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Credit Rating Agencies and the IPE: Not as influential as thought?

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ABSTRACT

Do Credit Rating Agencies (CRAs) affect national policy? This study critically examines assertions of a possible convergence to neo-liberal standards induced by sovereign bond ratings. By arguing that the role of the agencies in the global political economy has been exaggerated, the study finds that CRAs do not have a direct causal effect on domestic economic reforms. Employing a sample that covers the great majority of rated countries, it is shown that there is a robust trend towards deregulation and reform in accordance with neo-liberal standards. Nevertheless, sovereign bond ratings are not directly related to this process. Lower rated countries, or those more frequently downgraded, do not differ significantly from the highly rated countries in their pattern of policy reform. This result holds for policy domains such as regulation of credit, labour and business, inflation levels, legal structure and security of property rights, and the size of the public sector. It is concluded that the role of the CRAs as potential instigators of domestic reform is limited.

KEYWORDS

Credit Ratings Agencies; policy reforms; policy convergence; financial globalization; neoliberalism; sovereignty.

INTRODUCTION

Sovereign Bond Ratings are an integral component of the global economy. Rating actions, particularly downgrades, draw considerable attention from multiple sources. They are prominently featured in the news, affect bond markets and often instigate comments from state leaders.¹ The role and coverage of the ratings has substantially expanded during the latter part of the twentieth century. Both Moody's and Standard &

Poor's increased their country coverage from approximately 30 to almost 100 countries within the period of 1990 to 2006. The majority of the newly rated countries are emerging and developing economies that are attempting to establish access to international economic flows at a reasonable borrowing cost. Acquiring high sovereign ratings is an important step towards this goal (Kiff *et al.*, 2012).

This expansion of these agencies' coverage is treated with scepticism. Acknowledging the political content of the ratings, certain studies argue that rated economies will be coerced to implement policies in accordance with the CRAs' prescriptions to improve their relative standing in the rating scale (Sinclair, 1994; Kerwer, 2002; Bruner and Abdelal, 2005; Sinclair, 2005). Thus, the agencies are perceived as a mechanism through which neo-liberal conceptions of public policy are disseminated. Thus far, only minimal evidence exists demonstrating a relationship between policy making and sovereign bond ratings (Elkhoury, 2008). Can CRAs really affect domestic policy?

The aim of this study is to begin a systematic exploration of the role of the CRAs as instigators of economic reform. Several authors argue that CRAs will place isomorphic pressure on rated countries either coercively through their ability to affect bond markets (Sinclair, 2005; Paudyn, 2012) or through normative persuasion by constructing a consensus regarding 'good' and 'bad' policy choices (Sinclair, 1994; Sinclair, 2005). This study critically examines both of these views and argues that their premises are not *a priori* valid. In particular, it is argued that the CRAs' market power and importance in creating a liberal normative framework is somewhat exaggerated. Market participants are only affected by CRAs' actions when the latter offers new information to the market (Brooks *et al.*, 2004; Kiff *et al.*, 2012). Furthermore, CRAs are only one of the devices, in addition to a number of academic funds and think tanks, that collectively built the intellectual defence of the turn to neo-liberalism since the late 1970s (cf., Harvey, 2005).

A case is being made beyond the few existing studies for a systematic empirical assessment of the relationship between sovereign ratings (and their changes) and economic reform. It is tested whether countries with lower initial ratings or those downgraded more frequently experienced comparatively rapid rates of liberalization along four policy dimensions.² To accomplish this, a comprehensive data set is used covering the majority of rated economies beginning with the first year they received a rating. Consistent with the neo-liberal turn of the later part of the twentieth century, strong evidence of conditional convergence towards neo-liberal policies along all of the policy variables is found. Nevertheless, there is no evidence that sovereign bond ratings exert an independent effect beyond this general trend towards deregulation. In particular, neither the rating scores nor downgrading frequency are significantly associated

with the pace of these reforms; countries with lower ratings do not liberalize faster. Furthermore, there is no evidence of power yielding as countries that were downgraded more frequently do not significantly differ in their rate of liberalization.

In summary, this study intends to deliver two contributions. First, it critically discusses and expands an increasing body of literature that considers CRAs as possible sources of political as well as economic influence (Sinclair, 1994; Datz, 2004; Bruner and Abdelal, 2005; Sinclair, 2005; Elkhoury, 2008; Paudyn, 2012). It is argued that CRAs are not omnipotent and are only an element of the arrangements that promote market oriented policies over state intervention. Therefore, researchers must exercise caution regarding the theorized magnitude of the CRAs' general influence.

Second, and to our knowledge, for the first time, this study offers a broad cross-country empirical investigation of the direct influence that rating agencies may have on economic reform. Previous studies focus on how policy choices made by states impact ratings assigned from CRAs (cf., Mosley, 2003; Afonso *et al.*, 2011; Biglaiser and Staats, 2012) and contend that there is potential for interference with national policy, particularly for developing countries. This study takes these results as an input and tests for the existence and extent of this interference. The results compel us to conclude that, at least so far, there is no concrete evidence that the CRAs, through their sovereign ratings, have independently contributed to the noticeable trend towards market oriented policies. This does not indicate that CRAs are of no concern in policy-making. Rather, it implies that any analysis of the effect of their actions should not strive for a causal interpretation; rather, it should seek to comprehend the role that these agencies played within the greater turn to market oriented policies.

