Bartholomew Paudyn

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The struggle to perform the political economy of creditworthiness: European Union governance of credit ratings through risk

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Bartholomew Paudyn

London School of Economics & Political Science
Dept. of International Relations
Houghton Street
London, WC2A 2AE
United Kingdom

Analysing the European Union's regulatory response in the wake of the credit and sovereign debt crises, this paper argues how its adoption of risk management as the core strategy for governing the credit ratings space may undermine European efforts to rebalance the growing asymmetry between private expertise and public democracy. While centralised oversight, enhanced transparency and restorative, technical intervention seem like sound regulatory initiatives, I problematise the methodologies, models and assumptions of sovereign ratings to show how the new ratings framework may actually impede the ability of the technocratic European Securities and Markets Authority (ESMA) to redress the most egregious deficiencies of ratings. Drawing on the performativity of market relations, the paper argues how ESMA's supervisory conflicts undermine the EU's capacity to perform an alternative political economy of limits. Neither is it democratically sanctioned to interfere in the analytical substance of ratings nor should it distort the social facticity of creditworthiness by relying primarily on quantitative risk analysis, ESMA will be forced to either repoliticise the ratings process or promote the status quo, which diminishes fiscal sovereignty.

Keywords: credit ratings; performativity; risk and uncertainty; sovereign debt; financial governance; European Securities and Markets Authority

Introduction

As the financial crisis morphed into the sovereign debt debacle, governments assumed huge liabilities through the injection of massive amounts of liquidity designed to save the financial system from collapse (Blyth 2013). Strained public finances continue to impede the rehabilitation of sovereign creditworthiness; which fuels an antagonism between the programmatic/expertise and operational/politics dimensions of fiscal governance. Many of the most distressing cases remain in the European Union (EU). In addition to the tremendous structural reforms designed to help European economies regain their growth, the creation of the European Securities and Markets Authority (ESMA), a new independent EU Authority, seeks to redress one of the most egregious practices that threatens to jeopardise both financial market stability and fiscal sovereignty: sovereign credit ratings.

This article problematises ESMA's capacity to fulfil successfully its governmental mandate of the regulatory centralisation, enhanced transparency and restorative (technical) intervention of the credit ratings space. Reflective of a broader managerial movement centred on the financial governance of risk (Best 2010; Power 2007), I argue how the provisions of the new credit rating agencies (CRA) regulatory framework – Regulation (EC) No 1060/2009 (CRA Regulation v1); its amendments (EU) No 513/2011 (CRA Regulation v2); and the latest (EU) No 462/2013 (CRA Regulation v3) – may actually undermine the EU's strategy of diffusing a growing antagonism between the imperatives of financial markets and those of national democratic politics (Hay 2004; Posner & Blöndal 2012).

Austerity's demands for heavy (expenditure-based) concessions reflect a dominant (disinflationary) mentality implicit in ratings – aligned with self-systemic, and thereby self-regulating, Anglo-American forms of capitalism (Nölke & Perry 2007, 123; Roy, Denzau & Willet 2007). Treated as monolithic and universal prescriptions, these neoliberal logics help subject unique budgetary relations to an artificial fiscal normality and rectitude. Granted that a monetarist orthodoxy underpins the eurozone, which is reinforced by the Germanic core, as constant extensions (e.g. three for France since 2009) demonstrate, it is highly susceptible to being politicised for domestic purposes. Conversely, as (depoliticising) socio-technical devices of control, credit ratings serve to facilitate this 'translation' (Latour 1987) of diverse national (fiscal) problematisations into mutually corresponding, and potentially reinforcing, global ones, as they help with the performation of an (austere) political economy of creditworthiness; which is commercialised and exploited by financial markets.

ESMA must grapple with how, as internal forms of governmentality underpinning this neoliberal politics of limits, sovereign ratings help to control budgetary 'deviance' by rendering sovereign debt intelligible as a particular 'problem of government' to be managed (Miller & Rose 1990). This demands accounting for how the social facticity of creditworthiness becomes constructed to enshrine this disinflationary notion of rectitude as the dominant fiscal normality. Drawing on the 'social studies of finance' and the analytics of government (Aitken 2007; Langley 2008; MacKenzie 2006; O'Malley 2004), the following sections analyse the ensuing 'battle' between private markets and public governments to constitute what counts as authoritative knowledge underpinning sovereign creditworthiness, which works to define the parameters of budgetary reality and performatively produce the 'politics of limits'.

In this contest, what interplay of processes and discourses serves to reinforce an austere budgetary rectitude that threatens to depoliticise fiscal sovereignty? Furthermore, can the application of a predominantly technocratic rule book improve the operations and surveillance of this largely depoliticising field of finance to mitigate its escalating socio-political costs? Otherwise, what are the consequences for democratic economic governance in Europe, and around the world? In answering these questions, this article argues that the EU management of this antagonistic relationship between market-driven expertise and sovereign democratic governments is only complicated by a serious conundrum, which detracts from its authoritative capacity to perform an alternative politics of limits.

The bewildering paradox is that the governments who bailed out a reckless financial system must now earn the confidence of the very CRAs – often regarded as some of the least credible entities in global finance – who played such a precarious role in precipitating the liquidity and valuation crises behind the most severe economic correction since the Great Depression. Now ESMA must prevent a repeat disaster. However, excessively preoccupied with the *exogenous* (risk) elements of this problem, without any serious consideration of its *endogenous* (uncertainty) dimensions, ESMA's capacity to do so is questionable given that the very risk management techniques which helped precipitate much of the debacle are still taken for granted. With so much vilification of Standard & Poor's (S&P), Moody's and Fitch, or the institutional dimension, little serious attention has been donated to problematising the ubiquitous financial practice which has helped compensate for CRA failures: the methods/models of rating credit risk. But, as this article demonstrates, this is where this antagonistic relationship between the programmatic/expertise and operational/politics dimensions of fiscal governance is most revealing.

Sovereign ratings are not brute facts to unearth. Rather it is through the performativity of ratings that certain assessments and articulations of creditworthiness become hegemonic – while others are marginalised – to help produce the fiscal realities which they describe (Paudyn 2014). Neglectful of how this social facticity of sovereign creditworthiness is constructed and legitimised through discursive practices, such as risk and uncertainty, this analytics of government helps unpack sovereign ratings to show how ESMA may either promote the status quo or be placed in the awkward position of repoliticising the ratings process without a clear mandate; thereby exacerbating the asymmetry between expertise and democracy.

To demonstrate how detrimental this risk-based strategy is to the EU's regulatory capacity, and its consequences for fiscal sovereignty, the following argument proceeds along two main tracks. First, in order to appreciate how sovereign ratings distort fiscal relations, the ratings process is problematised in relation to the performativity of a disinflationary political economy of creditworthiness. Second, cognisant of the inconsistencies in the analytics of ratings, the next part discusses ESMA's response and the deficits of this CRA regulatory regime. Not only does the danger of conflating key categories like methodologies, models and assumptions threaten to entangle ESMA in their repoliticisation, but the push to enhance transparency through risk exposes the EU to further prohibitive (performative) effects; which undermine its struggle to perform an alternative political economy of creditworthiness, and thus potentially makes a bad situation worse.

