The Political Economy of Sovereign Rating Criteria

What Rating Agencies Demand from National Governments

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List of Abbreviations

BCBS	Basel Committee on Banking Supervision
CDS	Credit default swap
CRA	Credit rating agency
DBRS	Dominion Bond Rating Service
DPI	Database of Political Institutions
DV	Dependent Variable
EC	European Commission
ECB	European Central Bank
EMBI	Emerging Markets Bond Index
EMU	European Monetary Union
ESMA	European Securities and Markets Authority
EU	European Union
FDI	Foreign direct investment
Fitch	Fitch Ratings
FSB	Financial Stability Board
GDP	Gross domestic product
ICSID	International Center for the Settlement of Investment Disputes
IFC	International Finance Corporation
IMF	International Monetary Fund
IO	International Organization
LDV	Lagged dependent variable
Moody's	Moody's Investors Service
NRSRO	Nationally recognized statistical rating organization
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary least squares
PCSE	Panel-corrected standard errors
POLS	Pooled ordinary least squares
RD	Restricted Default
ROSC	Reports on the Observance of Codes and Standards
SD	Selective Default
SDDS	Special Data Dissemination Standard
SEC	Securities and Exchange Commission
S&P	Standard & Poor's
SSA	Sub-Saharan Africa
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
US	United States of America
WR	Withdrawn
WTO	World Trade Organization

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Summary

Sovereign rating downgrades have led to strong criticism of the criteria used by the three major rating agencies, Standard & Poor's, Moody's, and Fitch. But which criteria do rating agencies actually use for evaluating the creditworthiness of sovereign states? The existing literature points to a few basic macroeconomic factors. This book shows that, in addition, rating agencies take political factors into account, in particular a country's economic liberalization policies, international economic agreements, and political institutions.

The book demonstrates the importance of political factors for sovereign ratings based on a new data set for 145 rated countries, which is the largest sample analyzed in the literature thus far. Methodologically, the study combines panel econometric evidence with a text analysis of a unique database of more than 1,200 rating announcements. In 72 per cent of these rating announcements, rating agencies refer to political factors as a key rating determinant.

This book argues that rating agencies have good reason for taking political indicators into account as well. Since creditors cannot enforce sovereign debt repayment, rating agencies not only have to evaluate a country's ability, but also its willingness to repay. Political factors can play two crucial functions in rating assessments of this willingness to repay. First, rating agencies can use market-friendly economic liberalization policies and international agreements as signals of a country's willingness to repay. These policies and agreements are credible signals if they are costly to reverse. Second, rating agencies' analysis of political institutions can show which domestic political actors may prevent a government from defaulting. If a country has more veto players, it is less likely to default on its debt.

Overall, this book shows that political factors are at the core of rating agencies' risk analysis. Rating agencies take political factors into account for almost all rated countries, regardless of the country's stage of economic development.

1 Introduction

> "Keep in mind, if we don't do that, if we don't come to an agreement, we could lose our country's AAA credit rating, not because we didn't have the capacity to pay our bills -- we do -- but because we didn't have a AAA political system to match our AAA credit rating."
> Barack Obama, President of the United States, 29 July 2011 (White House 2011)

> "S&P has no authority to make that kind of vague political judgment."
> Paul Krugman, Economist, 5 August 2011 (on the day of the first downgrade of the United States) (Krugman 2011a)

> "There is a point at which a government will decide that the economic, social and political costs of repaying the debt are higher than those of not repaying it. There are no quantitative-based approaches that satisfactorily replace analysts' disciplined judgment on this question."
> Moody's, Sovereign Rating Methodology 2008 (Moody's 2008)

A few days after Obama's statement, the United States was downgraded from its top-notch AAA rating for the very first time. The downgrade by Standard & Poor's provoked strong criticism by politicians, academics, and columnists. For instance, in the quotation above Paul Krugman called into question the authority of Standard & Poor's political judgment. In the European debt crisis, sovereign rating downgrades also led to strong political criticism of the three major rating agencies, Standard & Poor's, Moody's, and Fitch. European officials, such as Commissioner Michel Barnier, complained about the "considerable power" (Financial Times 2010) and about the "disproportionate role played by rating agencies" (Barnier 2010). European Commissioner Viviane Reding demanded that "Europe cannot let itself be destroyed by three American private companies" (DW World 2011) and suggested that other countries "should create independent European and Asian rating agencies" (ibid.).

These comments vividly illustrate the common perception that the three major rating agencies are prominent sources of financial market pressure on sovereign states. With their sovereign ratings, rating agencies evaluate the likelihood of sovereign debt

repayment. As in Obama's statement, the AAA rating has become the standard measure of high credit quality that countries strive to achieve in order to pay lower interest rates on their debt. An analysis of sovereign ratings can therefore contribute to the broader academic debate about the constraints that international financial markets place on national governments (see section 1.1).

If financial market participants focus only on a few basic macroeconomic outcomes and do not care how countries achieve theses outcomes, countries still have considerable scope to make their own political decisions. In contrast, if market participants also evaluate the details of a country's policies, national governments will have to bear higher interest rates on their debt if they do not want to follow financial market's policy preferences. To analyze the room to move that financial market participants leave to sovereign states, we thus need to find out what financial market actors demand from sovereign states. In this book, I will show that credit rating agencies, one of the central actors in the sovereign debt market, do not only take into account macroeconomic outcomes, but also evaluate a country's policies and political institutions.

The previous empirical literature focuses only on a few basic macroeconomic criteria that rating agencies use as sovereign rating criteria (see section 1.2). However, based on a new comprehensive database for 145 countries, I will demonstrate that rating agencies also take political factors such as economic liberalization policies and political institutions into account in making their sovereign risk assessments. As there is no credible international mechanism to enforce sovereign debt repayments, rating agencies have to assess both a country's ability and its willingness to repay. Previous studies focus on a country's repayment record as a proxy for its willingness to repay (Tomz 2007, Reinhart & Rogoff 2009). But, as I will argue, policies and political institutions can also serve as an important indicator for a country's willingness to repay.

In this introduction, I will first explain in section 1.1 why I focus on rating agencies and how this study contributes to the wider debate about financial market constraints on national governments. In section 1.2, I will review the limited empirical evidence on sovereign rating criteria thus far and present the central argument of this book: that rating agencies take into account political factors in their risk assessments. Section 1.3 summarizes my main contributions to the literature on economic liberalization policies

(chapter 4), political institutions (chapter 5), and international agreements (chapter 6). Section 1.4 presents the structure for the rest of the book.

1.1 Rating Agencies in the Sovereign Debt Market

The criticism of credit rating agencies is part of a wider public and academic debate about the pressures of increasing capital flows on national governments. In the mid-1990s, some scholars claimed that international financial integration significantly constrains the policy choices of national governments (Andrews 1994, Cerny 1994, Strange 1996, Rodrik 1997). Other scholars emphasized that domestic political institutions and conditions can at least partly insulate national governments from being forced to adjust their policies according to the preferences of financial market participants (Garrett 1998, Swank 2001, Basinger & Hallerberg 2004).

This entire debate depends on the preferences of financial market participants. If, as Mosley (2003a) argues, financial market participants consider only a few macroeconomic indicators when making their investment decisions, then governments remain largely unconstrained in their policy choices. If market actors only care about macroeconomic outcomes, countries can still choose how to achieve these outcomes without fear of being punished by markets for their choices. As long as a country achieves preferred macroeconomic outcomes, such as high growth or low inflation, market actors might not care about a country's economic liberalization policies or its political institutions. In order to determine the impact of financial markets on a country's policies and political institutions, it is thus crucial to analyze the criteria financial market participants use to evaluate sovereign states.

Although the pressures of financial globalization are widely studied, many scholars analyze financial market participants only in general terms as "global financial markets" (Held et al. 1999: 288). Gilpin, for instance, discusses "how international financial flows have constrained domestic economic policy" (2001: 277). To understand the influence of these global financial markets or international financial flows on national governments, it is necessary to disentangle the influence of different specific market actors and to analyze their respective criteria for judging the policies of national governments. An analysis of the criteria used by specific market actors will therefore help to shed light on the extent of the constraints that financial markets place on national governments.

I will focus on credit rating agencies (CRAs) because they are central actors in the sovereign debt market. Over the last few decades, their sovereign ratings have become the most important standard of sovereign creditworthiness (see chapter 2). Until the 1980s, CRAs rated few countries, most of which got the best rating. Since then, the rating business has increased considerably to the extent that the credit quality of more than 100 countries is currently assessed by each of the three major rating agencies, Standard & Poor's (S&P), Moody's Investors Service (Moody's), and Fitch Ratings (Fitch).

Sovereign ratings have proven to be reliable indicators of default risk for investors. According to Standard & Poor's, a sovereign default is the failure of a sovereign "to meet a principal or interest payment on the due date contained in the original terms of a debt issue" (S&P 2011a). It occurs when the "government either fails to pay scheduled debt service on the due date or tenders an exchange offer of new debt with less-favorable terms than those of the original issue" (ibid.). Since 1975, more than 80 countries have defaulted, many of them several times (S&P 2006a). In the 180 sovereign debt restructurings that have taken place since 1970, investor losses have amounted to an average of 37% (Cruces & Trebesch 2013). In contrast to other rating products, sovereign ratings have a good track record as a measure of default risk (see section 2.3). No country with an investment grade rating, i.e., with one of the highest ten rating categories, has ever defaulted on its bonds in the subsequent year. This provides an incentive for investors to use ratings as one indicator in their assessments of the likelihood of sovereign debt repayments.

In contrast to other measures, sovereign ratings provide a "pure" measure of financial market's assessments of default risk. Government bond yields and spreads are alternative measures that are widely used in the political economy literature to assess financial markets' default risk expectations (see, e.g., Mosley 2003a, Bernhard & Leblang 2006, Hallerberg & Wolff 2008, Gray 2009). However, interest rates not only reflect expectations of default risk but also of market liquidity, exchange rates, monetary policy rates, and inflation rates. An extensive empirical literature shows that sovereign rating decisions have indeed an impact on government borrowing costs and a country's domestic economy (see Table 4 in section 2.2.3). If countries want to pay lower interest rates on their debt, they will have to pay attention to CRAs' demands.