The paper has the following structure. The next section presents the two aspects of this debate, one supporting an effect of CRAs on domestic policies and the other providing counter arguments. Section 3 presents the data and empirical strategy while Section 4 presents and discusses the results. Section 5 concludes.

THEORETICAL APPROACHES

A trend of the late twentieth century in the field of finance has been a turn toward disintermediated modes of lending (Sinclair, 1994; Leyshon and Thrift, 1998; Sinclair, 2005). The traditional role of banks as lenders is circumvented as borrowers searching for inexpensive capital can turn directly to the global market. This decentralization of investment created problems of information asymmetry and, with it, the need for coordination. CRAs fill this void by providing an assessment of the creditworthiness of debt issuers, much like 'signposts' directing internationally mobile capital flows (Kerwer, 2002). This strategic position in the new

global political economy has afforded them increased influence over the movements of private capital. This influence is further reinforced by the use of the agencies' output in official regulatory schemes in the U.S and elsewhere (cf., Bruner and Abdelal, 2005; Staikouras, 2012). Therefore, CRAs are promoted to gatekeepers of substantial amounts of capital, and access to these investment sources often relies on rating scores.

This new role of the CRAs raises questions with regard to the methods, and particularly the indicators, employed in the production of their famous three character symbols. While many of the inputs in the ratings process relate to fundamental economic indicators, there is also a qualitative component that plays an important role in the final outcome. When examining a sample of Asian countries, Ferri, Liu and Stiglitz (1999) find that this qualitative component of the ratings weighs heavier during non-turbulent times and gets downplayed when extraordinary situations such as economic crises occur. What lies behind this qualitative component is, ultimately, the controversy in this debate. It is believed that this component is influenced by the raters' perceptions of what constitutes good economic policies and is informed by neo-liberal ideology. This 'mental framework of rating orthodoxy' (Sinclair, 2005) originates from a Western, particularly US, understanding of what constitutes acceptable fiscal and regulatory policy. Recent empirical studies have shown that politics is as much a component of the rating scores as is economics. In addition to the standard economic correlates of the ratings such as per capita income, GDP growth, inflation, and external debt (Cantor and Packer, 1996; Afonso *et al.*, 2011), variables pertaining to political characteristics such as the effectiveness of Rule of Law and Property Rights Protection and the levels of corruption have explanatory power over the ratings as well (Depken *et al.*, 2006; Biglaiser and Staats, 2012).

Research on a systematic effect running from sovereign ratings to policy formation, however, is scarce (Elkhoury, 2008). For the most part, the literature focuses on how policy affects ratings rather than the opposite (e.g., Biglaiser and DeRouen, 2007; Biglaiser and Staats, 2012). Arguments on why ratings are of concern for policy are, nevertheless, evident considering the robust correlation of the ratings to policy variables. In the long run, CRAs are theorized to contribute towards a global framework where market forces place pressure on policy-makers promoting convergence towards a one-size-fits-all approach to politics (Sinclair, 1994; Sinclair, 2005). This perspective is similar to the reasoning behind the larger globalization debate, with one exception. CRAs and their ratings are at the centre of attention rather than capital or trade flows. The following subsection discusses the induced pressures by the CRAs towards policy convergence, separating them into coercive, normative, and mimetic. Subsequently, we provide a number of counter arguments and derive the hypotheses to be tested in the empirical section.

CRAs as powerful international actors: Coercive, normative and mimetic pressures

Isomorphism is defined as a process that forces one unit in a population to resemble other units that are confronted with the same set of environmental conditions (DiMaggio and Powell, 1983: 66). While originally developed to be applied at the organizational level of the firm or sub-state agency, Knill (2005) and Holzinger and Knill (2005) introduced the concept in the analysis of policy convergence at the state level. There are three types of isomorphic pressures which will be introduced as they apply to the CRAs case. The first type of pressures, referred to as *coercive isomorphism*, stress how organizational units are forced to adopt policies because they are sanctioned by other organizations that are in control of critical resources. With regard to CRAs, one approach considers the agencies as powerful players in the international capital markets and acting as gatekeepers to a substantial pool of investment capital capable of affecting the cost of borrowing for rated countries (cf., Sinclair, 2005; Paudyn, 2012). As such, lower ratings would place pressure on governments to adopt policies that are in accordance with the agencies' mental framework. Developing countries, in particular, and all those that rely on external capital flows to finance their needs will be increasingly vulnerable to these pressures (Mosley, 2003; Datz, 2004).

This coercive power of the rating agencies originates from their effect on financial markets. One shared finding among studies addressing the impact of sovereign credit ratings is that there is a significant negative correlation between sovereign bond spreads and ratings. It is shown throughout the literature that lower ratings correspond to higher spreads and subsequent higher costs of borrowing. In their seminal paper, Cantor and Parker (1996) find that rating agencies' opinions independently affect market spreads as rating announcements are succeeded by spread movement in the expected direction 63 per cent of the time. This connection between rating scores and cost of borrowing has been recently confirmed (Kiff et al., 2012). A fair conclusion to be drawn from this literature is that spreads and ratings are interdependent; therefore, rating agencies possess certain potential to influence the market and exert pressure to market participants.

