times they indicate risk is low, but they become very volatile during market turmoil (Shin, 2013). Hardwiring such indicators into regulation could therefore lead to worse forms of systemic instability (Hunt, 2009). EU policymakers have thus opposed this policy route. UK authorities warned that "movements in market prices are driven by factors other than credit risk – such as the depth and liquidity of the market – and are prone to overshooting (procyclical effects)" (FSA, HM Treasury, and Bank of England, 2011: 5). The European Central Bank argued against "any automatic reliance of regulation on market-based variables. Market-based information may be excessively volatile and significantly misleading, for instance, during times of market dislocation" (ECB, 2011: 2). In short, policymakers acknowledged that a bold solution to the rating problem would either displace or worsen the systemic risk problem.

An alternative option would be for policymakers to stop using publicly designated risk indicators and leave risk assessment up to firms themselves. But giving firms much more discretion is obviously problematic from a microprudential perspective (Carmassi and Micossi, 2012). The Eurozone debt crisis showed how this strategy could be quite dangerous. EU politicians had not required any risk-sensitivity in capital charges for EU sovereign debt and left it up to the banks to decide how much to invest in particular issues – with disastrous consequences (ESRB, 2015). Policymakers could also require firms to develop their own risk models, with Basel's Internal Ratings Based-approach (the alternative to the Standardized Approach) as an example. But the financial crisis had also exposed major flaws in banks' risk models. And this would not necessarily reduce rating reliance either, as banks often use credit ratings to verify their models (Interview 11): "internal models are currently often linked back to CRA ratings or CRAs' default histories as external independent measures of risk" (FSA, HM Treasury, and Bank of England, 2011: 4).

The Financial Services Authority had already in an early stage aptly summarized the problem: "while there is a danger that the use of credit ratings [in regulation introduces] procyclicality … it is likely that other measures of assessing risk (e.g. complete reliance on bank internal models or on market price based indicators) would be still more procyclical" (FSA, 2009b: 79). Policymakers thus faced a dilemma. Replacing ratings with market-based indicators would substitute ratings' systemic effects for something worse. And leaving it up to the firms would introduce another systemic stability threat (firms' opportunism) while not necessarily solving the rating problem. A bold response would arguably make things worse, not better.

Given these major drawbacks, the EU opted for a very general policy goal: to reduce the extent to which market participants rely "*solely* or *mechanistically* on credit ratings" (CRA 3 – Article 5a, emphasis added). CRA 3 required European supervisory agencies to stop referring to ratings in guidelines or in warnings "where such references have the potential to trigger mechanistic reliance" (CRA 3 – Article 5b[1]).[5] But the Regulation did not require the full removal of ratings from Union Law. Although it contained the aspiration to do so by 1 January 2020, policymakers included an important disclaimer: "provided that appropriate alternatives to credit risk assessment have been identified and implemented" (CRA 3 – Recital 6). This has so far proved elusive. Indeed, policymakers have admitted that replacing ratings with alternative risk indicators is no silver bullet:

> I completely understand market participants asking supervisors: 'If I cannot use ratings, what then should I use? Tell me and I will do it'. But this is very difficult. Are you going to say: 'you should all use credit spreads'? No, because if everyone does this, you will get the same problem. Or worse. (Interview 2).

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The Financial Stability Board has also warned that "[n]ational authorities and financial entities should guard against the temptation to adopt a small number of alternative measures for assessing creditworthiness in place of CRA ratings, which can result in substituted procyclicality and herd behavior" (FSB, 2014: 2).

While CRA 3 obliged EU regulators to look for potential alternative risk indicators, this only had a low-key follow up. Financial authorities did consult market participants and national authorities about their ideas on rating alternatives (cf. EBA, EIOPA, and ESMA, 2014; ESMA, 2015), but this merely resulted in calls for further investigation rather than a thorough analysis and testing of identified alternatives. An EU banking regulator admitted that "for the time being it is merely a stocktaking exercise … The prevailing opinion is that at this point in time we cannot get rid of the external ratings anyway – it is kind of unrealistic" (Interview 5). The European Securities and Markets Authority has also reached this sobering conclusion: "The process to reduce reliance on ratings [is] at an early stage, with some work done on agreeing high level principles and goals but more to be done in terms of mitigating mechanistic reliance and proposing alternatives" (ESMA, 2015: 36).