Rating Sovereign Debt

Sovereigns are assessed through an arsenal of quantitative risk calculus, which seeks to compute the debt-bearing capacity of an entire nation by disassembling governments into analytical categories, calculating each individually, before reaggregating them into a credit score. Pressured to refine its 2008 criteria, Moody's (2013) 'scorecard' involves the quantification of four factors: economic, institutional, and fiscal strengths, plus susceptibility to event risk. Whereas it employs a five-point grade scale, S&P's (2011a) Rating Analysis Methodology Profile (RAMP) uses a one (the best) to six (the worst) format to capture a sovereign's:

1) Institutional and governance effectiveness score - previously 'political risks';
2) Economic score - economic structure and growth prospects;
3) External score - external liquidity and international investment position;
4) Fiscal score - budgetary performance and flexibility; debt burden;
5) Monetary score - monetary flexibility; exchange rate stability.

This is then supplemented with subjective estimations in order to account for the uncertain vicissitudes of unique fiscal sovereignties. Unfortunately, the synthesis of quantitative (risk) measures and qualitative (uncertainty) judgements is concealed by CRAs.

Codified and commercialised as the 'risk of default', through the ratings scale (e.g. 'AAA' to 'D'), an infrastructure of referentiality is (discursively) constructed denoting a government's willingness and ability to service its debt obligations; which privileges 'monetarist' and 'supply-side' economics over 'demand-side' management (Hay 2004; Sinclair 2005). Broad fiscal austerity is deemed necessary to restore credit market confidence, protect the value of assets and even reduce bond yields (costs of borrowing) (Azerki, Candelon & Sy 2011).

Kept in the black box, however, contestation abounds as to the design of ratings. The definition of 'default' is itself hotly debated; with Moody's privileging expected loss and the ability to pay, while S&P evaluates default probability along with the willingness to pay and Fitch relies on some aggregation of the two. Rare sovereign defaults only preclude a clear and concise understanding or the unequivocal reliance on statistical probabilities.

More alarming is how such an opaque process is hindering the ability of governments – especially on the European periphery – to perform some of the main functions of democratic government. Rather than spurring growth, structural reforms (e.g. labour markets) and strict fiscal consolidation have constrained the provision of social democratic programmes, such as Spain's April 2012 announced €10 billion a year reduction in healthcare and education spending, helped prolong six consecutive years of contraction in the Greek economy at a cost of a quarter of the nation's economic output, and threaten the integrity of solidaristic welfare models (Blyth 2013).

Yet to appear *scientific* and *objective* – necessary for legitimacy – technical expertise mediates this representational process of surveillance as regulation to compensate for inconsistencies; which helps immunise and depoliticise the process (Miller 2001). CRAs mute the unique status of sovereigns in order to make their budgetary relations more tractable to the rational choice methodology and stress tests implicit in their propriety models (Kerwer 2002; Sinclair 2005, 139). Similar to corporates, risk scenarios are coupled with comparative metrics and rating transition matrices parameterised to assess current deviance and future rating changes. For example, Moody's Analytics' (2011) Expected Default Frequency (EDF) platform is such a probability default metric. An extension of the Black-Scholes-Merton model of credit risk, where a firm's assets follow a geometric Brownian motion, a structural credit risk model seeks to filter and separate underlying credit components into quantitative variables, such as market capitalisation, volatility, and historical default data. In reference to physics – where Brownian motion entails the random movement of minute particles caused by collisions with surrounding molecules – it explores stochastic processes in continuous time. A 'narrow rating range' is then compiled; whereby countries are synchronically standardised through an ordinal ranking of credit risk and then compared.

An implicit ergodicity develops, which is reinforced by the fact that sovereign bonds are treated identically to corporate debt and lack any specific provisions in the CRA regulation. Structured finance is a separate category; but also plagued by serious distortions. Pooling cash flow-generating assets (e.g. mortgages, bonds), before repackaging them into discrete tranches of risk, as with collateralised debt obligations (CDO), has also proven fraught with failure. Such financial engineering distorts the differentiation of their multiple tranches of risk valuations; which compromises the calculation of delinquency or default. Alleged CRA incompetence here is staggering. Out of all the U.S. private-label 'residential mortgage backed securities' (RMBS) which S&P rated 'AAA' between 2005-07, over 75 per cent were slashed below investment-grade ('BBB-') (IMF 2010, 88). Yet much of this risk management also informs the rating of sovereigns.

Of course, although substantial overlap exists, Moody's (2008, 1) admits that:

> there is no quantitative model that can adequately capture the complex web of factors that lead a government to default on its debt. The task of rating sovereign entities requires an assessment of a combination of quantitative and qualitative factors whose interaction is often difficult to predict.

S&P (1992, 15) confirms the contingency of the process, conceding that 'there is no exact formula for combining these scores to arrive at a ratings decision'. How 'the committee views one category depends upon other categories and trends as much as upon the absolute level of many measures' (S&P 2008, 2). Nevertheless, both are adamant that any 'qualitative elements are integrated within a structured and disciplined framework so that subjectivity is constrained' through the 'continuous effort to make the analysis more quantitative' (Moody's 2008, 6). In other words, as the next section develops, there is a concerted effort to transform (singular) fiscal uncertainties into (aggregate) pools of risk; as if they were binary, malleable *things*. Defendable risk calculus serves to mask some of the inconsistencies and liabilities of rating through uncertainty and devalues discretionary (political) conduct; thereby depoliticising the political economy of creditworthiness (Paudyn 2013). But deconstruction reveals its disguised presence, which opens the ratings process to more scrutiny and the potential for alternative articulations of creditworthiness.

Credit Rating Governance

Implicated in some of the most severe crises and scandals in recent memory (i.e. Asian Flu, Enron), it is odd that CRAs/rating had managed to escape any serious regulation until the 2007-08 'Great Recession', and subsequent European sovereign debt woes, evoked a vociferous backlash that compelled Europe to act. Amidst these crises, the European Commission (CEC 2010; 2011a) identified four deficiencies in the operations and supervision of the ratings space blamed for escalating the turmoil. Chief among these hazards is an 'overreliance' by market participants on (often dubious) external credit scores; as an outsourced form of due diligence. This dilemma is only compounded by the lack of competition in the ratings space. Both the European Commission (2011a) and the US Securities and Exchange Commission (SEC, 2009) calculate that the big three CRAs are responsible for a staggering 95-97 per cent of all ratings across all categories. New entrants and methods could potentially improve the poor quality of ratings and introduce alternative assessments/articulations of creditworthiness. Greater accountability is also considered necessary to 'ensuring the integrity, transparency, efficiency and orderly functioning of securities markets, as well as enhancing investor protection' (ESMA 2012a).