As we have seen above, rating agencies and the criteria they apply are widely criticized by policymakers and academics alike. In particular, many commentators focus on rating agencies' political judgments. But what are the criteria that CRAs promote by including them in their sovereign rating assessments? Do CRAs actually take political factors into account and demand certain policies from national governments or do they only analyze a narrow set of general macroeconomic indicators?

1.2 Argument: Why Rating Agencies Take Political Factors into Account

As I will show, political factors are central criteria in rating agencies' evaluation of a country's willingness to repay. In the literature thus far, there are many claims that CRAs are in favor of certain economic policies (Sinclair 2005, Sassen 1996, Datz 1994), political institutions (Biglaiser & Staats 2012, Beaulieu et al. 2012), and international agreements (Kapstein 1994, International Monetary Fund (IMF) 2003). However, there is limited empirical evidence that CRAs include these political factors in their sovereign risk assessments. Previous econometric studies analyzed a few basic macroeconomic indicators, such as gross domestic product (GDP) per capita, debt ratios, and inflation rates, as determinants of sovereign ratings. Recently, a few econometric studies have gone beyond this narrow set of macroeconomic indicators and include political factors as well. However, the results on political factors are either insignificant (Biglaiser & DeRouen 2007, Archer et al. 2007) or contradict each other (Biglaiser & Staats 2012, Beaulieu et al. 2012). Moreover, there is still no comprehensive theoretical explanation for why and which political factors matter for CRAs' sovereign risk assessment.

Rating agencies have good reason to go beyond the narrow set of macroeconomic indicators and to also take political factors into account. Since creditors cannot enforce sovereign debt repayment, CRAs not only have to assess a country's ability but also its willingness to repay. If a company simply decides not to repay its debt, domestic bankruptcy courts can force the company to hand over assets and can eventually even liquidate the company. For sovereign states, these legal enforcement procedures are limited (Schumacher et al. 2013). In foreign courts, sovereign immunity laws have for a long time protected sovereigns from creditor suits (see Sturzenegger & Zettelmeyer 2006: chapter 3). Even if creditors successfully litigate in foreign courts, there are few possibilities for creditors to get their hands on assets from the sovereign's territory.

Countries do indeed default at high and low debt levels and in economic bad and good times (Tomz & Wright 2007). More than half of all defaults by middle-income countries occur when external debt to GDP is still at a manageable level of below 60% (Reinhart & Rogoff 2009: 54). Without a credible mechanism for enforcing sovereign debt repayment, CRAs also have to evaluate the willingness of national governments to repay their debt.

CRAs know that they also have to assess a country's willingness to repay. In its most recent methodology, Standard & Poor's explains that its ratings assess a "sovereign's ability and willingness to service financial obligations" (S&P 2011a: 3). Moody's argues in its methodology that "governments, by the singular nature of sovereignty – i.e., the freedom from higher authority – can make the deliberate choice to not repay their debt. There is no way to compel them to do so, and nor there is a way for a sovereign to commit to hand over its assets if it defaults" (Moody's 2008: 6). Fitch also explains that due to the limitations of international law, its "analysis of sovereign credit risk must take into account the willingness to pay, as well as financial capacity" (Fitch 2012a: 2).

Previous literature mainly uses a country's past debt repayment record as a proxy for a country's willingness to repay. In the sovereign debt literature, Eaton and Gersovitz (1981) argue in their seminal theoretical model that creditors permanently exclude states from capital markets following a default. In this vein, reputational costs of default have played a central role in the theoretical sovereign debt literature (see Panizza et al. 2009: 9-14 for an overview). For instance, Tomz (2007) argues that financial market participants punish inexcusable defaults and reward countries for repayment in difficult times. Cruces and Trebesch (2013) provide empirical evidence for the reputational costs of default. Previous empirical research on sovereign rating determinants also focuses on past default history as a proxy for a sovereign's willingness to repay (see, e.g., Cantor & Packer 1996, Archer et al. 2007, Biglaiser & DeRouen 2007, Borensztein & Panizza 2008, Afonso et al. 2011a).

I argue that CRAs have good reason for taking additional, political factors into account in assessing a country's willingness to repay. First, market-friendly domestic policies and international agreements can serve as further signals of a government's willingness to repay if these policies and agreements are visible and costly to reverse. Second, CRAs' analysis of a country's political institutions can show which actors may prevent a government from defaulting.

These two lines of argument are very similar to the pioneering literature on central bank credibility. According to this literature, countries can build an inflation-fighting reputation (Barro & Gordon 1983, Backus & Driffill 1985) and delegate powers to an independent central bank (Rogoff 1985) to solve the time-inconsistency problem (Kydland & Prescott 1977). In a similar vein, countries can build a creditor-friendly reputation by following market-friendly domestic policies and international agreements and can limit the executive's leeway by establishing domestic veto players.

First, political factors can serve as signals of a government's willingness to repay under two conditions: if they are visible and if they are costly to reverse. Political factors have to be visible and easily interpretable for an external actor because market actors, such as CRAs, have limited resources and it is too costly for them to use these to analyze the details of every country's domestic political economy in the local language of the country. I argue that CRAs can use economic liberalization policies as a short-cut because a government can only implement these visible policies if these policies are in the interest of its major supporters. Economic liberalization policies can serve as a device for a government to credibly signal its investor-friendliness. Moreover, the ability of a government to implement these costly liberalization policies also sends a signal regarding its general willingness to reform and to reverse an unsustainable fiscal trajectory in times of crisis. A government can also show its market-friendliness by committing to relevant international agreements, for instance related to property rights, free financial flows, and economic reforms. In contrast to domestic policy announcements, international agreements are not in the local language and are very easily understandable for rating agencies.

Economic liberalization policies and international agreements can only serve as credible signals if it is costly for a government to change these policies later on. If a government can easily reverse its decisions, the policy or agreement is only cheap talk that market actors will not regard as a credible signal. Therefore, I expect that some liberalization policies, such as privatizations, will be read as more credible signals because it is very difficult and costly to reverse these policies. A government will have to expropriate current owners if it wants to reverse its privatization program, which will lead to visible protests that can be observed by any external actor, including CRAs. The commitment to an international agreement is only credible if there is some actor, such as the International Monetary Fund, which can credibly enforce a country's international commitment to reforms. Without credible enforcement or high costs for

reversing the decision, policy announcements and international agreements are only cheap talk.

Second, in addition to liberalization policies and international agreements as signals of a government's investor-friendliness, I argue that CRAs also have good reason for taking political institutions into account. Even if a country's executive is not investor-friendly and wants to default on its debt, veto players can prevent the executive from implementing this decision. I expect that the higher the number of actors – such as a parliament, an independent central bank or independent judiciary – that have to agree on a default decision, the less likely a country is to default. The higher the number of veto players, the more likely it is that some actor will have an interest in preventing the default decision. Therefore, CRAs have an incentive to take political institutional constraints into account in their sovereign default risk assessment.

In contrast to claims made in previous studies, I thus do not argue that CRAs promote certain policies, political institutions, and international agreements because of a certain ideology. Several scholars claim that CRAs have a "neoliberal" agenda and that is why they embrace certain policies (Sinclair 2005, Sassen 1996, Datz 2004). Krugman also claims that CRAs demand certain policies from national governments because of their "ideological agenda" (Krugman 2011b). In the European debt crisis, Italy's then Prime Minister Berlusconi argued that the "assessments by Standard & Poor's appear [...] to be tainted by political considerations" (Financial Times 2011).

Sovereign ratings are indeed political judgments in that CRAs do take political factors into account. But there is no indication that CRAs care about political factors because they are driven by an ideology. Rather, taking political factors into account makes sense if it improves rating agencies' assessment of a country's likelihood to repay. As CRAs also have to assess a government's willingness to repay, they cannot neglect political factors as one indicator for this willingness. Instead, they have to take into account the number of political veto players that can constrain the executive's decision to default and investor-friendly policies that signal a government's willingness to reform and repay in difficult times. Therefore, CRAs do not only care about a country's macroeconomic outcomes, but also about the policies and the political process through which countries try to achieve these outcomes.

1.3 Contributions and Findings

I will analyze which political factors CRAs take into account by using two new comprehensive data sets for 145 countries. First, I have compiled a new panel data set of sovereign ratings for more than 100 countries from 1980 to 2010. The econometric analysis is thus based on a far more comprehensive data set than some of the previous studies on political factors, which include only between 16 and 50 countries (Archer et al. 2007, Biglaiser & DeRouen 2007). In the panel econometric analysis, I aim to re-engineer CRAs' rating model by explaining sovereign ratings as dependent variable with macroeconomic and political indicators.

Second, I analyze what CRAs demand from national governments in their sovereign rating announcements. For each rating change, CRAs publish an announcement to explain their decision. This unique data source, consisting of 1,222 announcements for all 137 countries with rating changes since 1995, has never been compiled and analyzed before although it is the central way in which CRAs communicate their demands to governments and the wider public. Before giving an overview of the primer on sovereign ratings in chapter 2 and the literature, my empirical approach, and newly compiled data sets in chapter 3, I will summarize in the following how I aim to solve three puzzles in the political economy literature in chapters 4-6. Overall, these empirical chapters show that political factors are at the core of rating agencies' sovereign risk analysis.

1.3.1 Promotion of Economic Liberalization Policies (Chapter 4)

First, in the literature thus far, theoretical claims and empirical evidence on sovereign rating criteria have been inconsistent. Many scholars claim that CRAs promote economic liberalization and have thus contributed to the spread of liberalization policies over the last few decades (Sinclair 2005, Sassen 1996, Datz 2004). However, these studies rely on a small number of rating announcements. Biglaiser & DeRouen (2007) more rigorously test for economic liberalization policies, but in their small panel of Latin American countries CRAs do not seem to care about economic reforms.