Normative and mimetic pressures are also a possible channel through which CRAs affect country policy (Bruner and Abdelal, 2005; Sinclair, 2005). This approach maintains that rating agencies form perceptions of what constitutes good and bad policy. A worldview is created in accordance with the mental framework which draws upon neo-liberal concepts of public policy. As they reduce the multidimensional question of credit-worthiness into a single alphanumeric symbol, CRAs provide an indicator against which investments are rationalized, thus shaping the

perceptions of creditors and debtors. The difference of this mechanism from the coercive pressures view is that ratings do not necessarily have to employ their market power. Instead, their power is structural. Deviations from the mental framework will be treated as a crisis of creditworthiness by the agencies. Investors will anticipate rating actions and will act beforehand, causing the market in its entirety to respond. By creating a general framework of good and bad policies, CRAs are perceived as a 'feature of developed country 'government-at-a-distance' over developing countries' (Sinclair, 2005: 147). As the normative prescription of the ratings causes an increasing number of countries to behave accordingly mimetic pressures will incite the remaining countries to adopt similar policies.

Counter arguments

With the extensive publicity the CRAs have received in recent years, their potential for influence is taken for granted. Nevertheless, some scepticism about their unconditional power is warranted. Many of the isomorphic pressures attributed to the agencies depend on assumptions not a priori valid. First, the market influence of the CRAs is not without limits. This is demonstrated by the reactions of the market to rating actions.

Despite the strong correlation between ratings and the sovereign bond spreads described in the previous subsection, rating agencies are not omnipotent. Rating events are associated with changes in spread in the expected direction approximately only 50 per cent of the time for both advanced and emerging markets (Kiff *et al.*, 2012). Outlook and Watchlist changes are also relevant; however, there is no one-to-one relationship. The market does not always agree that rating actions introduce new information (Brooks *et al.*, 2004; Kiff *et al.*, 2012). Risk assessments by the two leading rating agencies are often preceded by an analogous change in the market's assessment of sovereign risk (Larrain *et al.*, 1997; Reisen and Von Maltzan, 2002). The ratings affect the market only when the latter is convinced that they provide unique information. Hence, downgrades might not be as effective in promoting policy decisions as is commonly believed.

In addition, market participants, including CRAs, apply their market power differently on developed and developing countries. As Mosley (2003) demonstrates, political choices among developed and developing countries are evaluated differently and allow for various degrees of freedom in policy-making. For developed countries, the interest lies in aggregate economic outcomes, specifically, the levels of inflation and government budget deficits. Other areas of government policies do not concern financial market participants thereby allowing opportunities for manoeuvring for governments of developed countries. In developing

nations, market participants are believed to exert pressure on a broader set of policy outcomes, however, just as in developed nations, the formulation of public policies reflects domestic as well as external pressures.

Finally, the coercive power of the agencies may not be as influential as assumed because the role of the agencies in the global political economy has been overly exaggerated. The introduction of sovereign bond ratings is not necessarily a disruptive innovation in the sense that a new market or a new method to perform transnational investment was not created. Financial disintermediation, the evasion of traditional modes of financing (i.e., banks) in favour of those that are more direct has been driven by regulatory changes and technological advances. Direct borrowing or lending without the inter-mediation of banks produces assets that are not recorded in the balance sheets of financial institutions, affording an opportunity for these institutions to escape the control of governments and regulatory authorities (French and Leyshon, 2004). In addition, the role of the Internet as a platform that facilitates the flow of the information required for a multilateral activity such as disintermediated finance cannot be overstated.

In this broader scenario, CRAs are just a piece of the puzzle, and their role is to fill in the vacuum of information asymmetry arising from the process of disintermediation. Certainly, this process provides the agencies with a prominent role in the global economy, and, in their turn, CRAs considerably facilitate the process. Nevertheless, their bond ratings are arguably not a necessary condition for the realization of disintermediated finance.

The role of the agencies might have been exaggerated with regard to the normative pressures they can create as well. Taking a long term perspective, it is easier to argue that, beginning with the neoclassical 'counter-revolution' led by intellectuals such as Friedrich Hayek and Milton Friedman, a mental framework was introduced that supported the operations of the CRAs as much as the CRAs reciprocate this support. In the new global economy that has emerged, CRAs are just one of the many organizations created to nurture and promote a neo-liberal consensus. Several of the concepts that belong to the CRAs' mental framework, such as the erroneous role of state interventions and regulations, and the primacy of investors rights against other societal pressures (cf., Moody's, 2008; Standard & Poor's, 2008) were already presented at such occasions as the Mont Pelerin Society meetings where intellectuals led by Friedrich Hayek met to mount an intellectual defence of the unregulated economy and private enterprise.

It did not take long until this new economic orthodoxy influenced policy in the two prominent industrial states, specifically, the United States and Britain, as is evidenced in the policies of the Reagan and Thatcher administrations (Harvey, 2005). In addition, New York investment banks

began increasing their operations overseas, particularly lending to foreign governments, and the US administration initiated a global promotion of credit and financial market liberalization. It is at this time that the rating agencies began expanding their sovereign bond ratings to incorporate overseas governments. Initially, only a few OECD countries were included but more countries were added in subsequent years. Parallel to these developments, a considerable number of think tanks, international institutions, and funding schemes to specific research programmes were further reinforcing the turn to a neo-liberal consensus (Harvey, 2005).

The role of the CRAs in promoting this consensus must be evaluated only within the context of the greater shift of mindsets described above. The ideas promoted by the agencies have been established beforehand, to some extent, and quicker than the agencies admitted new countries into their ratings. From this perspective, the high correlation between rating grades and Credit Default Swaps (CDS) spreads implies that the agencies and market participants already share an understanding of what comprises good and bad policy at any particular moment. This understanding was not introduced solely by the agencies but by a conscious effort that involved planning at the state level. Additionally, the market appears to increasingly contradict the agencies' valuations. Kiff, Nowak and Schumacher (2012) regress CDS spreads as a proxy for market risk valuation on sovereign bond ratings for each year from 2005 until 2010. While, in 2005, rating scores could explain about 93 percent of CDS variation, in 2010 amidst a global financial crisis, that number dropped to 65 percent. The market discriminates more among different risk profiles than the CRAs.