Since even counter-cyclical effects may result, it is odd that ESMA has adopted an approach which may promote the status quo by enhancing the ubiquity of risk vectors and metrics. Following the trajectory of financial regulatory convergence accelerated by the Financial Services Action Plan (FSAP) (Grossman & Leblond 2011, 416), and the technical expertise advocated by the 'Lamfalussy Process' (Mügge 2011, 60), the EU regulatory response is geared towards the financial management of risk and assumes three principal forms: governmental centralisation, enhanced transparency and restorative (technical) intervention.

One core recommendation is to enhance governmental coverage and coherence through the centralised surveillance of ratings agencies with the creation of a new independent EU Authority: ESMA. From July 2011, ESMA has replaced the Committee of European Securities Regulators (CESR); which merely served as a technical advisory committee. Afforded new 'delegated and implementing acts', ESMA is entrusted with CRA registration and supervision; including launching investigations, conducting inspections, proposing fines and prohibiting operations.

The next targets the mechanics of the ratings process in the hope of improving their transparency and quality. Equipped with a sophisticated technical apparatus, investors and officials may be better able to 'decrypt the rationale behind the sovereign rating event' (CEC 2011b, 16). Aligned with the hegemonic discourse of risk (Beck 1999; Power 2004), technical intervention is deployed to calculate deviance in the ratings process and restore what is conceived of as a (temporary) malfunction of credit markets (Engelen *et al.* 2012). Better risk models and greater transparency are at the core of this technocratic approach (Best 2010). Of course, such an emphasis on technical risk expertise, which privileges repeatable back-testing, from which future loss curves are anticipated, presupposes that fiscal relations are an *objective* and *measurable* reality that need only be unearthed with the right (quantitative) instruments.

Embedded in the broader risk narrative, this mentality is noticeable in the push to increase surveillance authority through measures like credit-scoring systems (Langley 2008; Leyshon & Thrift 1999) or reputational metrics (Power 2007). Although the pan-EU governance of the ratings space is welcomed, this article argues that the success of ESMA in correcting some of the most egregious elements of sovereign ratings is jeopardised by a misguided adherence to risk discourse as its core strategy for the ratings space. By neglecting the distortions produced by risk, it reinforces the shift in decision-making away from (discretionary) human competencies and critical judgement towards (defendable) quantitative techniques; which reflects a rationality that privileges the imperatives of the market over that of social democratic politics.

Uncertain Fiscal Relations

Drawing on research from the 'social studies of finance' (Callon 1998; Latour 1987; MacKenzie 2006) and the 'analytics of government' (Aitken 2007; de Goede, 2005; O'Malley, 2004), we arrive at a better understanding of how ratings acquire an authoritative capacity which threatens to undermine national fiscal sovereignty, and how the new EU regulatory response may compromise the constitution of an alternative political economy of creditworthiness. Governmentality equips us with the deconstructive/reconstructive 'tools' necessary to unpack sovereign ratings to show how risk distorts the analytics of ratings – the constituent components and processes involved in the construction of a credit score. Subsequently, performativity elucidates how through risk, ratings create the conditions and subjectivities that help validate their prescriptive (neoliberal) programme. Of particular significance here are the prohibitive (performative) effects on governments.

Underpinning the potential supervisory problems facing ESMA is the uncertainty of framing fiscal relations. Resorting to the construct of risk, sovereign debt is problematised as primarily a quantifiable, probabilistic propensity towards fiscal failure (Cantor & Packer 1995; Reinhart & Rogoff 2009). Through a 'referentialist metaphysics' (Maurer 2002, 18), which presupposes prior states of creditworthiness to unearth and aggregate, risk has synchronising effects that enable a political economy of creditworthiness based on the supposed congruence of diverse sovereigns. Recourse to this 'discourse of transcendental rationality' (Thrift 1996, 13) supposedly helps bridge together heterogeneous fiscal relations by making them susceptible to a uniform fiscal normality. Through the ergodicity of risk, this normality exhibits certain self-systemic/self-regulating properties, which are considered quantifiable, and thus manageable. The ensuing consistency, comparability and remote calculative capacity purportedly make messy fiscal relations tractable to the kind of rational choice modelling which eliminates the perception of imperfect information.

Accordingly, like the field of finance, the conventional CRA literature regards risk calculus as neutral and/or advantageous (Cantor & Packer 1995; Lowe 2002; Reinhart 2002); thereby juxtaposing credit risk against uncertainty. Lacking the empirical coordinates of risk

(Beck 1999; Reinhart & Rogoff 2009), uncertainty eludes quantitative capture and demands more subjective estimations of creditworthiness. Displacement or conversion of the latter (qualitative uncertainty) by the former (quantitative risk) is deemed possible with enhanced information and sophisticated calculative technologies/risk metrics. Moody's Analytics (2010, 1, added italics) Market Implied Ratings (MIR) software claims to '[disentangle] isolated changes in risk...from the *noise* of the general markets', which includes politics, by *translating* quantitative prices of bonds or equity into a 'standard Moody's ratings language' in order to 'capture credit *quality* sentiment'. While this increases the urgency for the *correct* synthesis of the quantitative and qualitative, it fails to specify how this translation happens; beyond vague notions of displacement.

Similarly, ESMA fails to recognise how an excessive reliance on the predictive positivism of risk promotes techniques that actually distort the political economy of sovereign creditworthiness. Budgetary politics are replete with fluid exigencies that infuse a significant degree of indeterminacy about the capacity and willingness of governments to implement austerity programmes (Sinclair 2005, 176). Ultimately, sovereign ratings rest on a judgement about the political will to subject constituents to the hardships of adjustment without imposing an *intolerable* burden on them (Moody's 2008, 6). Probability of payment depends on the palatability of the (socio-political) costs of austerity.

Stabilisations about a sovereign's unfolding fiscal future through risk may help objectify its creditworthiness for market commercialisation, but skew this contingency to render an artificial fiscal normality advocating disinflationary logics. This programmatic '[draws] a (provisional) dividing line between those questions that we consider need to be treated politically and those that can be delegated to the market' (Callon 2010, 164). Although the 'modalities of this distribution' remain contested and vulnerable to disruption, hence the antagonistic relationship, risk management depoliticises the discourse enough to facilitate their imposition on heterogeneous Member States. Complementarity to the disinflationary bias of EU budgetary politics promoted by Germany and the Troika helps (temporarily) mitigate its breakdown. But austerity fatigue can hasten that critical breaking point when its destabilising effects force governments to rebalance/repoliticise the debate and reclaim fiscal sovereignty to refute ratings; or what MacKenzie (2006: 19) labels 'counterperformativity'. Unfortunately, ESMA may hamper the successful construction of a different narrative.