In chapter 4, I use the new, more comprehensive panel data set to show that economic liberalization policies indeed lead to better sovereign ratings. Moreover, rating agencies also consistently promote economic liberalization policies in their sovereign rating announcements. In their 1,222 announcements, rating agencies make judgments

on economic liberalization policies in more than a third of all rating actions. For more than 80% of these judgments, rating agencies take a positive stance on economic liberalization policies, in particular on domestic economic reforms such as privatization. In their announcements, CRAs often refer to these policies as credible signals that a government is investor-friendly. Overall, the econometric and the content analysis provide first comprehensive evidence on the importance of economic liberalization policies for CRAs' assessments of sovereign states. If countries want to get a better rating to pay lower interest rates on their debt, they will therefore have an incentive to implement liberalization policies.

1.3.2 Rating Political Institutions (Chapter 5)

Second, in the political economy literature, there is a lively debate on whether sovereign creditors are in favor or skeptical of democratic decision-making because of the institutional constraints placed on the executive. According to this literature, democratic states pay lower borrowing costs on sovereign bond markets and hence enjoy a "democratic advantage" (Schultz & Weingast 2003). However, a number of recent papers fail to confirm this democratic advantage for recent sovereign rating data (Archer et al. 2007, Biglaiser & Staats 2012) even though such an advantage seemed to exist for sovereign debt data for historical cases. Hence, the recent literature tries to solve the puzzle, "Where is the democratic advantage?" (Beaulieu et al. 2012).

In chapter 5, I offer a simple explanation for this puzzle. Regimes with contested elections actually never had better borrowing conditions. If we use the same definition of electoral democracy that is used in the literature on recent debt data for the studies on historical data, we do not find any evidence for a democratic advantage. Instead, for the historical cases, it is a higher number of veto players that led to lower borrowing costs.

I show that this mechanism still holds for recent sovereign rating data. A panel econometric study and a text analysis show that credit rating agencies favor constraints on the executive but not regimes with contested elections, and they are particularly wary of the electoral uncertainty associated with electoral democracy. All other things being equal, a country that has more veto players has more actors that can prevent a government from making a decision to default. It is therefore countries with many veto players and not electoral democracies that enjoy an advantage in sovereign bond markets.

1.3.3 The Enforcement of International Agreements (Chapter 6)

Finally, I contribute to the debate on the enforcement of international agreements. In response to past international financial crises, states have promised to implement many international agreements. Several international organizations and scholars expect that rating agencies help to enforce these international agreements, such as the key international financial standards, by including them in their sovereign risk assessments (Kapstein 1994: 13, IMF 2003: 18, Arner & Taylor 2009: 2, IMF 2013a). But do rating agencies actually take international agreements into account in their sovereign rating assessments?

In chapter 6, I show that rating agencies only care about international agreements to the extent that international organizations and other states either already enforce these agreements or provide financial support. Based on the new data set of rating announcements, I test whether rating agencies take into account international financial standards, arrangements with the International Monetary Fund, and membership of international and regional organizations. International financial standards are seldom mentioned in sovereign rating announcements. As substantive compliance with these agreements is not enforced by an international institution, rating agencies have no reason to regard the adoption of these standards as a credible commitment that shows a government's willingness to repay. In contrast, IMF programs and the European Union accession process require substantive policy reforms. Rating agencies refer to these international agreements in more than a third of all announcements for a total of 87 countries for two reasons: first, due to the financial support linked to these agreements and second, as signals of a government's willingness to repay. The findings highlight that rating agencies only care about international agreements to the extent that they are already enforced. International organizations and governments should thus be wary of relying on market enforcement by rating agencies alone.

1.4 The Structure of the Book

Before presenting my findings in more detail in chapters 4-6, I will provide a primer on sovereign ratings in chapter 2 and review the previous literature on sovereign rating criteria and present my empirical approach and newly compiled data sets in chapter 3.

In chapter 2, I will explain what rating agencies and their sovereign ratings are (section 2.1), why they matter (section 2.2), and how they have performed thus far (section 2.3). First, I will argue why I focus on the three main CRAs and why these CRAs have dominated the sovereign rating business over the last few decades. Moreover, I provide a clear definition of sovereign ratings and the different types and rating categories that CRAs provide. Second, I explain why the sovereign rating business has increased considerably over the last few decades. In particular, I will show how regulatory measures and central bank endorsements have increased the importance of sovereign ratings. A review of the empirical literature highlights that sovereign ratings indeed have an impact on government bond prices and the domestic economy. Finally, I will analyze CRAs' track record thus far. Based on a comprehensive data set, I show that sovereign ratings are relatively stable and good predictors of default risk.

In chapter 3, I will review the previous literature on sovereign rating criteria showing that there is limited evidence on the importance of political factors for sovereign ratings thus far (section 3.1). This leads to the research question of this book: Do rating agencies take into account political factors and if so, which political criteria do they use (section 3.2)? Initial evidence from an analysis of sovereign rating methodologies indicates that CRAs take political factors into account (section 3.3). In section 3.4, I will introduce the data sets and methods used in this book to identify which political factors CRAs endorse.

In the following chapters, I will present the empirical evidence on economic liberalization policies (chapter 4), political institutions (chapter 5), and international agreements (chapter 6), summarized in section 1.3 above. As these chapters show, CRAs take liberalization policies, political institutions, and some international agreements into account as indicators for a government's willingness to repay.

In the conclusion, I will discuss the implications of my findings for rated countries and regulators (section 7.2). Moreover, I will have a closer look at recent developments, in particular rating agencies' and regulators' responses to the European sovereign debt crisis (section 7.3). In the light of my findings, I will finally propose avenues for further research (section 7.4). Overall, as the summary of my empirical findings shows (section 7.1), political factors are a major rating determinant for almost every country and for almost three quarters of all rating decisions, regardless of the country's initial rating and whether the country is upgraded or downgraded. Rating agencies do not only take

into account a country's macroeconomic outcomes, but also the policies and political procedures that a country uses to achieve these aims. Political factors are at the core of rating agencies' sovereign risk analysis.

2 A Primer on Sovereign Ratings: What They Are and Why They Matter

Sovereign ratings have become the key standard of creditworthiness over the last few decades. In this chapter, I will first explain what rating agencies and their sovereign ratings are and who pays for them (section 2.1). I will then argue why the number of rated countries has increased substantially since the 1980s (section 2.2.1). In particular, I will examine the important role of regulatory endorsements on the domestic and on the international level (section 2.2.2). A review of the empirical literature will highlight the strong influence that sovereign ratings now have on government bond prices and the domestic economy (section 2.2.3). Finally, in section 2.3, I will analyze the track record of sovereign ratings thus far based on a comprehensive database.

2.1 Rating Agencies and Their Sovereign Ratings: What They Are

2.1.1 Rating Agencies: Three Dominant Companies

The bond rating business first emerged at the beginning of the 20th century (White 2010: 211). In 1909, John Moody started to assess the likelihood of default for railroad bonds in the United States (US) (Sylla 2001: 6-7, Cantor & Packer 1994: 2). Fitch Publishing House was founded a few years later in 1913 by John Knowles Fitch and provided its first ratings in 1924 (Fitch 2013d). Around the same time, Poor's Publishing and Standard Statistics began rating corporate bonds and municipal securities (S&P 2013c). In 1941, the two companies merged to become Standard & Poor's and were acquired by their current owner, the publishing house McGraw-Hill, in 1966 (ibid.). Fitch Ratings is currently part of the Fitch Group, which is jointly owned by the New York-based media company Hearst Corporation and the Paris-based holding company Fimilac (Fitch 2013d). Moody's Investors Service is now part of the publicly traded company Moody's Corporation (Moody's 2013c).

These three rating agencies have dominated the rating business for the last decades. In 1975, they were the first companies recognized by the US Securities and Exchange Commission (SEC) as nationally recognized statistical rating organizations (NRSROs) (White 2010: 214). As a consequence, only ratings by these three companies could be

used in the US to fulfill regulatory requirements (see section 2.2.2). The three main CRAs were also the first to expand globally beyond the US market. S&P opened its first office in London in 1984 and has now offices in more than 20 countries (S&P 2013c). Currently, S&P, Moody's, and Fitch account for about 96% of all SEC-recognized ratings and employ 93% of all rating analysts (SEC 2012: 7-8). Up to 10% of their staff is responsible for producing sovereign ratings (ibid.). Standard & Poor's employs about 80 sovereign rating analysts (Reuters 2011). Moody's has a team of over 60 sovereign and sub-sovereign analysts worldwide (Moody's 2013e). Fitch's core team includes 19 sovereign rating analysts, twelve based in London, five in New York, and two in Hong Kong (Fitch 2013e).

Over the last few decades, few companies tried to enter the rating market and their attempts were generally unsuccessful. In the decades before the turn of the millennium, the SEC had recognized four new CRAs: Duff & Phelps in 1982, McCarthy, Crisanti & Maffei in 1983, IBCA in 1991, and Thomson Bank Watch in 1992 (Cantor & Packer 1994: 8). However, following the merger of these companies with Fitch, there were again only three NRSROs left by 2000 (White 2010: 217). Since then, the SEC has tried to promote competition in the rating market by recognizing eight new CRAs. Two of these, A.M. Best Company and Morningstar Credit Ratings, do not issue sovereign ratings. One CRA, Egan-Jones Rating, previously claimed it had been rating government bonds since 1995. However, the SEC later found out that Egan-Jones had actually only started to rate these bonds in 2008 and consequently barred Egan-Jones from issuing NRSRO-designated sovereign ratings (SEC 2013b). Table 1 gives an overview of the remaining five new entrants and the number of countries that they currently rate (as of July 2013). The Canadian-based Dominion Bond Rating Service (DBRS) was the first new entrant, but it only provided ratings for 16 countries up until May 2011. The other CRAs were only recently recognized and do not have a track record in the sovereign rating business. This is also the case for the new entrants that have been recognized since December 2010 by the European Union's (EU) CRA registration process (European Commission (EC) 2013b). In addition to the three main CRAs, the EU had recognized 17 additional CRAs by the end of 2012 (European Securities and Markets Authority (ESMA) 2013a). However, only four of these CRAs provide sovereign ratings and one CRA, Capital Intelligence (Cyprus) limited, has already withdrawn most of its sovereign ratings (ibid.).