The EU's approach was partly informed by the problems US regulators experienced. The US Senate had taken a bold approach and obliged regulators to remove all rating references from Federal laws, subsequently incorporated in Section 939A of the Dodd-Frank Act of 2010 (Manns, 2013). This being a political obligation, US regulators had to find a way to do this, but they struggled to find suitable alternatives. They therefore often simply removed rating references. But abandoning prudential stringency is dangerous, so how to square the circle? As an EU banking regulator reflects, the "American regulators experience the Dodd-Frank prohibition as a problem. They think that ratings should actually continue to play a role, albeit a smaller one than before the crisis" (Interview 1).

US regulators adopted a pragmatic solution: "they found a way to continue using ratings while still complying with the law" (Interview 1). They did so by sticking to the old language of 'investment grade' and 'non-investment grade' securities while remaining vague about what this means. The regulatory definition of investment grade – when "the risk of default is low, and the full and timely repayment of principal and interest is expected" (OCC, FED, and FDIC, 2013: 2) – gives no guidance, but this was deliberate. It ensured that firms could still use ratings, as they could plausibly claim that a high-rated entity implied low default risks and was therefore investment grade. According to another banking regulator, the US has thus only superficially reduced reliance on ratings: "Is this a solution? Legally yes, because they don't refer to external ratings. But they do not even define what investment grade is supposed to mean. It's only a different presentation" (Interview 5). So at first sight the US approach appears to be a major policy shift. In practice, however, regulators did not fully stop relying on ratings. As one CRA representative puts it: "I am not convinced that the Americans have gotten to a place that is very different from where Europe is" (Interview 6).

So the EU has, for the time being, given up on the agenda of reducing regulatory reliance on ratings (Interview 1; Interview 3; Interview 6; Interview 9). ESMA concluded that it may not be practical to remove all regulatory references, and that "the focus of any future initiatives should be on the mitigation of mechanistic reliance on ratings rather than their removal altogether" (ESMA, 2015: 7). Work is still to be done in this respect. In particular instances – for example, capital adequacy rules – it appears that regulations still induce mechanistic reliance (Interview 5; Interview 9). But policymakers have great difficulty marrying stringency (regulatory use of risk indicators) with flexibility (preventing mechanistic reliance). CRA scholarship suggests that this half-hearted response stems from policymakers' unwillingness to change course. Yet the problem is less a lack of will than a lack of viable alternative

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solutions. Regulators acknowledge that replacing ratings with other indicators would not solve the problem, and potentially make it worse. And while it makes sense to strive for more diversity in market participants' risk assessments, regulators also fear that increasing flexibility offers firms more scope for abuse. Effectively, policymakers see no way out of this conundrum.

Regulating rating methodologies

In addition to rating overreliance, policymakers identified fundamental flaws in CRAs' methodologies as a core cause of the structured finance debacle. These were therefore a focal point in post-crisis regulatory reform debates: "the idea was that methodology was the key issue, because at the end what goes out, the triple-A or double-B or whatever, comes from a certain methodology" (Interview 3). But on which aspects of methodologies should policymakers focus? Should regulators take a bold approach and go so far as to prescribe the methodologies CRAs must use? The eventual solution adopted in CRA 1 was to avoid public meddling with their content and concentrate on CRAs' procedures instead (Articles 23 and 8 respectively).

The EC consultation paper was vague on the issue of regulatory scrutiny of methodologies. While it made clear that the substantive requirements "do not interfere with the content of ratings" (EC, 2008a: 3), it did not provide a similar provision for methodologies. This worried CRAs, who feared regulatory interference with their rating approaches (Standard & Poor's, 2008; Interview 6; Interview 10). But EU regulators and supervisors had also from the start been deeply sceptical of vetting rating methodologies, let alone determining methodologies themselves (Interview 3; Interview 9). For instance, ESMA's predecessor – the Committee of European Securities Regulators – argued that the "goal for a potential regulation should be the supervision/monitoring of principles and processes that a CRA undertakes to generate a proper rating rather than influencing the methodology a CRA uses" (CESR, 2008: 3; cf. CEBS, 2008).

Several problems fed regulators' opposition to interference, including major conflicts of interest (Interview 2; Interview 3). But the substantive challenges were central to regulators' sceptical stance. "The problem is always the same," one regulator said, "You can check a methodology on ratings, which is about credit quality, [but this] is something you cannot observe" (Interview 5). And as substantive involvement would unlikely improve rating quality, it would at best shift reputational risks towards the regulator, making it an unattractive policy option. "As a supervisor, you don't want to be held responsible for a particular rating. You don't want to suggest it has been approved by the supervisor" (Interview 2).