Thus, this article contends that ESMA must come to terms with how sovereign debt is rendered a specific 'problem of government', or social fact, through 'techniques of truth production' (Foucault 1980; Rose 1999), and the prohibitive effects for Member States. While

Tim Sinclair (2005) alludes to historical knowledge networks, he is not precise about the techniques involved in their construction and regeneration. Here risk and uncertainty act as 'boundary objects', which are appropriated and deployed as modalities of rule by CRAs, and investors, to help constitute authoritative knowledge about creditworthiness. Similar to 'illocutionary' performatives (Callon 2010), this helps demarcate the limits of debt financing (i.e. politics of limits). Suspending the search for the *real* ontological coordinates of *things* called 'risk' and 'uncertainty' or their *correct* calculation/price and synthesis, this diagnostic focuses on how the infrastructure of referentiality that forms through these modes makes indeterminate fiscal relations intelligible as 'stable, mobile, combinable and comparable' (Miller & Rose 1990, 7). As opposed to just opinions or brute facts, this illuminates the 'perlocutionary' performativity of ratings as internal forms of governmentality underpinning (neoliberal) budgetary relations (Paudyn 2014). Closest alignment with the disinflationary logics of Anglo-American versions of capitalism, which prize the protection of asset values, is rewarded with the 'AAA' grade. Owning the printing press for the global reserve currency, in which much foreign debt is denominated (i.e. USD), also earns special treatment.

Treating them as modalities of government relieves us of the burden of searching for ontological equivalence in fluid fiscal relations; as neither risk nor uncertainty is inherently more or less abundant during a sovereign debt crisis. This eliminates a false binary dichotomy between the quantitative (risk) and qualitative (uncertainty) evident in the ratings space and conventional literature; which has helped foster the 'performation' of ratings to control compliance by better enabling CRAs/investors to manipulate the constitution/validation of the problem of sovereign debt through risk. Deployed to help constitute what counts as authoritative knowledge, these modalities are integral to the performativity of the politics of limits. To be effective, therefore, ESMA must target both risk and uncertainty in the assessment of creditworthiness; which entails adopting each of these modalities itself. However, this leads to the conundrum of either the repoliticisation of the ratings process or the depoliticisation of fiscal sovereignty.

Although enhanced transparency may seem as the solution to the opacity endemic to the ratings process, by focusing primarily on the verification of exogenous (quantitative) risk calculus, ESMA is blind to how perceptions of *contingency* and *normality* – namely informal judgement or management through the modality of uncertainty (de Goede 2005; O'Malley 2004; Paudyn 2013) – are mobilised by rating committees to help account for the 'singular nature of sovereignty' (Moody's 2008, 6) in the constitution of creditworthiness. But inattentive to the endogenous (qualitative) dimensions of credit analysis, the EU may inadvertently empower the calculative modality of risk at its own expense; irrespective of its eventual output.

If all the previous revelations about grave rating errors (e.g. Asian Crisis, Parmalat, sub-prime woes) have failed to disqualify risk ratings, then it is not a matter of obtaining more evidence but the authority of the method that is significant. Rather than an ontological fact to verify, the performativity of ratings creates the realities it purports to describe as social facts. Through a 'positive affective charge' (Langley 2012, 4), their *scientific* character grants ratings a performative power, which compensates for their inconsistencies and errors. As ratings help constitute the conditions and subjectivities privileging this disinflationary mentality, deconstruction reveals how risk works to depoliticise this process and invalidate alternative – often democratically-based – notions of budgetary rectitude. Here elected leaders or civil society are derogated from a greater contribution in establishing what is fiscally permissible.

Experts deploy risk to control budgetary performance through normalising models and universal benchmarks. Politically discretionary stimulus strategies become increasingly marginalised and censured to render what Foucault (1980, 81) refers to as 'subjugated knowledges', which 'have been disqualified as inadequate to their task or insufficiently elaborated: naïve knowledges, located low down on the hierarchy, beneath the required level of cognition or scientificity'. Through the 'objectifying cloak of economic and financial analysis' (Sinclair 2005, 34), technical, expert knowledge is shielded from contestation as risk '[immunises] decision-making against failure' (Luhmann 1993, 13). Consequently, governments must answer to unaccountable experts. But it is these leaders – not the experts – who know what the politics of limits actually are. Any subsequent repoliticisation of the ratings process, therefore, may only entangle ESMA in a politics for which it is not (democratically) qualified to mediate.

Neoliberal Programmatic Convergence

This aggregating and *scientific* character of sovereign ratings facilitates the communication of their disinflationary *programmatic* dimension; which privileges self-systemic/self-regulating, Anglo-American forms of capitalism (Roy, Denzau & Willet 2007). Yet there is nothing innate or natural about the discourse of 'austerity' or neoliberal capitalism. Rather 'the rational principle for regulating and limiting governmental activity must be determined by reference to "artificially" arranged or contrived forms of the free, entrepreneurial and competitive conduct of economic-rational individuals' (Burchell 1996, 23). As the IMF's misjudgement of the medium-term sustainability of Greece's public debt indicates, the depth and timing of budget cuts cannot be taken for granted. Austerity is not the self-evident 'correct' policy response, as often advocated, but needs to be analysed for its 'conditions of possibility and regularities' (Miller & Rose 1990, 12).

Aligned with monetarism, which also underpins EMU, ratings help translate this rationality that regards fiscal expansion as a threat to supposedly trans-historical economic imperatives, such as the efficient free market allocation of resources, into reality as a social fact through their inter-subjective performation as socio-technical devices of 'control' (Deleuze 1995). Control is exercised as ratings are deployed to modulate/inhibit (fiscal) deviance at multiple sites. Adoption of the Stability and Growth Pact (SGP), and subsequent Treaty on Stability, Coordination and Governance (TSCG), which includes all 18 eurozone members as signatories to its Fiscal Compact, are explicit commitments to maintaining such low budget deficits (below 3%). Of course, ultimately, national politics trump EU accords; as the 2003 SGP crisis and extensions demonstrate.

Since 2010, public investment has collapsed by more than 10 per cent in sixteen Member States (CEC 2014, 7). This has helped hamper growth and exacerbate national fiscal imbalances. Stagnating, deflationary economies are under pressure to reverse course and inject stimulus spending. Inflationary policies, however, may prompt premature interest rates hikes, which threaten to impede capital mobility and imperil the recovery. Given the unequal effects of uniform policy on heterogeneous economies, growing divergence between the European periphery and core may jeopardise existing EMU frameworks (e.g. Greek exit).

Governments, ostensibly, must be attractive for capital. A main reason for Moody's (2012) downgrade of Italy from 'A3' to 'Baa2' on 13 July 2012 was 'an eroding [of the] non-domestic investor base'. Amongst other practices, sovereign ratings serve as an internal form of governmentality, whose authority is linked to their capacity to induce convergence with this disinflationary normality through compliance with their austere programmatic. Deviance – linked to excessive stimulus – can trigger a downgrade, increase financing costs, and hamper programmes of national self-determination. Thus, ratings have prohibitive (performative) effects on governments.