Table 1: New SEC-Recognized Competitors in the Sovereign Rating Market

Name	Headquarter	Date of SEC Recognition	Number of Countries Rated
Dominion Bond Rating Service	Canada	24/2/2003	26
Rating and Investment Information	Japan	21/5/2007	44
Japan Credit Rating Agency	Japan	23/5/2007	33
Kroll Bond Rating Agency/LACE	US	11/2/2008	59
HR Ratings de México, S.A. de C.V.	Mexico	5/11/2012	1 (Mexico)

Data: Dominion Bond Rating Service 2013, HR Ratings de México 2013, Japan Credit Rating Agency 2013, Kroll Bond Rating Agency 2013, Rating and Investment Information 2013, SEC 2013a

Without official recognition, it has been difficult for new entrants to challenge the established CRAs that have a long track record in the sovereign rating business. Moody's began its sovereign rating activities in 1918 when it rated the foreign government bonds of ten countries (Gaillard 2012: 4). Fitch, Standard Statistics, and Poor's Publishing followed suit in the 1920s (ibid., S&P 2013d: 29). However, during World War II, Standard Statistics withdrew most of its sovereign ratings (ibid.) and the other agencies also suspended all of their sovereign ratings except for the Americas (Gaillard 2012: 5). After World War II, the three CRAs provided few ratings. S&P suspended all of its sovereign ratings except for the US and Canada (S&P 2013d: 29). Moody's rated only six sovereigns from the end of World War II until the end of the 1970s (Moody's 2013d) and Fitch suspended its rating business entirely until the 1990s (Gaillard 2012: 7). During the last thirty years, the sovereign rating market has picked up again to the point that the three main CRAs now each evaluate the creditworthiness of more than 100 sovereigns (see section 2.2.1 for the reasons of this increase).

2.1.2 Sovereign Ratings: Definition and Types

Sovereign ratings are assessments of the likelihood of debt repayment by sovereign states to private investors (see S&P 2013a: 3, Moody's 2008: 4, Fitch 2012a: 1). According to the three main CRAs' rating methodologies, sovereign ratings assess:

- "a sovereign's ability and willingness to service financial obligations to nonofficial (in other words, commercial) creditors" (S&P 2013a: 3)
- "the risk facing an investor who holds the debt securities of a given government" (Moody's 2008: 4)
- "a sovereign's capacity and willingness to honour its existing and future obligations in full and on time" (Fitch 2012a: 1)

A country is rated as being in default either when the sovereign fails to pay on time or when debt is exchanged at terms less favorable than those of the original issue (S&P 2013d: 28). Sovereign ratings are not an absolute cardinal measure of default risk, but only a relative ranking (S&P 2009a: 4, Moody's 2008: 5, Fitch 2010: 1). This relative ranking is provided on a rating scale from "AAA"/"Aaa", the lowest default risk, to "D" for countries currently in default. Countries rated "BBB-"/"Baa3" or higher are often referred to as investment-grade and countries below this threshold as speculative-grade rated (S&P 2013f). Table 2 gives an overview of the rating scales for the main CRAs.

Table 2: Rating Scales and Definition

S&P	Moody's	Fitch	Definition by S&P
AAA	Aaa	AAA	extremely strong
AA+ AA AA-	Aa1 Aa2 Aa3	AA+ AA AA-	very strong
A+ A A-	A1 A2 A3	A+ A A-	strong
BBB+ BBB BBB-	Baa1 Baa2 Baa3	BBB+ BBB BBB-	adequate (BBB-/Baa3 last investment grade rating)
BB+ BB BB-	Ba1 Ba2 Ba3	BB+ BB BB-	"Less vulnerable in the near-term but faces major ongoing uncertainties to adverse business, financial and economic conditions."
B+ B B-	B1 B2 B3	B+ B B-	"Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitments."
CCC+ CCC CCC-	Caa1 Caa2 Caa3	CCC+ CCC CCC-	"Currently vulnerable and dependent on favorable business, financial and economic conditions to meet financial commitments."
CC	Ca C	CC C	"Currently highly vulnerable."
D, SD		DDD,DD, D,RD	"Payment default on financial commitments."

Definitions are based on S&P (2013f) and S&P (2009a: 11).

In contrast to S&P and Fitch, Moody's does not use a category for "Default" (D), "Selective Default" (SD) or "Restricted Default" (RD). Moody's continues to rate the defaulted bonds and indicates the magnitude of the expected loss to investors with its lower categories (Moody's 2013f). On Moody's scale, countries rated "C" are "typically in default, with little prospect for recovery of principal or interest" (Moody's 2013a: 5) and countries rated "Ca" are "likely in, or very near, default, with some prospect of recovery of principal and interest" (ibid.). S&P and Fitch introduced sovereign recovery ratings in 2007 and 2005 respectively for countries close to or currently in default (S&P 2007, Fitch 2013a). These recovery ratings serve the same purpose as Moody's lower rating categories and indicate the expected losses given a default (ibid.).

Over the last few decades, CRAs have introduced several different rating types, depending on the denomination and the maturity of the bonds, but all these rating types are based on the same sovereign risk assessment.

First, CRAs distinguish between domestic currency and foreign currency ratings. According to S&P's methodology, the domestic currency rating is based on the foreign currency rating assessment (S&P 2013a: 36-37). A country can get an additional upgrade of up to two notches for its domestic currency rating due to the sovereign's ability to issue local currency (ibid.). Moody's foreign currency ratings are the same as the domestic currency ratings except for the fact that it takes additional balance of payments risks into account (Moody's 2008: 13-14). Fitch's domestic currency ratings are also directly linked to the foreign currency ratings and are usually one or two notches higher "reflecting the sovereign's greater access to local currency" (Fitch 2012a: 3).

Second, in addition to rating sovereign states as issuers, CRAs also provide ratings for specific sovereign bonds. These issue ratings can incorporate the seniority structure or support arrangements, such as guarantees (S&P 2009a: 13, Moody's 2013a: 8, Fitch 2012a: 1). In almost all cases, these issue ratings are the same as the relevant sovereign issuer default ratings (ibid.). One of the few exceptions was a $250 million series of Argentinean sovereign bonds, which were guaranteed by the World Bank and rated AAA by S&P (S&P: 2001_11_06_Argentina) and Fitch (Fitch: 2001_12_03_Argentina) despite the imminent sovereign default.

Third, CRAs introduced short-term ratings, which are directly derived from the long-term sovereign ratings, but reflect the default risk for sovereign bonds with an original contractual maturity of less than 12-13 months (Moody's 2013a: 7, Fitch 2012a: 3, S&P 2013b: 4).

Finally, CRAs also provide outlooks and reviews to signal potential changes to their sovereign ratings. Outlooks are categorized as "positive", "neutral" or "negative" and indicate the likely development for the next six months to two years (S&P 2009b: 2, Moody's 2013a: 32, Fitch 2013b). Rating reviews (Moody's), rating watches (Fitch), or credit watches (S&P) indicate that a rating is currently under revision with changes likely in the following couple of months (S&P 2009b: 3, Moody's 2013a: 32, Fitch 2013b). If Standard & Poor's puts a rating on credit watch, the rating has a one-in-two

likelihood of a rating change within the next 90 days (S&P 2009b). Moody's concludes half of all rating reviews with a rating change after 180 days (Moody's 2013a: 32). Despite this multitude of different categories, all rating types are based on the sovereign risk assessment developed for long-term foreign-currency issuer ratings (S&P 2013a: 36-37, Moody's 2008: 13-14, Fitch 2012a: 4). Therefore, I will focus in the following on these long-term foreign currency ratings and refer to them in short as sovereign ratings.

2.1.3 Who Pays for Sovereign Ratings?

For sovereign ratings, CRAs moved relatively late from an investor-paid to an issuer-paid model. Until the end of the 1970s, investors generally had to pay if they wanted to receive rating information. However, these assessments could be easily replicated following the introduction of photo-copy machines (Cantor & Packer 1994: 4). Moreover, the default of Penn Central Transport Company in 1976 and the increasing regulatory need for ratings increased the pressures on companies to signal their creditworthiness (White 2010: 214ff.). Sovereigns only began to pay for their ratings at the beginning of the 1990s (see Gaillard 2012: 36). Most of the sovereign ratings issued today by the three main CRAs are solicited, i.e., requested by the sovereign. Of the 127 sovereigns currently rated by S&P, only 16 ratings are initiated by the CRA without a request by the sovereign (S&P 2013e). Only eight of Moody's 52 EU-issued sovereign ratings are unsolicited (Moody's 2013b). As a newcomer in the sovereign rating business, almost a third of Fitch's sovereign ratings, 31 of 106, are not paid for by the sovereign state (Fitch 2013c). The few states that do not pay any rating agency are mainly developed countries with good ratings, such as Germany, Switzerland, France, and the United Kingdom. CRAs maintain these unpaid ratings because the sovereign rating is an essential component in the rating of domestic companies in these countries (S&P 2012d). Moreover, sovereign ratings can help a CRA to generate publicity. Therefore, for some rating actions, members of a CRA's communication team are directly involved in the rating decision (ESMA 2013b: 9).