The most fundamental problem, however, was that regulators' substantive involvement would not only fail to take away rating performativity, but would likely reinforce it. As market participants' perception of ratings' importance is key to their performative effects, policymakers deemed explicit government endorsement undesirable. So UK authorities warned that "regulatory assessment or challenge of CRAs methodologies" exacerbates the risk that markets participants see ratings as having "an official seal of approval'" (HM Treasury, FSA, and Bank of England, 2008: 9-10). Moreover, if regulators were to prescribe a particular rating approach, this risked even more homogeneity in ratings, boosting systemic risk. As an EU regulator succinctly put it: "if the government is wrong, everybody is wrong" (Interview 5).

Still, the fundamental importance of methodologies implied that regulators could not ignore the issue. While CRA 1 included a clause (Article 23) stating that public authorities "shall not interfere with the content of credit ratings or methodologies", CRAs were not

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completely off the hook. Article 8 introduced significant procedural requirements concerning the development, application, review and disclosure of rating methodologies. Crucially, a key clause – Article 8(3) – seemed to be directly concerned with the *content* of methodologies. It stated that CRAs "shall use methodologies that are rigorous, systematic, continuous and subject to validation based on historical experience, including back-testing". The ambiguity this clause introduced has been a source of contention ever since, as it implied that ESMA would have to check whether CRAs' methodologies conformed to Article 8(3), without actually interfering with their content.

This issue gained visibility when, during the Eurozone debt crisis, the EC (2011b: 3) proposed that a CRA modifying one of its methodologies "may only apply the new rating methodology after ESMA has confirmed the methodology's compliance with Article 8(3)". ESMA itself, however, vehemently opposed this proposal (Interview 9; Interview 10). ESMA-Chairman Maijoor stated that "[m]oving to the new CRA3 has indeed [increased] the tension that we, as ESMA, become involved in the rating methodologies. There is clearly a tension there with the strong points of CRA1 and CRA2 that we should not interfere with the ratings themselves" (House of Commons, 2011: n.p.). Again, regulators feared they might be seen as validating ratings or methodologies. The rule would have "led to a sort of regulators-approved rating. You would get a triple-A rating that was seen by investors as being in some way ESMA-approved. That is not something you want to have" (Interview 9).

The proposal was eventually shelved. Instead, CRA 3 required CRAs to *notify* ESMA of material changes to their methodologies. Key members of the European Council had found the original Commission proposal unworkable (Interview 2; Interview 3). According to an EU securities market regulator, this solution effectively freed ESMA from checking the substance of methodology changes: "they left the issue to 'notify in advance', so the supervisor gets it in an official register. What are you going to do with it? You put it in a drawer" (Interview 3).

While regulators have not created substantive requirements for CRAs' methodologies, they do subject them to supervisory scrutiny. Where to draw the line is controversial. Given the impossibility of assessing whether methodologies are 'correct' (Paudyn, 2015), ESMA settles for checking whether CRAs consistently apply their methodologies and modify them in case of unexpectedly poor performance. This latter aspect of 'methodology validation' is controversial. CRAs warn that ESMA's approach pushes them in the direction of quantitative rating approaches, which in their eyes contributes to rating homogeneity (Interview 7). Regulators stress they do not aim for homogeneous rating approaches:

> We want to prevent that market participants think that there is only one way of looking at credit risk. There isn't. So the rules aren't meant to… we want to have alternative opinions. So that means you cannot say that the methodology should contain 'this, and this, and this' or that there is one approach to validation. (Interview 9)

Still, the subjectivity introduced by the qualitative nature of ratings is a mixed blessing for regulators. The upsides are that it buttresses rating heterogeneity and limits mechanistic feedback loops between market developments and rating changes. But regulators fear that CRAs' emphasis on the qualitative aspect might be an excuse for poor conduct and an unwillingness to reassess ratings in a timely manner.

So ESMA (2015) champions tighter standards for CRAs to check their own methodologies. CRAs should assess whether actual default percentages in different rating categories (AAA, AA+, and so on) match their earlier expectations; if they do not, methodologies should be reviewed. Simultaneously, ESMA provides enough leeway to ensure that the rules do not oblige CRAs to "automate their approach so that if a rating category exceeds or falls below their

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expectations, the CRAs should change their methodology/credit ratings mechanistically" (ESMA, 2016: 11). Hence, ESMA requires CRAs to draw conclusions from faulty expectations even if this does not predict the methodologies' future adequacy. But ESMA knows better than to become too closely involved in this domain.