To appease global financial markets, current account rebalancing has translated into a reduction in expenditure of over 5 per cent of GDP from 2011-15 in numerous countries, including Spain, Portugal and Poland (CEC 2014b). Unfortunately, given the negative feedback loop between budgetary policy and economic growth, arguably, this fiscal adjustment may be damaging growth prospects and forcing states to incur more debt as they stagnate. Not only is

EMU debt-to-GDP forecast to climb to 95 per cent in 2015 (CEC 2014b, 1), but ultra low inflation (-0.3 per cent in February 2015) and feeble GDP growth – estimated at a paltry 1.4 per cent until 2024 (CEC 2014a, 23) – are only fuelling a crisis in confidence between the battered European periphery and Germanic core. Persistently high unemployment – 26 per cent in Greece and 24 per cent in Spain – and austerity fatigue reinforce a growing sentiment that the appeasement of financial markets, and Germany, through austerity is proving self-defeating.

Yet, reluctant to promote a model not sanctioned by the market, new supervisory powers (*Article 23*) prohibit ESMA from intruding into the (CRA) analytical substance of ratings, and *repoliticising* the ratings process. Because the serious assessment of sovereign ratings entails a significant degree of discretionary conduct, bureaucratic intrusion may distort the qualitative dimensions of credit grades; which threatens to prejudice their responsiveness to changing market conditions. As a managerial disposition for dealing with such immeasurable contingent liabilities, the government through uncertainty cannot be systematically orchestrated because of its non-ergodicity.

In principle, the logic of a market-driven regulatory regime is understandable. Bureaucrats lack the competence and resources to appraise creditworthiness adequately. ESMA also lacks the democratic accountability necessary to make such qualitative judgements required to rebalance this asymmetry. In practice, however, given this implicit uncertainty in framing fiscal relations, a rigid adherence to a restorative technocratic (risk) approach intent on protecting the independence of Moody's or S&P may actually compel ESMA to repoliticise the process. Effectively relinquishing democratic oversight to technocrats is a slippery slope. Crucial political judgements about fiscal affairs will be increasingly considered as the purview of unelected experts, such as CRAs. Thus, ESMA is assuming risks for which it is neither prepared nor mandated to manage.

Analytical Assessment of the Ratings Process

Vague regulatory definitions and stipulations in the CRA framework expose ESMA to conflicts and serve to attenuate its authority; which may potentially stifle alternative forms of appraising sovereign creditworthiness. Many of these regulatory inconsistencies stem from the mentality of government that ESMA has adopted. By importing a corporate-based rationality of risk management, ESMA's methodological focus is primarily skewed in favour of quantitative measures. Identically treated to corporates, no specific provisions for sovereigns exist in the CRA framework to assess fiscal relations or make contingent liabilities more explicit. Rather ‘key assumptions and quantitative and qualitative criteria are validated (ex-ante) and reviewed (ex-post) through appropriate forms of back-testing’ (ESMA 2012b, III.IIf). Demanding ‘continuous’ validation ‘supported by statistical, historical experience or evidence’ (ESMA 2011, Art.4.1a) – where actual defaults are compared with the probabilities of default predicted in transition matrices – the EU is asking for representative data samples of fiscal politics that just do not exist. Sovereigns rarely default at the rate that businesses fail. Such questionable regulations and over-emphasis on quantitative analysis threaten ESMA’s mandate and the EU’s capacity to redesign an alternative assessment/articulation of creditworthiness, and thus perform a different politics of limits.

Unfortunately, the current risk mentality parallels that of private CRAs. Yet even S&P (2008, 11) concedes that ‘comparative statistics are affected by the small number of rated sovereign defaults’; but given the ‘same rating definitions’, it ‘expects sovereign default probabilities to be closer to private-sector ratios over time’. Dubious claims such as this flow from an excessive reliance on probability convergence implicit in repetitive risk metrics. Methods make the markets. Their application to contingent fiscal relations distorts both the assessment of sovereign debt and the verification of its methodological compliance because, as Moody’s (2008, 13) admits, there are ‘no quantitative-based approaches that satisfactorily replace analysts’ disciplined judgment on these questions’. ESMA cannot blindly adopt the prevailing mentalities with all their inadequacies and hope to correct their consequences.

Where dilemmas arise about the calculation of ‘political risks’, such as a ‘clear process of succession’ or the ‘robustness of political institutions’ (S&P 2011a, 10-11), ESMA (2011, Art.4.2a) instructs CRAs simply to submit ‘the scope of qualitative judgment’ in such contestable areas. How such an ambiguous request can be satisfied is daunting to fathom; much less institutionalise across the board. ESMA’s answer to this conundrum is equally nebulous. Should ‘limited quantitative evidence to support the predictive power’ of the rating methodology exist then its validation can be secured if ‘*sensible* predictors of credit worthiness’ are available (ESMA 2011, Art.7.6, added italics). Without a clear definition, however, determining what constitutes as ‘sensible’ in relation to diverse political economies is not only mindboggling but open to numerous conflicting (political) interpretations. Neither is ESMA privy to how CRAs render their internal judgements nor is it equipped to evaluate the ‘sufficiency’ or ‘sensibility’ of these contingent liabilities without making political assumptions and intruding into the rating process.

Yet these conflicts cannot be dismissed as trivial because, as S&P (2011a, 9) argues, ‘political risks are among the main drivers of the poor economic policies that lead to default’.

Irrespective of its asset position, a government with a political score of '6' cannot be rated higher than 'BB+'. Given how much notions of sensibility inform the understanding of normality/rectitude, and thus what counts as authoritative knowledge, its design is integral to the performativity of the politics of limits. ESMA may defer to Moody's or S&P to define the parameters of sensibility, and witness its oversight authority diminish, as probabilistic benchmarks establish these parameters. Otherwise, it will be dragged into heated debates, such as when Moody's (2011a) relegated Portugal's debt to 'junk' on 5 July 2011 or S&P (2012a) cut of France and Austria to 'AA+' on 13 January 2012, and make the kind of political judgements which interfere with the analytical substance of the ratings process. Surrendering democratic supervision, however, to a body of experts that neither wants the role nor is suited for it is dangerous.

Compounding these headaches is ESMA's obligation to decipher if Moody's or S&P are, indeed, applying 'internal procedures in a consistent way over time and across different market segments' (ESMA 2011, Art.7.6). Consistency is an admirable objective. But even the Commission (2011b, 15, added italics) admits that the 'important degree of subjectivity of the sovereign rating process' and 'the *lack of consistency* of CRA's behaviour over time' contribute to a 'substantial increase of the "arbitrary component" of sovereign ratings...and point at the existence of subjective biases in favour or against rated nations'. Similar conclusions have been empirically demonstrated by Gärtner, Griesbach and Jung (2011). Not surprisingly, the exact synthesis of the quantitative/qualitative techniques involved in a rating judgement is not disclosed because that would force CRAs to explain the subjective (read biased) nature of their decisions (Johnson *et al.* 1990); which would detract from their authority to perform this disinflationary political economy of creditworthiness. Unfortunately, quantitative efforts focused primarily on enhancing transparency not only fail to capture such subjectivity but misrepresent it as an objective fact. ESMA's complicity in such a distortion would only reinforce the status quo.