2.2 Central Actors in the Debt Market: Why They Matter

Since the 1980s, CRAs have started to rate more and more countries and scholars have begun to recognize the importance of sovereign ratings in the debt market. In the following sections, I will first explain the resurgence of sovereign ratings in the past

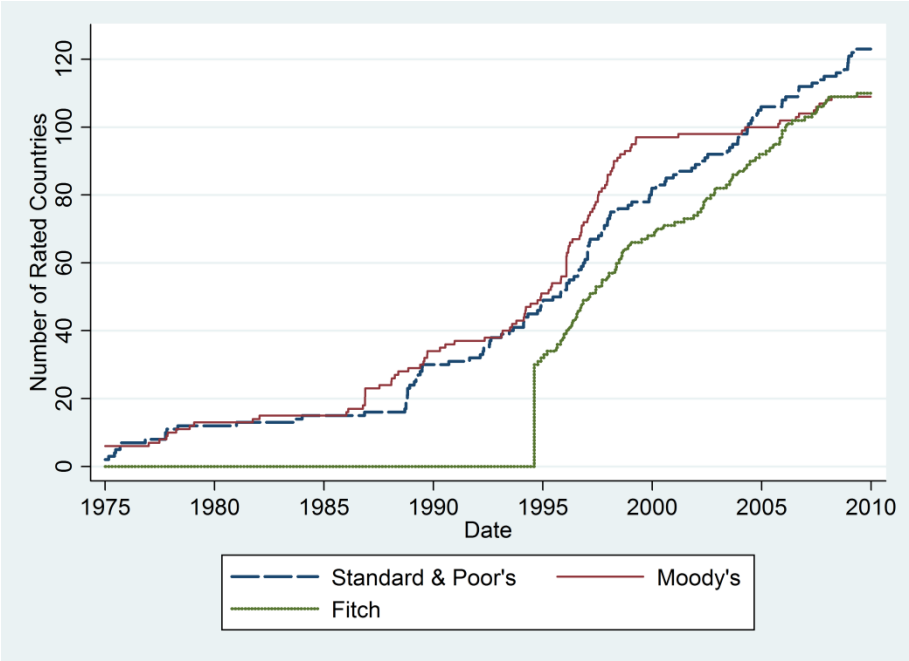
decades (section 2.1.1). In particular, I will highlight how regulatory endorsements increased the importance of sovereign ratings (section 2.2.2). In section 2.2.3, I will finally give an account of the literature on sovereign ratings' impact on government bond prices and the domestic economy.

2.2.1 The Resurgence of Sovereign Ratings

Over the last few decades, more and more countries have been rated by the three main CRAs (see Figure 1). There are five major reasons for this increase in the number of rated countries: the liberalization of financial markets, the shift from bank- to bond-based sovereign lending following the 1980s debt crises, investors' and regulators' interest in curbing risk-taking by banks and investment and pension funds, active promotion by the US and international organizations, and finally the importance of sovereign ratings for companies that want to raise debt in international markets.

First, financial liberalization has led to an increase in the number of sovereign ratings. Given asymmetries of information and costs of gathering information, ratings are an important informational short-cut, especially for foreign investors. However, following World War II, private international financial markets were tightly controlled, which meant that market participants had few opportunities to invest abroad (see Eichengreen 2008: chapter 4). When the US imposed a tax on all new issues of foreign securities sold in the US, the Interest Equalization Tax (Helleiner 1994: 85), most sovereign ratings were suspended (S&P 2013d: 29, Moody's 2013d). In addition to the US, S&P continued to rate only Canada, which was exempt from the new tax (ibid.). The liberalization of international financial markets was therefore an important precondition for the resurgence of the sovereign rating business. S&P and Moody's started to increase their coverage following the US abolition of capital controls in 1974 and the United Kingdom's (UK) abolition of all exchange controls in 1979 (see Helleiner 1994: 111ff. on details of the liberalization processes).

Figure 1: Number of Rated Countries



Second, the developing country debt crisis in the 1980s highlighted that sovereign default risk is not an abstract risk for investors. Following World War II and tight controls on private international finance, few countries defaulted on their external debt (Reinhart & Rogoff 2009: 95-96). But the defaults of more than twenty countries in the debt crisis showed that sovereign default risk could not be neglected and could lead to serious financial consequences for sovereign creditors. On the one hand, investors therefore became aware of their need for detailed sovereign risk assessments. On the other hand, sovereigns had to show investors that, in contrast to some of their peers, they would not default.

Even more important than the sovereign debt crisis as such was the way it was solved, a debt exchange scheme proposed by the US treasury secretary Nicholas Brady. From 1989 to 1997, seventeen countries exchanged their defaulted bank loans for new so-called Brady bonds (Sturzenegger & Zettelmeyer 2006: 18). Until these exchanges, direct bank lending had dominated the sovereign debt market. Since then, bonds have begun to replace bank debt (Panizza et al. 2009: 21). In contrast to large international banks, individual bondholders have a higher need for external credit risk assessments because it is too costly for each individual investor to undertake a detailed sovereign risk analysis. Similar to the 1920s, rating agencies could play an important role by providing information and risk assessments for these bondholders.

Third, although large international banks and investment and pension funds are well-informed and hence do not need rating information (White 2001:4), these institutions have to rely on sovereign ratings to solve principal-agent problems. The clients of pension funds and investment funds, as principals, need to find ways to curb risk-taking by their agents, investment managers (Fridson 1999, Cantor 2004). CRAs provide an assessment of sovereign credit risk independent of the investment managers' interests. Sovereign ratings can be incorporated into fund manager's internal guidelines, forcing them to invest only in sovereign bonds with a certain credit rating (IMF 2003: 18). According to the SEC and the Financial Stability Board (FSB), ratings are widely used as triggers in private contracts (SEC 2009: 17, FSB 2010). In a survey of 200 plan sponsors and investment managers in the United States and Europe by Cantor et al. (2007), ratings are explicitly referenced in more than 80% of the investment guidelines. Moreover, public regulators want to limit risk-taking by private financial institutions. I will explain this central driver of the increase and importance of sovereign ratings in more detail in section 2.2.2 below.

Fourth, the coverage of rated sovereigns increased because the US government and international organizations promoted the introduction of sovereign ratings for developing countries. In 2002, the US financed a conference for sub-Saharan African (SSA) countries to "educate them about the benefits" of sovereign ratings (US Department of State 2013). Sovereign ratings were meant to push developing countries to open "their books to public scrutiny", adhere "to liberalization policies and reform efforts", "promote realistic monetary and fiscal policies throughout SSA, even in the face of political opposition", and to "strengthen a government's commitment to market-oriented growth strategies and improve its credibility" (ibid). Following this conference, the US government paid Fitch to issue sovereign ratings from 2002-2006 for 12 sub-Saharan African countries that were previously not rated by the three main CRAs. In a similar way, the United Nations Development Programme (UNDP) has been cooperating with S&P since 2003 (S&P 2010a). With support from UNDP, S&P issued sovereign ratings for several developing countries, including Ghana, Cameroon, Benin, Burkina Faso, Mozambique, Kenya, Macedonia, Georgia, and Sri Lanka (ibid.). According to S&P, "behind the scenes, other international organizations and national development agencies have also encouraged governments to request credit ratings from Standard & Poor's" (ibid.).

Finally, although several countries do not issue external sovereign debt, they still request sovereign ratings to promote private sector borrowing. Until the early 2000s, sovereign foreign currency ratings were used as rating ceilings for private domestic companies by the CRAs (Gaillard 2012: 24-25). Since then, the three CRAs have introduced special ratings for this purpose, but the country ceiling still moves "invariably in tandem" with the sovereign rating (Fitch 2012a: 5). Sovereign ratings are hence a precondition for domestic companies to access international capital markets. According to S&P, Chile, for instance, requested a sovereign rating in 1992, ten years before their first rated external government bond, to "enhance the private sector's access to capital markets and help attract foreign direct investment" (S&P 2010a). As seen in section 2.1.3, CRAs also maintain a sovereign rating although the country does not pay for the rating if the rating is an essential component for the rating of important domestic companies in the country (S&P 2012d).

Financial liberalization, the shift from bank- to bond-based lending, investors' and regulators' need to curb private sector risk-taking, promotion by the US and international organization, and the need to maintain sovereign ratings for the rating of domestic companies all led to a strong increase in number of rated sovereigns over the last few decades. S&P, Moody's, and Fitch now rate more than 100 countries.

These factors also explain why sovereign ratings have become more important for investors and sovereign states. Foreign investors and small bondholders take sovereign ratings into account due to information asymmetries. Investors and regulators can solve principal-agent problems by using sovereign ratings as an external check of financial institutions' risk-taking. Finally, sovereign ratings have become such an important standard in financial markets that sovereign states feel the need to apply for a rating to enter the debt market themselves or to allow their domestic companies to raise money on international markets.

2.2.2 Regulatory Endorsements

Sovereign ratings' inclusion in public regulation is one of the main drivers of their increase in importance. Regulators on the domestic and on the international level as well as central banks have endorsed sovereign ratings over the past decades. On the domestic level, the US already began to include ratings into their regulatory framework following the 1929 financial crisis. Regulators wanted to limit the risk-taking by financial companies. For instance, from 1931 onwards, banks were only allowed to hold

publicly rated bonds of at least BBB at book value (Cantor & Packer 1994: 6). In 1975, the SEC decided to recognize the three main CRAs as nationally recognized statistical rating organizations for different regulatory purposes (White 2010: 214). Until the 2008/2009 financial crisis, ratings were used in more than 100 federal laws and 50 regulations (Cantor et al. 2007: 14, Congressional Research Service 2009: 2, Partnoy 1999). Section 939A(c) of the new Dodd-Frank Wall Street Reform and Consumer Protection Act requires the US regulatory agencies to remove this reliance on ratings and replace them with other standards of creditworthiness (SEC 2011). In other countries, credit ratings are also widely used in national legislation, regulations, and supervisory policies as a recent review by The Joint Forum (2009) for the world's largest economies shows. Although most countries aim to reduce their reliance on ratings, there has been "overall slow progress to date" (FSB 2012: 1).[1]

On the international level, the incorporation of ratings into the standardized approach of the Basel II capital requirements has further boosted the importance of CRA judgments (Basel Committee on Banking Supervision (BCBS) 2004, King & Sinclair 2003, Redak 2006). Under the original Basel Accord of 1988, bonds from member countries of the Organisation for Economic Co-operation and Development (OECD) were assigned a 0% risk weight, while claims in foreign currency on non-OECD governments resulted in a 100% risk weighting (BCBS 1988: 21-22). With the introduction of the Basel II Accord in 2004, banks that are not allowed to use their own internal ratings are forced to hold capital in accordance with CRA risk assessments, ranging from 0% risk weight for sovereigns rated at least "AA-" to 150% for below "B-" rated sovereigns (BCBS 2004: 15). Because of these capital requirements, sovereign ratings influence a bank's costs of holding government bonds. Although large banks can use internal rating models, these models strongly rely on CRA assessments (Hau et al. 2013: 296).