Despite the fundamental flaws in CRAs' pre-crisis methodologies, policymakers have struggled to find a solution, and ultimately adopted contradictory rules. Explaining this outcome from regulators' unwillingness to fix rating methodologies fails to convince. Instead, regulators acknowledge the inherent limitations of scrutinizing methodologies: "It is the financial system that relies on these opinions [of the Big Three], and the models have to be good, but they will never be perfect anyway. So even if ESMA would have 200 quants checking every single input and every single output, it will not change very much" (Interview 5). Regulators know that substantive involvement will not solve the problem that ratings affect risks, and that it will likely make this problem worse, but neither can they afford to leave it completely to the CRAs.

Increasing diversity through a European CRA

If the structured finance debacle had not shaken EU policymakers' confidence in the rating sector, the Eurozone debt crisis certainly did. When the Big Three started downgrading Greece, Portugal, and Ireland, angered politicians stated they were behaving irresponsibly. EU Commissioner Barnier expressed his discontent in May 2010: "It is not normal for these rating agencies to play such an important role and to be so few in number" (quoted in EurActiv, 2010: n.p.). And so the financial turmoil once again exposed the dominance of the Big Three. "Even if they're right or wrong it does not matter, if one of the major rating agencies downgrades one asset class or one country … this will have a systemic impact of some kind" (Interview 5).

The Eurozone crisis thus exposed the problem of the rating sector's homogeneity, owing to its oligopolistic structure (EC, 2016a). In response, politicians floated the plan to set up a European CRA, to act as a counterbalance to the major agencies' pessimistic perspectives. German Chancellor Merkel joined French President Sarkozy in expressing support for an EU CRA, stating that it could provide "an understanding of basic economic mechanisms different from the existing agencies, more oriented towards … [sustainability] of the economy and less on the short term" (quoted in Willis, 2010). A strong European agency as an alternative to the big American CRAs had also been a long-standing wish of several fractions in the EU Parliament (Pagliari, 2013: 220-21). Given the high-level support for the idea, the EC was tasked to investigate this option in the third revision of the CRA Regulation (CRA 3; 2010-2013).

A key issue was whether it should be a *public* agency. The EC (2010: 19) identified the ECB as a suitable candidate to issue ratings, or alternatively a new agency could be set up. While private actors such as banks or investors did not express much enthusiasm for either option (EC, 2011a; EBF, 2011), they would unlikely be harmed in any significant way. They mainly seemed concerned with whether they would be obliged to use these ratings (EFAMA, 2011). The CRA sector was divided on the issue. Whereas Standard & Poor's (2011: 9) warned that a public CRA would distort competition, Moody's was much more supportive. Moody's (2012: 4) argued that "policy makers could neutralise private-sector credit rating opinions by introducing a public-sector voice to contribute competing views", and that this was mostly a "matter of political will".

Yet precisely this political will was waning. The ECB opposed the idea of having to issue ratings, bluntly stating, "[the] ECB should not issue public ratings to be used for regulatory

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purposes" (ECB, 2011: 7). Governments publicly responding to the EC consultation (including the UK, France, and the Netherlands) warned of significant downsides to a public CRA. What was the problem? Regulatory capacity was certainly not the most fundamental obstacle. As policymakers acknowledged, public sector bodies such as the ECB had intimate knowledge of the financial positions of sovereigns. Moreover, the ECB and various other EU central banks already had risk assessment departments (see EC, 2015). CRA lobbying also fails to explain policymakers' hesitation – they were clearly divided on this issue. So where did this hesitation come from?

While politicians hoped to quickly increase the sector's diversity, policymakers realized it was more likely that the public CRA would either attract too little or too much attention. If it was ignored because of being tainted by the "image of political interference" (Netherlands Ministry of Finance, 2011: 10), it would be a waste of money and fail to increase diversity. If, on the other hand, the EU CRA's ratings were seen as official stamps of approval on sovereign debt, it could lead to herd behaviour around these indicators. According to a banking representative, this latter danger was most pronounced if the ECB were to rate sovereign debt: "If you have the ECB issuing ratings, why would anybody still listen to S&P? Why would you still listen to Fitch? Then you would have the ECB saying what is rubbish and what is not. So I can imagine this would have systemic effects on the markets" (Interview 11). An EU CRA would not solve the performativity problem, but could in fact lead to a worse variant. And so despite major dissatisfaction with the sector's oligopolistic structure, key public actors backed down.