Methodologies, Models and Assumptions

To appreciate this conundrum between the erratic repoliticisation of the ratings process and the complicit depoliticisation of fiscal sovereignty, which jeopardises the EU's authoritative capacity to perform an alternative politics of limits, the categories of rating design must be problematised. Indicative of the rationality of risk, the Regulatory Technical Standards (RTS) stress that an improvement in the quality of sovereign ratings is connected to the 'continuous' character of their methodologies (ESMA 2011, Art.6). ‘Objective reasons’ must be presented to justify either modification or discontinuance. Movements in ‘structural macroeconomic or financial market conditions’ are considered to satisfy this criterion. Subjective estimations, however, are necessary to gauge the severity of any shock – especially socio-political risks – and the suitability of proposed revisions to the rating methodology, models and assumptions; many of which are inherently political. In the preservation of procedural stability, the deconstruction of these categories shows how ESMA may conflate them and place itself in the awkward position of analytically assessing whether the proposed changes are warranted and valid. Although government through uncertainty may be an inevitable feature of the EU’s management of ratings, its official strategy fails to recognise and properly accommodate it. This leaves ESMA vulnerable to additional supervisory conflicts and the unintended consequences of repoliticisation.

At present, the RTS may compel ESMA to confuse credit rating methodologies with analytical models and principal rating assumptions. Its responsibility is to:

> consider whether a credit rating methodology has a demonstrable history of consistency and accuracy in predicting creditworthiness and may have regard to methods of validation such as appropriate default or transition studies designed to test that specific methodology. (ESMA 2011, Art.3.3)

The difficulty in assessing what constitutes as ‘default’ in relation to diverse sovereigns has already been noted above. Even more painstaking is the risk-dominant approach that ESMA has adopted to verify whether CRA methodologies are ‘appropriate’ and ‘objective’. Rating methodologies refer to the specific frameworks and processes which govern the application of criteria principles to produce a score. Parametric statistics are an example of the (technical) methods employed by rating agencies to assess variables like current and future (corporate) cash flows or the ability to cover expected interest expenses for issuers in particular industries (S&P 2010).

In regards to sovereigns, the ‘through-the-cycle’ (TTC) rating methodology relies on such techniques to aggregate specific and dynamic knowledge about the obligor’s debt position. Serious criticisms of the TTC, however, attack it for its procyclical bias (IMF 2010) and for failing to capture adequately the translation of political movements into credit risk (Valles 2006). Rating stability and prudent migration policies, which wait to determine if any deviation is cyclical, result in excessive downgrades once triggered. Yet deciphering what constitutes as a permanent transition in credit quality is arduous since there is no single, reliable detection mechanism available. Furthermore, as noted, Moody’s TTC EDF programmes are derived from its corporate firm model, and heavily depended on historical default rates; which are infrequent for sovereigns. Expert authority is predicated on ‘being able to establish repeatability, most especially by reducing the scope for variability’ through the production of ‘“controlled” results’ (Thrift 2004, 588). Quantitative methods help facilitate that outcome; thus minimising the scope for discretion and contestation.

But fiscal politics fails to reproduce itself at regular frequencies. Determining the ‘rigorousness’ and ‘consistency’ of these quantitative measures – without interfering in their analytical substance – entails reproducing the calculations themselves; if they are appropriate. Consistent repetition, however, not only works to embed the technical methodologies of risk but also accelerates the translation of its discursive elements into material reality. The internalisation of this neoliberal rationality communicated through risk is dependent on ‘a compulsory repetition of prior and subjectivating norms, ones that cannot be thrown off at will, but which work, animate, and constrain the...subject’ (Butler 1993, 22). Performativity combines this relationship between action and authority; whereby repetitive risk calculus elevates the significance of quantifiable variables, and diminishes the value of discretionary conduct, in the assessment and articulation of creditworthiness.

Where ESMA is bound to experience even more difficulty is with the models and assumptions which underpin sovereign ratings. Models are ‘a simplification of, and approximation to, some aspects of the world’ (King *et al*. 1994, 50) that help rating committees analyse the shock-absorbing capacity and resilience of a sovereign. Stress scenarios implicit in these propriety models primarily rely on a synthesis of informal judgement and statistical probabilities to validate competing propositions about its willingness and capacity to fulfil its obligations. How this occurs is never revealed. While the ‘a TTC rating process estimates the distance to default based on fundamental values’, it ‘imposes a stress scenario on the cyclical component’ (IMF 2010, 116); which demands the exercise of forward-looking, discretionary conduct. These hypothetical tests are associated with a particular rating category and are informed by their underlying premises.

Assumptions are the ‘projections, estimates, input parameters to models, and all other types of qualitative or quantitative expectations that [CRAs] use to arrive at a ratings opinion’ (S&P 2010, 3). Together, they help analysts to identify and discriminate what constitutes as *relevant* criteria and how these quantitative and qualitative factors should combine to formulate, as with S&P, a RAMP. After a rating committee discussion, a vote follows. Explicit or otherwise, contingent liabilities are a constant fixture of the ratings process.

ESMA's verification of dubious methods is only compounded by the informal and political judgement exercised in the assessment of models and assumptions. After all, S&P (2012b, 7, added italics) concedes that 'rather than providing a strictly formulaic assessment' it 'factors into its ratings the *perceptions* and *insights* of its analysts based on their consideration of all of the information they have obtained'. Any comprehensive review of the appropriateness of these subjective estimations will entail a degree of analytical intrusion of the part of ESMA. Lacking a coherent strategy, however, it may resort to over-emphasising the quantitative means, which undermine fiscal sovereignty. This is aggravated by the fact that, although the new RTS allude to these categories individually, methodologies, models and assumptions are never operationally defined – heightening the threat of confusion.

In the preceding CESR guidance – the foundational framework for the RTS – these distinctions were also obscured. There rating methodologies:

> refer to criteria, models, methodological principles for a particular rating or practice; principles and fundamental elements used in analyzing credit risk; rating factors; qualitative or quantitative assumptions used to arrive at a rating opinion. (CESR Ref. 10-945, CESR Guidance)

All encompassing classifications only blur the very categorical distinctions necessary to instruct ESMA on how to identify 'reliable, relevant and quality' models and assumptions (ESMA 2011, Art.4) – along with the 'objective' justifications which sanction their revision – without impinging on their analytical constitution. If these categories are so broad and nebulous as to be superfluous, or even interchangeable, then how can they help identify the specifics of the ratings process requiring correction? Both excessive, yet unnecessary, overhauls and contradictory instructions may result.