In summary, theoretical argumentation can favour both the 'CRAs as powerful international actors' camp as well as the counter arguments offered here. It is, therefore, not a priori clear whether to expect an effect of sovereign bond ratings on policy-making either through their market or structural power. More empirical evidence is required. One example of such research is Paudyn (2012) arguing that, during the current crises, the agencies coerced states into adopting austerity measures. In addition, Hanusch and Vaal (2013) provide preliminary evidence that CRAs can moderate public spending during election years by focusing on 18 emerging democracies. Nevertheless, more systematic empirical investigation is needed to establish a causal link, if any.

Hypotheses

To summarize, those scholars that treat CRAs as powerful international actors predict that economic orthodoxy – spread partly by bond ratings – will drive countries to behave more in accordance with neoliberal

conceptions of public policy and regulation in an effort to achieve higher ratings. For lower rated countries, this move towards deregulation will be more pronounced as they will be required to rapidly climb the ratings ladder in order to compete for capital in the same markets as the higher rated economies. The central question is whether bond ratings have, indeed, contributed towards such a trend. The hypotheses we derive from the discussion above is the following:

Hypothesis 1a: Low-rated countries have more significant economic policy reforms than high-rated countries, *ceteris paribus*.

Hypothesis 1b: Countries whose sovereign debt ratings are more frequently downgraded have more significant economic policy reforms than countries less frequently downgraded, *ceteris paribus*.

Rejecting these hypotheses provides support for the counter arguments offered in this study. In the next section, we present the data and methods employed to arrive at our conclusions.

DATA AND METHODS

Rating scores and dependent variables

We use an extensive data set of sovereign bond ratings for the two major agencies (Moody's and Standard and Poor's) that spans from the early 1970s until 2006 taken from Afonso *et al.* (2011). We follow common practice and change the alphanumeric code used by the agencies to a simple linear scale within the interval of 1 (depicting the few ratings that fall below 'B-') to 17 (the highest possible rating score; 'AAA').

To test the effect of credit ratings on domestic policy, four indicators acquired from the World Bank Development Indicators and the Economic Freedom of the World Project produced by the Fraser Institute (Gwartney *et al.*, 2012) are used. These variables are selected according to two criteria. Their relevance to the rating assessment, as in accordance with previous research regarding the determinants of ratings, and their appearance in policy recommendations delivered by the agencies through their announcements. The first index used, referred to as *Regulation*, is a measure of the degree in which labour and capital markets as well as the general business environment is regulated. This index rates countries on an extensive array of dimensions such as private involvement in bank ownership and interest rate controls, laws restricting hiring and firing practices, the existence of a minimum wage, and the amount of time and money necessary to begin a new limited-liability business, among others. A complete description of the content of the index is provided in the Economic Freedom of the World Annual Reports.³ Labour markets rigidities have been mentioned as concerns in

reports of the CRAs after rating events such as the French downgrade in January 2013. Furthermore, this index is partially based on information procured from World Bank surveys that have been shown, in previous research, to be important for the ratings (Biglaiser and Staats, 2012).

Our second index is the level of Inflation. This variable is found to be one of the most robust predictors of rating scores in almost all of the quantitative studies addressing rating scores. In addition, anecdotal evidence suggests that inflationary policies are perceived with substantial hostility from ‘bond vigilantes’, i.e., the players in the debt security markets, forcing policy-makers to incorporate these reactions in their policy formulations (Sease and Mitchell, 1992). Since the ratings are the primary vehicle through which these actions are judged, it is hypothesized that they can restrict the policy-makers’ decisions (e.g., Sinclair, 1994; Mosley, 2003).

We utilize one more index for measuring the Legal System and Property right protection, referred to here as *Legal Protection*. This index examines countries’ ability to enforce contracts and secure property rights, the impartiality of the courts, and the effect of lawlessness on business activity, among other dimensions. The importance of property rights and the well-functioning of the law are recognized directly from the primary rating agencies and have been found to be significant determinants of ratings (e.g., Biglaiser and Staats, 2012; Moody’s, 2013; Standard and Poors, 2013). It is also believed to be one of the central elements of the mental framework of the agencies. Market economies that strongly enforce property rights are believed to be less prone to policy errors (cf., Bruner and Abdelal, 2005; Beers and Cavanaugh, 2006).⁴

Finally, we use a measure of general government final consumption expenditure as a percentage of GDP to proxy the size of government. This measure includes all government current expenditures for purchases of goods and services – compensation of employees included – together with most expenditure on national defence and security. Although it has not been found to be a robust predictor of the ratings, it, nevertheless, reflects the degree of government activism in the economy which is something considered incompatible with the rating orthodoxy (cf., Standard and Poor’s, 2008; Moody’s, 2008).