In this context, the EC (2011b) did not propose setting up a public CRA, expressing scepticism regarding the feasibility thereof (EC, 2012). But several fractions in the EU Parliament (EUP) seemed unshaken by the objections and kept the idea alive. EUP Vice President Pitella wanted further investigation of the feasibility of a European agency, such as the European Court of Auditors or the ECB, issuing sovereign ratings (EurActiv, 2011). EUP Rapporteur Domenici also tabled the idea (European Parliament, 2012). A compromise seemed possible – the EU could (financially) support a European *private* agency. An EUP Motion in November 2011 had already called on the EC to investigate this possibility.

This option also did not gain sufficient support, but now for fear that it would not get enough attention. A failed initiative in Germany had not boosted confidence. In July 2011, the consulting firm Roland Berger tried to set up a private rating agency that would be funded by both private and public actors, but it failed to gather enough financial support from issuers and banks (Der Spiegel, 2012). It thus asked the German government for assistance, but was turned down. This failure resonated in the EU, challenging the idea that a private European CRA would (eventually) be successful and making it unappealing to fund such an endeavour with taxpayers' money (Interview 10). The final CRA 3 Regulation (Recital 43) merely obliged the EC to submit a report on the desirability of setting up a public CRA or a European credit rating foundation. According to stakeholders, this was a way to shelve the issue: "the European Commission eventually said 'we will write a report on it', which is usually a good way to get the discussion off the main stage" (Interview 9). The subsequently published report (EC, 2015) reiterated the key problem: a public CRA would either duplicate existing information (making it a waste of money), or it would get too much attention (making it potentially dangerous). According to the EC (2015: 18), it entailed "the risk of creating over-reliance on a new alternative if relied upon by investors in an exclusive way". Ultimately, policymakers did not dare go down that road. Once again, the potentially harmful consequences of a substantive solution limited policymakers' reform ambitions. The Commission therefore indicated it would not pursue the idea any further.

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Conclusion

The global financial crisis made clear that ratings can contribute to the build up of systemic risk. Critics looked at governments to fix these flaws, arguing that regulatory rating references should be replaced by better indicators, that CRAs' methodologies should be vetted or prescribed, and that a public alternative to the dominant CRAs should be set up. Actual reforms turned out differently, and a substantial gap emerged between the magnitude of the identified systemic problems and the adopted solutions. Policymakers encouraged market participants to use other risk indicators, but they themselves continued to rely on ratings. Regulators introduced procedural requirements for CRAs' methodologies, but steered clear of prescribing their substance. And the public CRA that many deemed necessary was never set up. Unsurprisingly, there have been frequent accusations that the lack of far reaching reform reflected regulators' unwillingness to fix these problems, either because institutional path dependencies made it too costly, because regulators feared private sector opposition, or because they were unable to discard pre-crisis regulatory ideas. I have argued, in contrast, that limited reforms stem from regulators' inability to solve the underlying problems. These regulatory limitations are rooted in the performativity of risk assessments. CRAs cannot help but influence the risks they purport to simply measure, and regulation cannot undo this situation. Moreover, policymakers rightly feared that bold regulatory actions (such as prescribing rating methodologies, issuing ratings themselves, or requiring market participants to use market-based measures instead) would actually make things worse.

With this article, I aim to contribute to the SSF literature by showing the value-added of a focus on financial regulation. The analysis shows that regulators are quite aware of the fact that risk assessments may affect the risks they set out to measure, but that they also see how this introduces dilemmas for financial regulation. Similar dynamics might appear in other regulatory domains pertaining to firms' valuation and risk measurement practices (FSA, 2009b; FSF and CGFS, 2009). For instance, Mügge and Stellinga (2015) have shown how the performativity of accounting standards has led to repeated ad-hoc modifications, both before and after the crisis. Here, the real-world effects of one particular measurement approach inevitably bolster the case for switching to another. Also in other domains – such as rules on risk-weighting assets in financial portfolios, firms' reliance on quantitative risk models, or stress testing exercises that assess how firms would fare in adverse market conditions – the performativity of risk assessment practices seems a crucial regulatory problem. Examining how regulators deal with this problem seems a promising avenue for future SSF research.