The new Basel III framework did not remove this reliance on rating agencies (BCBS 2011: 51ff.). In its implementation of the Basel III framework, the European Union also did not reduce its references to external ratings. According to the European Commission, "sometimes external ratings – however imperfect – remain the best solution available" (EC 2013a). For them, "the alternatives (e.g. country based method

[1] In section 7.3.2 of the conclusion, I will have a closer look at current regulatory responses to the crisis.

for banks, internal ratings) may misguide markets, be too costly or lack objectivity" (ibid.).

Due to the Dodd-Frank requirements, the US aims to implement Basel III without any reliance on the main CRAs as external credit assessment institutions. Instead, the US regulatory agencies want to use the OECD's country risk classification as an alternative (Federal Deposit Insurance Corporation 2012: 21, BCBS 2012: 23). However, the OECD strongly objects to the US' use of its country ratings. According to the OECD, its "country risk classifications **are not** sovereign risk classifications and should not, therefore, be compared with the sovereign risk classifications of private credit rating agencies" (OECD 2013a, emphasis in original). The OECD's ratings are transfer and convertibility ratings which serve the same purpose as the main CRAs' country ceilings. These ratings do not measure the risk of default, but the risk of controls that prevent a company from exchanging and transferring funds outside the country (ibid.). According to the OECD measure, Greece was still rated in the best category until the end of 2012 (OECD 2013b). Despite these objections, the US regulatory agencies went ahead with their reference to the OECD risk scale. In response, the OECD stopped rating all high income OECD and Euro area countries from 2013 onwards (OECD 2013c). "Although every effort has been made to eliminate misconceptions about the country risk classifications being sovereign risk classifications, many in the outside world continue to make use of the classifications as if they were measurements of sovereign credit risk" (ibid.). The failed EU and US' attempts to find alternatives shows the difficulties of removing reliance on sovereign ratings from public regulation.

In addition to the inclusion in domestic and international regulation, central banks also rely on sovereign ratings for their collateral frameworks. Banks can only use bonds as collateral at a central bank if the bonds are deemed eligible for central bank credit operations. Most central banks use ratings as one central eligibility criterion. Until the European sovereign debt crisis, this regulatory endorsement by central banks has been mainly overlooked by the literature.

In the Euro area, the European Central Bank (ECB) relies on the assessments of four external credit assessment institutions for government bonds (ECB 2013a). In addition to the three major CRAs, the ECB has also used ratings by the Canadian-based Dominion Bond Rating Service since 2008 (ECB 2007). Before the financial crisis, government bonds had to get a minimum rating of A-/A1 to be deemed eligible as

collateral at the ECB. Due to the financial crisis, this rule had been amended to a minimum of a BBB- rating until the end of 2010 (Financial Times 2009). Although the ECB first emphasized that they would not change plans just to accommodate Greece (ibid.), the ECB announced on 25/03/2010 that they would extend looser collateral rules into 2011 (Reuters 2010). Following further downgrades, the ECB finally exempted bonds of Greece, Ireland, and Portugal from its minimum rating requirements (ECB 2010, 2011a, 2011b). Despite these exemptions, the ECB continues to rely on CRAs' sovereign risk assessments. Ratings are not only used to assess the eligibility of collateral, but also to calculate valuation haircuts (ECB 2013b). These haircuts determine the amount of ECB credits that banks will get for certain government bonds. Currently, the ECB requires higher haircuts for government bonds rated below A- (ibid.).

Table 3: Eligibility of Foreign Government Securities as Central Bank Collateral

Central Bank	Minimum Rating	Rating Agencies
European Central Bank	BBB- (S&P, Fitch) Baa3 (Moody's) BBB (DBRS) (higher haircuts below A-)	S&P, Moody's, Fitch, DBRS
US Federal Reserve	BBB- (higher haircuts below AAA)	"approved ratings agencies" if more than one, then "most conservative"
Bank of England	AA-/Aa3	S&P, Moody's, Fitch
Swiss National Bank	AA-/Aa3	S&P, Moody's, Fitch
Reserve Bank of Australia	AAA	S&P or "another major rating agency"
Bank of Japan	AA	"by at least two rating agencies which the Bank considers to be appropriate"

Data: European Central Bank 2013a, 2013b, Federal Reserve 2013a, 2013b, Bank of England 2010, Swiss National Bank 2009, Reserve Bank of Australia 2013, Bank of Japan 2013

Table 3 gives an overview of the reliance by central banks on minimum ratings as eligibility criterion for collateral. In contrast to the ECB, other central banks do not require a minimum rating for their own government's bonds. However, foreign government bonds need to get a minimum rating by one of the major CRAs. As the ECB, these central banks want to maintain some room for maneuver. For instance, the Reserve Bank of Australia exempts New Zealand government bonds from this requirement (Reserve Bank of Australia 2013). The Bank of England only changes the

bond's eligibility after it sought "to understand the circumstances of the downgrade" (Bank of England 2010). Despite these exemptions, sovereign ratings have also become engrained in major central bank's collateral frameworks.

Overall, the domestic and international endorsement of sovereign ratings has assigned CRAs a "quasi-regulatory function" (Weber & Darbellay 2008: 5). Sovereign ratings do not only matter for bondholders because of the information that the ratings provide. Bondholders also take sovereign ratings into account because ratings determine how much capital bondholders have to hold and whether they can use the bonds as collateral. By giving ratings the force of law, CRAs can sell "regulatory licenses" (Partnoy 1999: 711) and act as "quasi-public regulators" (Kerwer 2004: 14).

2.2.3 Impact on Government Bond Prices and the Domestic Economy

Due to their informational and regulatory value, we can expect that sovereign ratings have a direct impact on government bond prices and the domestic economy. Table 4 gives a summary of studies on sovereign ratings' impact on sovereign bond spreads, bond yields and credit default swap (CDS) spreads. Despite different definitions of the dependent variable, the sample size, and the specification, all of these studies find that sovereign ratings lead to changes in the dependent variable in the expected direction. Though most studies focus on emerging market economies, earlier studies by Cantor and Packer (1996) and Larraín et al. (1997) confirm this result for a data set including developed countries from 1987-1994 and 1989-1996 respectively. For 18 high- and middle-income countries, Cantor and Packer show that relative sovereign bond spreads rise 0.9 percentage points on the day and the following in response to a negative rating announcement and fall 1.3 percentage points for a positive announcement (1996: 46). Afonso et al. (2011b) and Kiff et al. (2012) show that these findings also hold for developed countries' CDS spreads.

Table 4 also provides a summary of the conditions under which sovereign ratings have a stronger impact on government bond and CDS spreads. First, downgrades have generally a stronger impact than upgrades. Second, rating changes in and out of investment grade have a particularly strong impact. Third, sovereign ratings matter more in crises episodes.

Table 4: Studies on the Impact of Sovereign Ratings on Government Bonds

Study	Data Set	Finding and Dependent Variable (DV)
Cantor & Packer 1996	1987-1994, 18 high- and middle-income countries, S&P and Moody's	• DV: dollar bond yield spread compared to US Treasury rate • for two-day event window: increase by 0.9 percentage points for negative announcements and decrease by 1.3 percentage points for positive announcements • stronger impact for: ▪ speculative-grade countries ▪ Moody's announcements
Larrain et al. 1997	1987-1996, 26 countries, S&P and Moody's	• DV: spreads to 10-year US treasury bonds • stronger impact for: ▪ emerging-market countries ▪ review for possible downgrade
Reisen & von Maltzan 1999	1989-1997, 29 countries, S&P, Moody's, Fitch	• DV: relative dollar bond yield spreads • for two-day event window: change of 0.6 percentage points • stronger impact for: ▪ downgrades
Sy 2001	1994-2001, 17 emerging markets, S&P and Moody's	• DV: EMBI+ sovereign spreads, monthly data • decrease in sovereign spread by 14%
Kaminsky & Schmukler 2002	1990-2000, 16 emerging markets, S&P, Moody's, Fitch	• DV: EBMI or EBMI+ sovereign spreads • average yield spreads increase by 2 percentage points
Gaillard 2009	1993-2007, 32 emerging markets, S&P, Moody's, Fitch	• DV: EMBI Global stripped spreads • stronger impact for: ▪ downgrade from investment grade to speculative grade ▪ Moody's upgrades and S&P downgrades
Ismailescu & Kazemi 2010	2001-2008, 22 emerging markets, S&P	• DV: sovereign CDS spreads • for upgrade and positive outlooks: decrease in average CDS spread by 11 basis points from day -1 to day 1 (2.23% drop in CDS premia) • for downgrades and negative outlooks: increase by 67 basis points (5.77%)
Jaramillo & Tejada 2011	1997-2010, 35 emerging markets, average of S&P, Moody's, and Fitch	• DV: EMBI Global spreads, monthly data • upgrade to investment grade decreases spreads by 35% or 160 basis points (beyond what is implied by macroeconomic factors) • 5-10% reduction for investment grade rated • no significant impact for speculative grade rated
Afonso et al. 2011b	1995-2010, EU countries, S&P, Moody's, Fitch	• DV: sovereign bond yields and CDS spreads • negative announcement increases yields by 0.08 (CDS spreads by 0.13 percentage points), a positive announcements decreases CDS spreads by 0.01 percentage points • stronger impact for: ▪ negative announcements
Kiff et al. 2012	2005-2010, 72 countries, S&P, Moody's, Fitch	• DV: sovereign CDS spreads • stronger impact for: ▪ negative credit warnings ▪ upgrades and downgrades in and out of investment grade

Despite these clear findings, the empirical studies cannot show why bond spreads move in the expected direction following a sovereign rating change. In some cases, sovereign rating changes might coincide with other events driving the bond price changes. Moreover, these studies cannot take into account market expectations of sovereign rating changes. Finally, none of these studies is able to distinguish whether sovereign ratings matter because of their informational or because of their regulatory value. However, two recent studies aim to distinguish between these two effects for corporate bonds. In a sample of US corporate bond issues from 2000-2008, Bongaerts et al. (2012) show that Fitch ratings only matter when they can be the tie-breaker at regulatory thresholds between Moody's and Standard & Poor's. Kisgen and Strahan (2009) analyze market reactions in response to the decision by the US Securities and Exchange Commission to recognize Dominion Bond Rating Service as a fourth nationally recognized statistical rating organization. DBRS ratings could only be used for regulatory purposes due to this decision. According to their study, corporate bond yields change in exactly the direction of a company's rating by Dominion Bond Rating Service, which indicates the importance of rating inclusion in public regulation.