Estimation

To test our hypotheses, we resort to a type of convergence regressions following Barro and Sala-i-Martin (1992). For each of our policy indexes, we construct a variable in two steps. Initially, we identify the first year that each country appears in the rating tables of Moody’s and Standard and Poor’s. For the majority of our countries, this occurs in the mid-1990s;

albeit a few developed countries have data all the way back to late 1970s. Subsequently, we calculate the difference of the score for each policy index in 2006 and the score the country had in the initial year of rating. In the case of government consumption, we take the differences of the natural logarithm. The majority of countries in our sample are developing economies, and the time interval covered by the data spans the entire period during which they have been rated. We thus have an almost complete overview of the population of rated countries. Subsequently, we run the following cross-sectional regression for each policy index:

$$\Delta Policy_{i,(2006-StartYear)} = b_0 + b_1 Rating_{i,(StartYear)} + b_2 Downgrades/Years_i + b_3 Policy_{i,(StartYear)} + b_4 Controls_{i,Averages(2006-StartYear)} + e_i$$

There are two primary predictors including the initial rating for each country (*Rating*) and the number of times each country was downgraded divided by the number of years it has been rated. The first variable is intended to capture the convergence pressure effect of the ratings. That is, it is expected that if rating pressures are significant, countries that began low on the scale should have experienced higher degrees of change in their policy scores towards more liberalized policy regimes. We expect this coefficient to be negative if Hypothesis 1a is supported by the data for the two composite indexes and positive for the Government Consumption and Inflation indicators. The second variable, the average number of times that each country was downgraded during the time it was included in the ratings, is meant to proxy the amount of power yielding that each country faced. It is reasonable to assume that countries downgraded more frequently than others faced greater pressures to liberalize. Sinclair (2005) provides the example of Japan that withstood a number of downgrades until it subscribed more cohesively to the agencies' policy prescriptions. The coefficient for this variable is expected to be positive if Hypothesis 1b is supported for the two composite indexes and negative for the Government Consumption and Inflation variables.

A number of control variables are included to separate the effect of ratings from other confounding factors. A primary control is the initial value of our dependent variables. This is performed in order to test for conditional convergence in the data set that is unrelated to the ratings process. Furthermore, measures of economic development and trade openness are included, constructed as averages over the period that each country is rated. Wealthier countries are expected to have a greater ability to internally raise capital, hence, be less affected by their rating score. The openness measure controls for the level of economic integration. We anticipate that more open countries will also have chosen to instill less

regulation in other aspects of policy. To control for domestic forces that could possibly influence the rate of deregulation and liberalization, we control for the Executive Ideology by including a variable that measures the proportion of time spent under Left-oriented governments. Notwithstanding globalization induced pressures, governments have been responsive towards the ideology of their constituency (Cusack, 1997) while strong left-wing parties and influential trade unions can mitigate the effects of increased economic integration (Garrett, 1995). In addition, we include a series of regional dummies for Latin America, East Asia, and OECD in order to improve the model's fit and make the results comparable with previous studies of globalization-induced pressures on Government Size (e.g., Rodrik, 1998; Garrett, 2001). The next section presents our results.

RESULTS

Baseline estimations

Table 1 depicts the results for all dependent variables using Moody's sovereign bond ratings. In all regressions, there is strong evidence of conditional convergence as portrayed by the negative and highly significant estimate of the initial value of each dependent variable. Regarding the rating variables, there is no such evidence. The initial rating score is not a significant predictor of change in two out of four equations. Furthermore, in the second and third equation (Legal Protection and Inflation, respectively), there is evidence of divergence. Countries that were initially highly rated experienced a more rapid transition towards the establishment of a market enhancing legal environment and lower inflation. In addition, there is no effect of power yielding as measured by the effect of downgrade frequency. Again, in the only regression in which this variable is found significant (at the 10 per cent level), it receives a positive sign consistent with a tendency towards divergence rather than convergence. This could be because countries that did not inhibit inflation have been downgraded more often. If this is true, it provides further indication that ratings have not affected domestic policy as the more frequent downgrading did not hinder national governments from achieving their agenda.

In examining the geographical variables, the dummy for Latin American economies receives some significance indicating a slower speed of deregulation (i.e., change in the Regulation index) and legal adjustments. Sub-Saharan countries experienced deterioration in their Legal Framework and increases in Inflation and Government Spending, on average. Furthermore, countries historically more open to trade experienced rapid reform in the first two indexes.

Table 1 Moody's rating scores and downgrades as determinants of policy reform

VARIABLES	Dependent Variable:			
	Δ Regulation	Δ Legal Protection	Δ Inflation	Δ Gov. Consumption
Rating Score _{Start Year}	-0.0287 (0.0288)	0.152*** (0.0322)	-0.332** (0.141)	-0.000202 (0.00852)
Downgrade Frequency	0.942 (1.433)	-1.411 (1.517)	10.44* (5.774)	-0.111 (0.233)
GDP pc (log)	0.173 (0.117)	0.237** (0.112)	-0.134 (0.605)	0.00732 (0.0322)
Openness (log)	0.324* (0.176)	0.396*** (0.129)	-0.207 (0.694)	-0.0486 (0.0494)
Executive Ideology	-0.0243 (0.200)	0.285 (0.252)	-1.130 (0.993)	0.00168 (0.0673)
OECD	0.343 (0.242)	0.104 (0.209)	-0.371 (0.890)	0.157** (0.0745)
Latin	-0.521** (0.215)	-0.857*** (0.215)	-1.303 (1.101)	0.0406 (0.0712)
East Asia	0.202 (0.331)	-0.259 (0.276)	-1.350 (1.074)	-0.0768 (0.0853)
Sub-Saharan Africa	-0.0524 (0.190)	-0.749** (0.336)	3.842** (1.911)	0.0726* (0.0403)
Regulation _{Start Year}	-0.582*** (0.0786)			
Legal Protection _{Start Year}		-0.972*** (0.0891)		
Inflation _{Start Year}			-0.987*** (0.0161)	
Gov. Consumption _{Start Year} (log)				-0.329*** (0.0831)
Constant	2.024* (1.158)	1.126 (0.884)	9.998** (4.157)	1.008*** (0.305)
Observations	85	83	77	91
R-squared	0.545	0.647	0.988	0.393

Notes: Robust standard errors in parentheses, '***' indicates $p < 0.01$, '**' indicates $p < 0.05$, and '*' indicates $p < 0.1$.