What ESMA seeks to avoid is, in fact, what is essential to the performativity of an alternative political economy of creditworthiness: the constitution of authoritative knowledge which helps define sovereign debt as a problem of government. Very much a political construction, it is based on the kinds of models and assumptions which demand ESMA govern through the modality of uncertainty rather than just risk. Without a clear mandate and ill prepared to exercise such political discretion, ESMA may find it onerous to advance competing alternatives. Confusing rating categories, ESMA may inadvertently sanction the models implicit in dubious methods or defer definitional authority to CRAs. Both threaten to weaken the EU's capacity to change how creditworthiness is assessed and articulated.

Conclusion

Diffusion of the growing antagonism between the programmatic/expertise and operational/politics dimensions of fiscal governance may be traced to the struggle to constitute what counts as authoritative knowledge underpinning the problem of sovereign debt. By adopting a risk-dominant strategy, the EU neglects how uncertainty is deployed in the qualitative construction of sovereign creditworthiness as a social fact. While more transparency and restorative, technical intervention are thought to enhance EU regulation of the ratings space, they help create a conundrum which risks entangling ESMA in political debates to an undesirable extent, thereby repoliticising the ratings process, or makes it complicit in the distortion of sovereign creditworthiness. Both threaten to undermine the EU's capacity to perform an alternative politics of limits.

Relinquishing democratic oversight to a technocratic body that neither wants it nor should have it is dangerous. Arguably, nowhere is the analytical intrusion more perilous then in the EU's attempt to ensure stability by gauging the suitability of proposed revisions to rating methodologies, models and assumptions. Politicisation is anticipated as an inexperienced ESMA probes this process with few clear definitions or guidelines. Given the degree of political judgement involved, ultimately, the EU must resolve itself to the fact that it will interfere in the ratings process. How it does so will determine its capacity to shape the politics of limits. If it wants to maintain the integrity of democratic rule, which depends on adequate financing, then it cannot just ignore this fact and arbitrarily grant unelected experts more authority to decide the fate of publics. Being the first comprehensive CRA framework, these dilemmas facing the 'Atlantic Rim' will serve as lessons/models for the looming conflicts on the 'Pacific Rim' (i.e. BRICs).

Conversely, if ESMA becomes disproportionately preoccupied with quantitative measures then it helps institutionalise an artificial budgetary uniformity; as it omits or distorts the uncertainty of framing fiscal relations. Aggregating risk methods may seem more transparent, but their ergodicity serves to impose an artificial fiscal normality on heterogeneous budgetary landscapes. Reliance on an exogenous technocratic fix centred on risk can depoliticise the constitution of sovereign creditworthiness to the detriment of Member States. 'While quantitative measures and models are useful in assessing credit risk', S&P (2010, 4) does 'not believe they capture all the nuances of the real world, which can sometimes contradict the information exhibited in financial ratios or provided by a quantitative model'. Again, the government through uncertainty is apparent and necessary.

Accordingly, this analytics shows how risk will be regenerated and sedimented as the hegemonic discourse; whereby (private) expert forms of rule exercise greater authority over (public) democratic governments. By first willingly surrendering its democratic authority to ESMA, and then having it erode through an adherence to risk in the constitution of the political economy of creditworthiness, the EU is jeopardising the capacity to advance alternative assessments and articulations of creditworthiness, which can protect and deliver its unique capitalist and social democratic imperatives. Ratings act as the internal forms of governmentality through which this austere fiscal normality is translated into reality. Yet, as recent crises have proven, the imperatives of private markets are not necessarily better.

References

Aitken, R. (2007) *Performing Capital: Toward a Cultural Economy of Popular and Global Finance*. New York: Palgrave.

Arezki, R., B. Candelon, A.N.R. Sy. (2011) *Sovereign Rating News and Financial Markets Spillovers:Evidence from the European Debt Crisis*. International Monetary Fund Working Paper 11/68, March. www.imf.org/external/pubs/ft/wp/2011/wp1168.pdf.

Beck, U. (1999) *World Risk Society*, London: Polity.

Best, J. (2010) 'The Limits of Financial Risk Management: Or, What We Didn't Learn from the Asian Crisis.' *New Political Economy*, 15(1), 29-49.

Blyth, M. (2013) *Austerity: The History of a Dangerous Idea.* New York: OUP.

Burchell, G. (1996) 'Liberal Government and Techniques of the Self.' In *Foucault and Political Reason: Liberalism, Neo-liberalism and Rationalities of Government*, Eds. Barry, T. Osborne & N. Rose, 19-36, Chicago: University of Chicago Press.

Butler, J. (1993) *Bodies That Matter: On the Discursive Limits of 'Sex',* New York: Routledge.

Callon, M. (1998) 'Introduction: The Embeddedness of Economic Markets in Economics.' In *The Laws of Markets*, Ed. M. Callon, 1-59, Oxford: Blackwell Publishing.

Callon, M. (2010) 'Performativity, Misfires and Politics,' *Journal of Cultural Economy*, 3(2): 163-69.

Cantor, R., & Packer, F. (1995) 'Sovereign Credit Ratings,' *Current Issues in Economics and Finance,* New York: Federal Reserve Bank of New York.

Committee of European Securities Regulators. (2010) *CESR's Guidance on Common Standards for Assessment of Compliance with Credit Rating Methodologies with the Requirements Set Out in Article 8.3*. Retrieved September 13. www.cesr.eu.

de Goede, M. (2005) *Virtue, Fortune, and Faith: A Genealogy of Finance.* Minneapolis: University of Minnesota Press.

Deleuze, G. (1995) 'Control and Becoming.' In *Negotiations*, Ed. Gilles Deleuze, 169-76, New York: Columbia University Press.

Engelen, E., I. Erturkm, J. Froud, S. Johal, A. Leaver, M. Moran, & K. Williams. (2012) 'Misrule of Experts? The Financial Crisis as Elite Debacle,' *Economy and Society*, 41(3): 360-82.

European Commission: DG MARKT. (2010) *Public Consultation on Credit Rating Agencies*, 5 November, IP/10/1471. Brussels: European Commission.

European Commission. (2011a) *Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) No 1060/2009 on Credit Rating Agencies*, 11 November. Brussels: European Commission.

European Commission (2011b) *Executive Summary of Impact Assessment: Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) No 1060/2009 on Credit Rating Agencies and Proposal for Directive*, 11 November. Brussels: European Commission.

European Commission (2014a) *Quarterly Report on the Euro Area*, 13(4), Brussels: Europe Commission.

European Commission (2014b) *Report on Public Finances in EMU 2014*, Brussels: DG EcFin European Economy Series, September.

European Securities and Markets Authority (2011) *Final Report: Draft RTS on the Assessment of Compliance of Credit Rating Methodologies with CRA Regulation*, 2011/462, 22 December.
Paris: European Securities and Markets Authority.

European Securities and Markets Authority. (2012a) *About ESMA*. Retrieved October 05. http://www.esma.europa.eu/index.php?page=groups&mac=0&id=43.