In addition to sovereign ratings' impact on the rated country, several studies demonstrate that sovereign ratings also have an impact on other countries. Kaminsky and Schmukler (2002) first test for these spillover effects on the bond spreads of other countries for a sample of 16 emerging market economies from 1990-2000. They show that these effects are stronger at the regional level and during crisis episodes. In a sample of 34 developed and developing countries, Gande and Parsley (2005) find that negative rating announcements lead to contagion to other countries. Ismailescu and Kazemi (2010) confirm spillover effects for emerging-market economies' CDS from 2001-2008 and Arezki et al (2011) for Euro area government CDS from 2007-2010. De Santis (2012) highlights the direct spillovers from downgrades for Greece, Ireland, and Portugal for other Euro area government bond yields. In the most extensive study thus far, Böninghausen and Zabel (2013) confirm earlier results for a sample of 73 developed and emerging market economies for all three CRAs from 1994-2011. Spillovers are generally stronger for downgrades and within the same region.

Beyond its impact on governments bonds, many studies demonstrate that sovereign ratings also have direct impact on the domestic economy. Kaminsky and Schmukler (2002) show that domestic stock market returns decline by about one percentage point

following a domestic downgrade. Brooks et al. (2004) and Hooper et al. (2008) confirm this result for wider samples. In an extensive sample of 101 countries from 1990-2006, Hill and Faff (2010) highlight that this impact is particularly strong during crisis episodes.

It is not surprising that sovereign ratings influence the valuation and creditworthiness of domestic companies because sovereign ratings often have a direct impact on companies' ratings. Until the early 2000s, foreign currency ratings served as ceilings for domestic companies' ratings and since then, the new country ceiling ratings also move in tandem with foreign currency ratings (see above, Fitch 2012a: 5, Gaillard 2012: 24-25). Fitch demonstrates that about half of its 958 international rating changes of corporate, bank and insurance companies outside of North America can be explained by sovereign rating changes (Fitch 2008: 1). Borensztein et al. (2007) show that sovereign ratings have an impact on companies' ratings even after controlling for country-specific macroeconomic factors and firm-level variables.

The link between sovereign and companies' ratings is especially pronounced for domestic banks. The sovereign-bank nexus has become very clear in the European debt crisis (see IMF 2012: 33-34, Mody & Sandri 2012). As bondholders, banks are directly affected by a sovereign rating downgrade. The lower market value of the government bonds held by the bank in turn leads to a higher bailout risk. The need for more bank bailouts increases the sovereign default probability, which also lowers the probability that the sovereign will be able to bailout all insolvent banks. Beyond the European crisis, Williams et al. (2013) find that sovereign ratings also have a direct impact on bank ratings for emerging market countries in their sample of 54 countries from 1999-2009.

Overall, these empirical findings show the direct impact of sovereign rating changes on government bond prices and the domestic economy. This provides countries with an incentive to closely take into account what rating agencies demand from them.

2.3 Descriptive Statistics: Stability and Performance of Sovereign Ratings

As sovereign ratings are embedded in public regulation and as they have an influence on government bond prices, it is important to understand their performance thus far. Following the 2007-2009 financial crisis, CRAs were widely criticized for their contribution to the subprime crisis (see Pagano & Volpin 2010). The US Department of Justice even filed a complaint against S&P in a Los Angeles federal court (Economist 2013). He et al. (2011) find that CRAs indeed assigned more positive ratings to large issuers of structured finance products before the crisis. Efing and Hau (2013) also demonstrate that CRAs gave asset- and mortgage-backed securities a better rating if the issuer provided the CRA with more rating business. Moreover, Hau et al. (2013) show that large banks also received better ratings if the banks bought more structured finance ratings. In contrast to these failures in rating structured finance products and banks, CRAs have thus far a good track record for sovereign ratings.

Table 5: Number of Sovereign Ratings

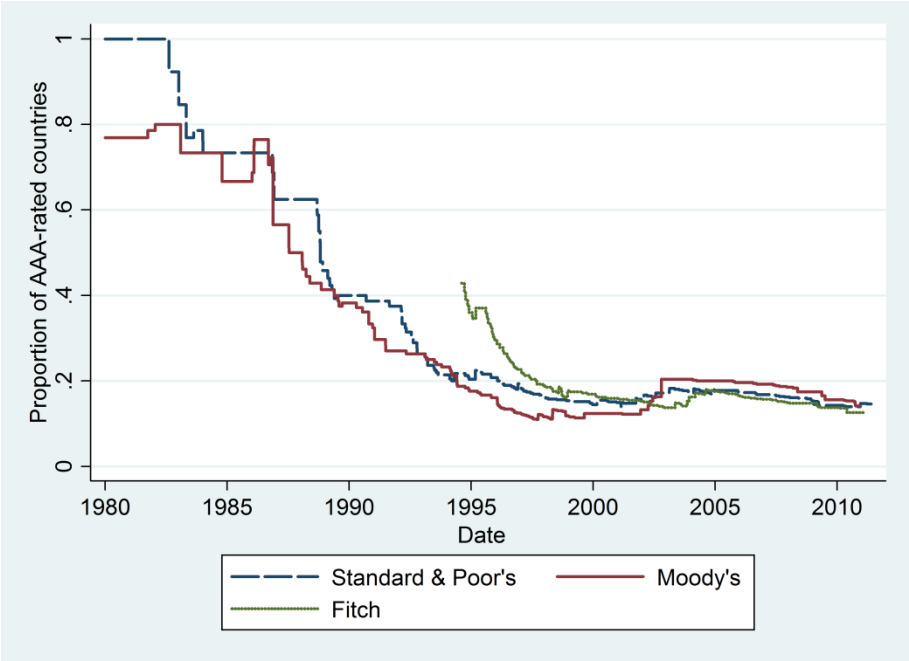
Rating Agency	Countries	Year-End Ratings
S&P	129	1,888
Moody's	109	1,823
Fitch	111	1,295
Total	**147**	**5006**

Data: for S&P from 1980-2010 (S&P 2011b), for Moody's from 1980-2009 (Moody's 2011), for Fitch from 1994-2010 (Fitch 2012c)

Since the resurgence of sovereign ratings, the three main CRAs have rated 147 countries and issued 5,006 ratings at the end of the year (year-end ratings) (see Table 5).[2] Since 1980, S&P and Moody's both issued more than 1,800 year-end ratings. Fitch provided about 1,300 year-end ratings since re-entering the rating market in 1994. About 20% of all year-end ratings were for countries with a AAA/Aaa rating (see Figure 2). Until the end of the 1980s, the majority of countries were still rated AAA/Aaa. But as more and more countries received a rating, a lower percentage was rated AAA/Aaa. As a result, most rating changes occurred since the mid-1990s. 87% of S&P's and 85% of Moody's sovereign rating changes have taken place since 1995.

[2] In the following, all sovereign rating data are from 1980-2010 for S&P (S&P 2011b), from 1980-2009 for Moody's (Moody's 2011) and from 1994-2010 for Fitch (Fitch 2012c).

Figure 2: Proportion of AAA-rated Countries by Rating Agency



Over time, sovereign ratings have been relatively stable, which indicates that CRAs seldom had to change their assessments fundamentally. Table 6 shows a transition matrix for all year-end ratings for the three main CRAs. Ratings are especially stable for better-rated countries. Countries with a AAA rating at the end of one year still got a AAA rating at the end of the next year in 97.5% of the 981 cases. Almost all rating changes within a year are only by a few rating notches. One of the few exceptions was South Korea during its financial crisis. From 1996 to 1997, all three CRAs downgraded Korea's sovereign rating by several notches, S&P and Fitch even from AA- to B+ and B- respectively. For most rating categories, more than 70% of all ratings are not changed from one year to another. If a country comes close to default, its ratings change more often and by more rating notches.

To measure the performance of sovereign ratings, we have to analyze ratings prior to sovereign defaults. In contrast to government bond yields, sovereign ratings do not reflect exchange rate expectations, monetary policy rates or inflation rates, but are only a measure of default risk. If CRAs fulfill their task, their ratings should be good predictors for defaults. Thus far, 24 countries defaulted that were rated by at least one of the three main CRAs one year prior to the day the default occurred. Table 7 shows the default date and the foreign-currency rating one year before the default. No investment grade-rated country ever defaulted one year later. Greece was the country

with the best rating one year prior to the default with a BB+/Ba1-rating assigned by all three CRAs. In contrast to other rating products, all three CRAs have therefore thus far not failed in their sovereign default risk assessments.