To determine the sensitivity of our results, we perform the same estimations employing rating data from Standard and Poor's (S&P). While highly correlated with Moody's ratings, S&P's actions are demonstrated to have a more substantial effect on CDS spreads and capital markets, hence, one could hypothesize that power yielding could be more effective when S&P data are considered. In addition, the new estimations comprise a different sample of countries. S&P's grades cover a slightly larger number of countries for different time spans. These results are depicted in [Table 2](#). There is a notable increase in the number of countries included in the estimations and, given that S&P rates approximately 100 countries, we are nearly approaching the entire population of rated economies. Nevertheless, the primary conclusions drawn earlier still hold, and there are great similarities between the two estimations.

Again, the evidence of conditional convergence is strong. More importantly, the rating variables behave as before. Particularly, the initial rating score is not a significant predictor for three of the dependent variables and produces evidence of divergence when Inflation is considered. Power yielding is also not evident. Finally, the dummy variable for Sub-Saharan Africa loses its significance, most probably due to the different countries and time span encompassed by the S&P's ratings. The same is true for the Openness indicator. Combining all of the results, the proposition that sovereign bond ratings can place direct pressure on rated countries to reform towards more neoliberal standards is not supported by any of our estimations thus far.

Non-linearity

One of the main results regarding CRAs' market power is that investment grade status is an important asset for rated economies. In emerging countries, investment grade status is found to be associated with a 36 per cent decrease in spreads (Jaramillo and Tejada, 2011). Furthermore, downgrades have a greater significance when inflicted upon non-investment grade economies (Cantor and Packer, 1996; Kiff *et al.*, 2012). It follows that economies that are just above (below) the investment grade border could possibly be confronted with greater pressure to preserve (improve) their rating score than those at the very bottom of the rating scale. The approach utilized in the preceding subsection is not able to capture this non-linear effect. For that reason, we extend our estimation strategy to account for the possibility of asymmetric effects. In particular, since economies in the middle of the ratings scale could face greater pressure, one would expect an inverse U-shaped relationship between initial rating values peaking at the investment grade line. That is, countries in the middle would deregulate more than others. [Figure 1](#) below depicts the results after fitting a quadratic equation employing Standard and

Table 2 Standard & Poor's rating scores and downgrades as determinants of policy reform

VARIABLES	Dependent Variable:			
	Δ Regulation	Δ Legal Protection	Δ Inflation	Δ Gov. Consumption
Rating Score _{Start Year}	-0.0395 (0.0290)	0.0979 (0.0661)	-0.314** (0.153)	0.00462 (0.00561)
Downgrade Frequency	-0.112 (1.511)	-0.860 (1.146)	-1.654 (3.297)	0.111 (0.109)
GDP pc (log)	0.248** (0.109)	0.250 (0.180)	0.00853 (0.647)	0.000573 (0.0252)
Openness (log)	0.169 (0.175)	0.197 (0.165)	-0.445 (0.817)	-0.0261 (0.0323)
Executive Ideology	-0.220 (0.185)	0.0465 (0.239)	-0.843 (1.115)	0.0201 (0.0429)
OECD	0.265 (0.242)	0.374 (0.283)	-0.731 (1.016)	0.111** (0.0482)
Latin	-0.584*** (0.209)	-0.897*** (0.333)	-0.0800 (1.143)	0.00311 (0.0460)
East Asia	-0.00885 (0.266)	-0.263 (0.316)	-0.317 (1.258)	-0.0904 (0.0635)
Sub-Saharan Africa	-0.287 (0.239)	-0.230 (0.284)	-0.102 (1.769)	0.00599 (0.0612)
Regulation _{Start Year}	-0.544*** (0.0607)			
Legal Protection _{Start Year}		-0.804*** (0.0890)		
Inflation _{Start Year}			-1.001*** (0.000781)	
Gov. Consumption _{Start Year} (log)				-0.258*** (0.0483)
Constant	2.045* (1.095)	1.325 (1.167)	10.26** (4.230)	0.710*** (0.244)
Observations	89	86	81	95
R-squared	0.560	0.613	0.998	0.363

Notes: Robust standard errors in parentheses, '***' indicates $p < 0.01$, '**' indicates $p < 0.05$, and '*' indicates $p < 0.1$.

Figure 1 Quadratic fit of initial ratings and change in regulations and government size

Poor's data. A vertical line is also included in each scatterplot to signify the dividing line between the two investment grades. There is no evidence of a significant non-linear effect. This conclusion holds for data taken from both agencies as well as when all previous estimations are repeated, including the squared term of the initial rating or the squared term of downgrade frequency.