European Securities and Markets Authority (2012b) *Annual Report on the Application Regulation on Credit Rating Agencies as Provided by Article 21(5) and Article 39a of the Regulation (EU) No 1060/2009 as Amended by Regulation No 1095/2010*, 12 January: Paris: European Securities and Markets Authority.

Foucault, M. (1980) 'Two Lectures.' In *Power/Knowledge: Selected Interviews and Other Writings,* Ed. C. Gordon, 78-108, New York: Pantheon.

Gärtner, M., B. Griesbach & F. Jung. (2011) 'PIGS or Lambs? The European Sovereign Debt Crisis and the Role of Rating Agencies,' University of St Gallen, Discussion Paper 2011-06, March.

Grossman, E. & P. Leblond. (2011) 'European Financial Integration: Finally the Great Leap Forward?' *JCMS*, 49(2): 413-35.

Hay, C. (2004) 'The Normalizing Role of Rationalist Assumptions in the Institutional Embedding of Neoliberalism', *Economy and Society*, 33(4): 500-27.

IMF. (2010) *Global Financial Stability Report: Sovereigns, Funding, and Systemic Liquidity*, October. Washington: IMF.

Kerwer, D. (2002) ‘Standardising as Governance: The Case of Credit Rating Agencies.’ In *Common Goods: Reinventing European and International Governance*, Ed. A. Héritier, 293-316, Lanham, MD: Rowman and Littlefield.

King, G., Keohane, R. & Verba, S. (1994) *Designing Social Inquiry: Scientific Inference in Qualitative Research*, Princeton, NJ: Princeton University Press.

Langley, P. (2008) *The Everyday Life of Global Finance: Saving and Borrowing in Anglo-America.* Oxford: OUP.

Langley, P. (2012) ‘Anticipating Uncertainty, Reviving Risk? On the Stress Testing of Finance in Crisis,’ *Economy and Society*, 41(1): 51-73.

Latour, B. (1987) *Science in Action*, Milton Keynes: Open University Press.

Leyshon, A. & N. Thrift. (1999) ‘Lists Come Alive: Electronic Systems of Knowledge and the Rise of Credit-Scoring in Retail Banking.’ *Economy and Society*, 28(3): 434-66.

Lowe, P. (2002) Credit Risk Measurement and Procyclicality, Bank for International Settlements Working Paper No. 116. Retrieved June 12. www.bis.org/publ/work116.htm.

Luhmann, N. (1993) *Risk: A Sociological Theory*, Berlin: de Gruyter.

MacKenzie, D. (2006) *An Engine, Not a Camera*, Cambridge, MT: MIT Press.

Maurer, B. (2002) ‘Repressed Futures: Financial Derivatives’ Theological Unconscious,’ *Economy and Society*, 31(1): 15–23.

Miller, P. (2001) ‘Governing by Numbers: Why Calculative Practices Matter,’ *Social Research*, 68(2): 389-96.

Miller, P. & N. Rose. (1990) ‘Governing Economic Life,’ *Economy and Society*, 19(1): 1-31.

Moody’s Analytics (2010) Market Implied Ratings. Retrieved August 3. http://www.moodysanalytics.com/Products-and-Solutions/Credit-Research-Risk-Measurement/QuantitativeInsight/Market-Implied-Ratings.aspx.

Moody’s Analytics. (2011) *Through-the-Cycle EDF Credit Measures*, New York: Moody’s.

Moody’s Investor Services. (2008) *Moody’s Rating Methodology: Sovereign Bond Rating*, New York: Moody’s

Moody’s Investor Services. (2011a) *Rating Action: Moody's Downgrades Portugal to Ba2 with a Negative Outlook from Baa1*, New York: Moody’s.

Moody’s Investor Services. (2012) *Moody's Downgrades Italy's Government Bond Rating to Baa2 from A3*. New York: Moody’s.

Moody’s Investor Services (2013) *Rating Methodology: Sovereign Bond Ratings*. New York: Moody’s.

Mügge, D. (2011) ‘Limits of Legitimacy and the Primacy of Politics in Financial Governance,’ *Review of International Political Economy*, 18(1): 52-74.

Nölke, A. & J. Perry (2007) ‘Coordination Service Firms and the Erosion of Rhenish Capitalism. In *The Transnational Politics of Corporate Governance Regulation*, Eds. H. Overbeek, B. van

Apeldoorn & A. Nölke, 121–36, London: Routledge.
O'Malley, P. (2004) *Risk, Uncertainty and Government*, Portland: The Glasshouse Press.
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) (2013): 788-818.
Paudyn, B. (2014) *Credit Ratings and Sovereign Debt: The Political Economy of Creditworthiness through Risk and Uncertainty*, Basingstoke: Palgrave.
Posner, P. & J. Blöndal (2012) 'Democracies and Deficits: Prospects for Fiscal Responsibility in Democratic Nations,' *Governance*, 25(1): 11-35.
Power, M. (2004) *The Risk Management of Everything*, London: Demos.
Power, M. (2007) *Organized Uncertainty: Designing a World of Risk Management*. New York: OUP.
Reinhart, C. (2002) 'Default, Currency Crises, and Sovereign Credit Ratings.' *World Bank Economic Review*, 16(2): 151-70.
Reinhart, C. M. and Rogoff, K.S. (2009) *This Time Is Different*, Princeton and Oxford: Princeton University Press.
Rose, N. (1999) *Powers of Freedom*, New York: Cambridge University Press.
Roy, R.K., A.T. Denzau, & T.D. Willet, T.D. (2007) *Neoliberalism: National and Regional Experiments with Global Ideas*, New York: Routledge.
Sinclair, T.J. (2005) *The New Masters of Capital: American Bond Rating Agencies and the Politics of Creditworthiness*, Ithaca: Cornell University Press.
Standard & Poor's. (1992) *S&P Corporate Finance Criteria*, New York: S&P.
Standard & Poor's. (2008) *Sovereign Credit Ratings: A Primer.* New York: S&P.
Standard & Poor's. (2010) *Guide to Credit Ratings Criteria.* New York: S&P.
Standard & Poor's. (2011a) *Sovereign Government Rating Methodology and Assumptions,* New York: S&P.
Standard & Poor's. (2012a) *Credit FAQ: Factors behind Our Rating Actions on Eurozone Sovereign Governments*, New York: S&P.
Standard & Poor's. (2012b) *How We Rate Sovereigns,* New York: S&P.
Thrift, N. (1996) 'Shut Up and Dance, or, Is the World Economy Knowable?' In *The Global Economy in Transition*, Eds. P.W. Daniels & W.F. Lever, London: Longman.
Thrift, N. (2004) 'Movement-Space: The Changing Domain of Thinking Resulting from the Development of New Kinds of Spatial Awareness,' *Economy and Society,* 33(4): 582-604.
US Securities and Exchange Commission. (2009) *Annual Report on Nationally Recognized Statistical Rating Organizations,* Washington: SEC.
Valles, V. (2006) *Stability of a 'Through-the-Cycle' Rating System during a Financial Crisis*, Financial Stability Institute. Basel: BIS.