The reflexivity of financial markets and, as a consequence, the performative nature of risk assessment, implies that policy problems may show a much greater resistance to effective solutions than we often assume. But this certainly does not mean that regulation is futile. An SSF perspective on financial regulation that solely aims to expose regulatory failures risks being merely "complicit with anti-regulatory rhetoric" (Coombs, 2016: 297). My sobering conclusions should therefore inspire alertness rather than nihilism, heightening the urgency of regulatory efforts to prevent analytical monocultures. Performativity can contribute to systemic crises when "all actors come to share the same or similar beliefs, narrative or modelling framework" (Bronk, 2013: 346). To spot anomalies and potential sources of systemic risk, we need institutionalized 'self-doubt' – organizations that provide alternative narratives to dominant conceptions of benign market developments. This may go some way in tempering future 'this-time-is-different'-delusions.

Yet the perspective on financial market functioning presented in this article highlights the limits to containing systemic risks solely through financial regulation aimed at firms' valuation

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practices (Warwick Commission, 2009; Mügge and Perry, 2014). This suggests that complementary policy strategies are needed to limit the damage that finance can do. Crucially, it suggests a critical re-evaluation of policies that contribute to the credit-intensity of our societies, for example tax incentives that favour debt over equity finance. It may also take the form of more direct policy measures, such as ceilings on credit growth and rules on credit allocation (Turner, 2015). Such measures could be part and parcel of an ambitious macroprudential policy strategy – or in any case, something more ambitious than the macroprudential policies actually implemented after the crisis (Baker, 2018). Even if this will not prevent crises, reducing our debt dependence will at least ensure that potential problems will be more limited in scope.

Finally, acknowledging financial markets' inherent instability also points at the limits of a narrow policy focus on financial stability alone. It forces us to ask the social purpose question of finance: What role do we want finance to play in our societies? Understanding finance as inherently destabilizing will generate more scepticism about the desirability of debt-fuelled growth than understanding it as self-stabilizing. This highlights the desirability of developing a broader vision of the place and purpose of finance in society (Baker, 2018). Translating this vision into actual policy reform will require that policymakers look beyond their typical fields – capital requirements, monetary policy, tax policies – in order to address the issue of policy coherence and coordination. If we see our economies as 'inherently financial', then we should reassess the idea that policy fields should only have one policy goal, as has become the norm since the 1980s. Informed by a broader notion of the social purpose of finance, policymakers should critically evaluate whether different policies are conducive to the broader social role envisaged for finance (Mügge and Perry, 2014).

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Notes

1. A credit rating is an indicator of a CRA's assessment regarding the creditworthiness of a particular entity (such as a firm or a government) or a particular obligation (such as a structured financial security), expressed using a ranking system. Ratings are meant to assess the probability of defaults or losses for investors.
2. To ensure confidentially, I have not disclosed the specific agencies the respondents work for.
3. While in the run-up to the crisis the EU still did not match the US's rating reliance, it was definitely catching up (Menillo and Roy, 2014). Parts of the Basel II capital adequacy accord (2004), specifically the Securitisation Framework and the Standardised Approach to credit ris, used assets' credit ratings to calculate capital requirements (Weber and Darbellay, 2008; Alexander, 2014). Ratings also informed the European Central Bank's assessment of banks' collateral in refinancing operations (ECB, 2008), thereby stimulating banks to pay attention to their assets' credit ratings.

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Finally, national authorities used ratings (albeit only limitedly) in investment fund regulation (FSB, 2014; García and Ruiz, 2012).

4. The European Commission had actually championed a system of monitored self-regulation, requiring the Committee of European Securities Regulators to check CRAs' compliance with the IOSCO Code of Conduct (EC, 2006; IOSCO, 2004). This Code contained certain requirements on internal governance and information disclosure, but the bar was so low that the Big Three CRAs were thought to comply with them already (CESR, 2006). And while European rules required banking supervisors to assess some aspects of CRAs' conduct, the EC (2006) admitted that in practice this measure too fell short of regulating CRAs (Sy, 2009).
5. Apart from the European Securities and Markets Authority, these are the European Banking Authority and the European Insurance and Occupational Pensions Authority.

Appendix: Interviews

Interview 1: Banking regulator (two respondents); 16 March 2016
Interview 2: Securities market regulator; 4 April 2016
Interview 3: Securities market regulator (two respondents); 8 April 2016
Interview 4: Securities market regulator; 8 April 2016
Interview 5: Banking regulator (two respondents); 13 April 2016
Interview 6: Credit Rating Agency representative (two respondents); 13 April 2016
Interview 7: Credit Rating Agency representative; 14 April 2016
Interview 8: Banking and investment services representative; 14 April 2016
Interview 9: Securities market regulator; 21 April 2016
Interview 10: Credit Rating Agency representative; 22 April 2016
Interview 11: Banking sector representative; 3 June 2016

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