Another way to test for non-linear effects is to estimate each equation separately for every investment category. We do so by initially focusing solely on countries that have been in the (non) investment category throughout their rating history and subsequently including countries that changed investment category. The results are consistent with the preceding analysis. There is no consistent evidence that any of the rating variables, whether initial values or downgrade frequency, can explain the observed patterns of reforms, with one exception. There is some robust evidence that top graded countries have improved their institutional quality more than low graded countries, as captured by the Legal Environment index.⁵

Alternative specifications

To check the sensitivity of our results, we offer several robustness tests. First, we utilized the main sub-indexes that comprise the two Economic

Freedom Indexes used in earlier estimations as dependent variables. The motivation behind this is that ratings might have opposing effects on different sub-indexes that may be moderated through the aggregation process. For this reason, we use the same estimation strategy as previously and present the new results in Table 3. In particular, we report the dependent variable used (sub-index) and the sign and statistical significance of the coefficient for rating scores and downgrade intensity. Empty cells signify that these variables did not reach the minimum agreed upon significance level (i.e., $p > 0.10$).

Results corroborate much of the earlier analysis. In particular, the ratings are again, and for the most part, not significant predictors of the rate of reform. When they are significant, the signs of the coefficients are opposite from those signifying convergence. Countries with initially higher ratings have worked more toward the improvement of their court system. Analogous results follow when looking at downgrades.

Table 3 Alternative specifications

Sub Index	Moody's		Standard & Poor's	
	Rating	Downgrade Intensity	Rating	Downgrade Intensity
Judicial Independence		(-)*	(+)**	
Impartial Courts			(+)*	
Military Interference				
Integrity of the Legal System				
Contract Enforcement	No obs	No obs	No obs	No obs
Restrictions on Sale of Property	No obs	No obs	No obs	No obs
Foreign Currency Accounts (Freedom to own)		(-)**		
Credit Market Regulation				
Labour Market Regulation				
Business Regulation				(-)**

Notes: Table 3 presents the results of regressions using the same control variables as in Tables 1 and 2 for each subcomponent in the three indexes used in previous Tables. The sign in parenthesis presents the sign of the respective coefficient (rating or downgrade intensity), and its statistical significance, where ***, **, and *, denote $p < 0.01$, $p < 0.05$, and $p < 0.1$ respectively. No content means the variables were not significant. Robust Standard Errors used in the majority of the regressions.

Next, we exploit the cross-section time series dimension of our data. Thus far, we are focusing on a convergence regression setting that aimed at directly testing the convergence pressure that states could be experiencing. As such, our main variables were measured at the beginning and end of the available time spans. We now investigate the contemporaneous relationship between changes in ratings and changes in our policy variables. Table 4 in the Appendix presents the results. For the Legal Protection and Inflation variables, there is no significant correlation with the ratings and the same is true for the Regulation index, although the latter achieves a marginal significance ($p = 0.096$) when using Moody's data. Finally, in Standard and Poor's data, there is a significant contemporaneous correlation between the ratings and the Government Consumption Index; nevertheless, this correlation is not evident when using Moody's ratings. As a final test, we repeat these estimations using the first lags of the ratings variables in order to allow for some time for the governments to react to rating changes. Doing so yields insignificant results throughout.⁶

Lastly, we repeat all estimations, both the contemporaneous and the convergence type regressions using alternative policy indexes. In particular, we employ the level of fiscal deficit, external debt and total debt as measures of sustainability of public finances. As before, there is no evidence that rating agencies have been pressuring governments through their ratings.⁷ Regarding all of our results collectively, we find no support for either of the hypotheses tested. There is no robust evidence that rating agencies have directly influenced policy in regard to the dimensions tested in this study.

CONCLUSIONS

Credit rating agencies are often perceived as non-state actors whose influence on the behaviour of market participants elevates them to transnational centres of authority. It is further assumed that the agencies perform a function of 'governance without government' that promotes reforms in regard to several dimensions of public policy in accordance with neo-liberal conceptions of minimal state regulation. In this study, we argue that, when theorizing the importance of CRAs as instigators of economic reform, researchers should consider, on the one hand, that market participants do not indiscriminately respond to sovereign rating changes, and on the other, there is a concurrent change of mindset towards neo-liberalism that began in the late 1970s. Within this framework, the role of the CRAs is limited to a contributor towards the neo-liberal trend rather than an independent actor.

We show that there is no robust evidence that rating actions directly affect domestic policy by employing a number of policy indicators and a

sample that covers the majority of the countries rated by the two most influential agencies. Countries awarded lower credit ratings do not tend to reform more rapidly than higher rated economies. The growth of their public sector also does not significantly differ. Similarly, neither is the downgrade frequency each country experiences a significant predictor of reforms. On the contrary, there is an occasional indication of the opposite relationship. Particularly, highly rated countries created a market promoting legal framework by supporting the protection of property rights and enforcing contracts without facing rating pressure. These findings are valid for developed and developing countries alike which is contradictory to previous expectations (Mosley, 2003; Datz, 2004).

Our results could be challenged in regard to a relatively limited time span for the non-investment countries. Most of them received a rating in the midst of the 1990s. In our defence, we believe that a 10-year span, on average, for these countries should be sufficient to register an effect, if one exists, especially since this time interval coincides with increased proliferation of capital flows that occurred in the later part of the twentieth century. This adds confidence to our conclusions.

Lastly, our results add to the wider literature on globalization and its effects on domestic policy whereby the state is often portrayed as under attack, in retreat, or even obsolete (Sassen, 1996). A recurrent theme in this debate is the uncertainty that increasing market integration generates for the survival of basic institutions in which political life is traditionally organized (e.g., Cohen, 1996: 1; Sassen, 1996: 4; Garret, 1998). Nevertheless, these claims are frequently not supported by systematic research that empirically assesses these hypotheses. As an example, Schulze and Ursprung (1999: 54) survey the literature on the nexus between economic globalization and the nation state and conclude that ‘...[after we] cast the cool eye of econometric analysis on the phenomenon of global market integration, we arrive at the conclusion that a doomsday view is not warranted’. Our analysis indicates that, in the case of the credit rating agencies, the same conjecture is likely to be relevant.

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NOTES

1. President's Sarkozy comment to *Le Monde* regarding the loss of triple-A grade for France as a “political” action is characteristic.

2. Namely, (i) Regulation of Credit, Labour and Business, (ii) Inflation Level, (iii) Legal Structure and Security of Property Rights, and (iv) the size of the public sector as measured by the General Government Final Consumption Expenditure.
3. <<http://www.freetheworld.com/release.html>>. A brief description of all variables can be found in the appendix.
4. All indexes taken from the Economic Freedom project run from the value of 0 to 10 where higher values indicate a more liberal stand with less restrictions and regulations. These scores run from as early as 1970 for some countries available in five year intervals until the year 2000. Beyond that, they are available yearly. To increase our sample size, we linearly interpolate the values within five year intervals.
5. For economy of space we do not present the results here. They are available upon request.
6. For economy of space we do not present the results here. They are available upon request.
7. For economy of space we do not present the results here. They are available upon request.

NOTES ON CONTRIBUTOR

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APPENDIX

Table 4 Contemporaneous correlations of changes in ratings and changes in policy indicators

VARIABLES	Dependent Variable:					
	Δ Regulation	Δ Regulation	Δ Legal Protection	Δ Inflation	Δ Gov. Consumption	Δ Gov. Consumption
S & P's Ratings	0.0137 (0.0180)		0.0133 (0.0135)	-4.423 (3.984)	0.174*** (0.0584)	
Moody's Ratings		0.0404* (0.0240)	-0.00672 (0.0130)	-6.423 (5.595)		0.0844 (0.0640)
Δ GDP pc (log)	0.282 (0.462)	0.265 (0.422)	1.217*** (0.419)	-37.31 (25.16)	-4.939*** (1.532)	-4.199* (2.281)
Δ Openness	-0.00269* (0.00158)	-0.00228 (0.00143)	-0.00164 (0.00126)	0.412** (0.171)	-0.0209*** (0.00661)	-0.0156*** (0.00555)
Δ Executive Ideology	-0.0246 (0.0273)	-0.0354 (0.0318)	-0.0476 (0.0437)	-23.47 (23.26)	-0.125 (0.102)	-0.293 (0.228)
Regulation	0.0349*** (0.0131)	0.0307** (0.0121)				
Legal Protection			0.0181*** (0.00500)			
Inflation				-0.695 (0.857)	0.401*** (0.0240)	
Gov. Consumption					0.00782 (0.00562)	0.0141** (0.00580)

(continued)

Table 4 (Continued)

VARIABLES	Dependent Variable:							
	Δ Regulation	Δ Regulation	Δ Legal Protection	Δ Legal Protection	Δ Inflation	Δ Inflation	Δ Gov. Consumption	Δ Gov. Consumption
Constant	-0.153* (0.0820)	-0.126 (0.0766)	-0.125*** (0.0403)	-0.161*** (0.0318)	2.916 (4.291)	-5.411 (4.868)	-0.0133 (0.117)	-0.107 (0.120)
Observations	1,115	1,144	1,108	1,136	1,115	1,146	1,152	1,201
R-squared	0.016	0.023	0.025	0.024	0.033	0.210	0.052	0.036
Number of Countries	91	87	91	87	94	87	96	93

Notes: Clustered Robust standard errors in parentheses, *** indicates $p < 0.01$, ** indicates $p < 0.05$, * indicates $p < 0.1$.

Table 5 Variables' Definitions and Sources

Variable	Definition	Source
Regulation	Index measuring Regulation of Credit, Labour and Business. Ranges from 0–10, higher values reflect less regulation.	Gwartney <i>et al.</i> (2012)
Legal Protection	Index measuring Judicial independence, Protection of property rights Legal enforcement of contracts, Military interference in rule of law and politics among others. Ranges from 0–10, higher values reflect greater law enforcement.	Gwartney <i>et al.</i> (2012)
Inflation	Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.	World Bank (2012)
Government Consumption	General government final consumption expenditure includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditure on national defence and security, but excludes government military expenditures that are part of government capital formation. Expressed as percentage of GDP.	World Bank (2012)
GDP per capita	GDP per capita constant 2000 US dollars.	World Bank (2012)
Openness	Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product.	World Bank (2012)
Rating Score	Records for each country the rating given by either Moody's or Standard & Poor's the first year it appears in the ratings. Own calculation based on historical data by Afonso <i>et al.</i> (2011)	Afonso <i>et al.</i> (2011)
Downgrade Intensity	Number of times that a country was downgraded either by Moody's or Standard & Poor's divided by the number of years the country appears in the ratings. Multiple downgrades per year are treated as one downgrade. Own calculation based on historical data by Afonso <i>et al.</i> (2011)	Afonso <i>et al.</i> (2011)
Executive Ideology	An indicator taking the value of '1' if the party of the executive's orientation with respect to economic policy is Left (i.e. for parties that are defined as communist, socialist, social democratic, or left-wing.)	Beck <i>et al.</i> , (2001)