Table 6: Transition Matrix for Sovereign Ratings

t \ t+1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	D/SD	Total
AAA	**97.5**	1.7	0.6	0.1	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	**981**
AA+	8.9	**85.1**	4.8	1.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**269**
AA	1.3	8.4	**84.8**	3.4	0.3	0.7	0	0	0	0	0.3	0.3	0.3	0	0	0	0	0	0	0	0	**297**
AA-	0.5	0	15.1	**78.5**	4.3	0	0	0.5	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0	**186**
A+	0	0	0	13.4	**77.3**	7	0.6	0	0	1.2	0.6	0	0	0	0	0	0	0	0	0	0	**172**
A	0	0	0	0.7	12.2	**80.5**	3.1	2.1	0.3	0.7	0.3	0	0	0	0	0	0	0	0	0	0	**287**
A-	0	0	0	0	1.7	14.9	**78.9**	4.1	0	0.4	0	0	0	0	0	0	0	0	0	0	0	**242**
BBB+	0	0	0	0	1.6	4.3	15.2	**68.5**	6.5	2.7	0.5	0.5	0	0	0	0	0	0	0	0	0	**184**
BBB	0	0	0	0	0	0.5	4.1	17.1	**71.4**	4.6	1.8	0	0	0.5	0	0	0	0	0	0	0	**217**
BBB-	0	0	0	0	0	0	0.4	1.8	14.1	**76.7**	4.6	1.1	0.4	0	0.4	0.7	0	0	0	0	0	**283**
BB+	0	0	0	0	0	0	0	0.3	2.1	14.6	**76**	4.9	0.3	0.3	0	0.7	0.3	0.3	0	0	0	**288**
BB	0	0	0	0	0	0	0	0	0.4	2.4	15.8	**72.5**	5.3	1.6	1.2	0.4	0	0	0	0	0.4	**247**
BB-	0	0	0	0	0	0	0	0	0	0	2.1	13.1	**70.3**	8.1	3.4	1.3	0	0.4	0.4	0	0.8	**236**
B+	0	0	0	0	0	0	0	0	0	0	0.4	2.7	12.2	**71**	9.2	3.1	0.8	0	0	0.8	0	**262**
B	0	0	0	0	0	0	0	0	0	0	0	0	2	15.6	**72.1**	5.7	2.5	1.2	0.4	0	0.4	**244**
B-	0	0	0	0	0	0	0	0	0	0	0.7	0	0.7	4	19.3	**66.7**	2.7	2.7	1.3	0.7	1.3	**150**
CCC+	0	0	0	0	0	0	0	0	0	0	0	0	0	1.7	5.1	18.6	**69.5**	3.4	0	1.7	0	**59**
CCC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.3	26.3	10.5	**42.1**	0	10.5	5.3	**19**
CCC-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14.3	0	**57.1**	0	28.6	**7**
CC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14.3	14.3	28.6	0	14.3	**14.3**	14.3	**7**
D/SD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	25	5	5	0	0	**55**	**20**
Total	**21.2**	**5.8**	**6.4**	**4**	**4**	**6.2**	**5.1**	**4**	**4.6**	**6.1**	**6.1**	**5.1**	**4.7**	**5.5**	**5.3**	**3.3**	**1.3**	**0.4**	**0.2**	**0.2**	**0.5**	**4657**

Data: for S&P from 1980-2010 (S&P 2011b), for Moody's from 1980-2009 (Moody's 2011), for Fitch from 1994-2010 (Fitch 2012c)
Figures are in % except for the last column which gives the total number. Transition rates are averaged for the different rating categories and for rating at the end of the year. The table can be read in the following way: Countries with a AAA rating in year t have a AAA rating in year t+1 for 97.5% (of the total of 981 AAA ratings), a rating of AA+ for 1.7% of the cases, a rating of AA for 0.6 and so forth.

Table 7: Foreign-Currency Ratings One Year Prior to a Sovereign Default

Default Date	Country	S&P	Moody's	Fitch
27/02/2012	Greece	BB+	Ba1	BB+
06/11/2001	Argentina	BB	B1	BB
27/01/1999	Russia	BB-	Ba2	BB+
16/05/2003	Uruguay	BB-	Ba2	BB+
30/12/2004	Grenada	BB-		
29/01/1999	Pakistan	B+	B2	
August 1999	Ecuador		B1	
13/02/2003	Paraguay	B	B2	
July 2003	Nicaragua		B2	
07/08/2008	Seychelles	B		
14/01/2010	Jamaica	B	B1	B
30/03/1999	Indonesia	B-	B3	B-
January 2000	Ukraine		B3	
23/04/2002	Indonesia	B-	B3	B-
June 2002	Moldova		B3	CC
18/01/2005	Venezuela	B-	Caa1	B-
15/12/2008	Ecuador	B-	Caa2	CCC
21/08/2012	Belize	B-	B3	
08/10/2012	Grenada	B-		
17/04/2000	Indonesia	CCC+	B3	B-
June 2008	Nicaragua		Caa1	
01/02/2005	Dom. Republic	CCC	B3	CCC+
05/12/2012	Greece	CCC	Ca	CCC
07/12/2006	Belize	CCC-	Caa3	

Data: Default dates are from S&P (2013d: 17-18) and from Moody's (2013d) for those countries not rated by S&P. Sorted by S&P's foreign-currency rating one year prior to a sovereign default.

3 Sovereign Rating Criteria: What We Know and How to Find Out More

> "The bankers, the rating agencies and the financial institutions have a much bigger voice in matters which are basically political. And, the idea that the bankers and rating agencies can just tell a democratically elected government to ignore altogether the will of the population seems to go against everything that democracy stood for."
> Amartya Sen, Economist, 1 June 2011 (Sen 2011)

As discussed in chapter 2, rating agencies have an impact on government bond prices and the domestic economy. Therefore, it matters what the agencies demand from national governments. As Amartya Sen in the citation above, many scholars claim that CRAs are in favor of certain policies and political institutions (see section 3.1.1). However, most empirical studies on sovereign rating criteria test only for a few basic macroeconomic indicators without controlling for political factors. Some scholars have built on these studies to analyze political factors, but their results are inconclusive (see section 3.1.2). This leads to the research question of this book: Do rating agencies take into account political factors and if so, which political criteria do they use (see section 3.2)? The methodologies and databases that the main CRAs publish can give us a first indication of CRAs' criteria. In these methodologies, CRAs indeed emphasize that they go beyond simple macroeconomic indicators and also take political factors into account to measure a government's willingness to repay (see section 3.3). Section 3.4 provides an overview of the data and quantitative and qualitative methods used in the following chapters to understand which policies and political institutions CRAs regard as indicators for a country's willingness to repay.

3.1 Literature on Sovereign Rating Criteria

3.1.1 Claims on Political Criteria

Many scholars claim that rating agencies favor certain policies and political institutions. In particular, they expect that CRAs take economic liberalization policies, certain domestic political institutions, and the adoption of and compliance with international institutions into account. In this section, I will only summarize these claims briefly, as I

will provide a more comprehensive review on these political factors in the following chapters (section 4.1, 5.1 and 6.1).

First, several scholars claim that CRAs promote certain economic policies, in particular economic liberalization policies. Sinclair, a political scientist who has published on CRAs for twenty years, claims that CRAs promote "institutional arrangements of a neoliberal form" (Sinclair 2005: 139) and an "American-derived mental framework" (ibid.: 71). Sassen, a sociologist, supports this perspective by arguing that ratings aim for an "undistorted price signal and little if any government involvement" (Sassen 1996: 111). Datz, an expert on Latin America, argues that "sovereign ratings are embedded in a neoliberal strategy of development" (Datz 2004: 311) which is based on the "Washington-Wall Street 'consensus' on neoliberal reforms" (ibid.).

Second, there is a lively debate on whether CRAs view democratic political institutions more favorably than other political regimes. Schultz and Weingast (2003) first argue that democratic states have to pay lower borrowing costs on sovereign bond markets and hence enjoy a "democratic advantage". Beaulieu et al. (2012) provide evidence that such a democratic advantage exists for sovereign ratings, which is disputed by Archer et al. (2007) and Biglaiser and Staats (2012).

Finally, scholars and international institutions expect that CRAs take the adoption of and compliance with international agreements into account (Kapstein 1994: 13, IMF 2003: 18, Arner & Taylor 2009: 2, IMF 2013a). This provides countries with an incentive to adopt and comply with these agreements in order to gain a better sovereign rating.

3.1.2 Limited Empirical Evidence

Despite these many claims on CRAs' political criteria, the empirical literature thus far provides limited evidence that CRAs actually take political factors into account. Most econometric studies focus only on a few basic macroeconomic factors. Table 8 presents an overview of the main econometric studies on sovereign rating criteria. Despite their different methods and data sets, these studies identify similar statistically significant macroeconomic indicators which determine a sovereign's credit rating. In most of these studies, GDP per capita explains already more than half of the variation in sovereign ratings. Moreover, GDP growth and current account surpluses have a positive influence

on sovereign ratings. In contrast, higher inflation and higher debt ratios lead to a lower sovereign rating.

In addition to these criteria that measure a country's ability to repay, the literature mainly takes past default history as a proxy to assess a sovereign's willingness to repay (see, e.g., Cantor & Packer 1996, Archer et al. 2007, Biglaiser & DeRouen 2007, Borensztein & Panizza 2009, Afonso et al. 2011a). A country's repayment history has not only played a central role in the rating literature, but also more generally in the theoretical sovereign debt literature (see Panizza et al. 2009: 9-14 for an overview). In Eaton and Gersovitz's (1981) seminal theoretical model, creditors permanently exclude countries from the sovereign debt market following a default. Tomz (2007) also argues that financial market participants punish inexcusable defaults and reward countries for repayment in difficult times. Cruces and Trebesch (2013) provide empirical evidence that financial markets take a country's payment record into account.

Table 8: Overview of Main Econometric Studies on Sovereign Rating Criteria

	Method	Data	Significant Explanatory Variables
Cantor & Packer 1996	OLS, cross-section, linear transformation	49 developed & developing countries, 29/09/1995, S&P, Moody's	(+) GNP per capita, GDP growth, indicator for economic development (-) inflation, external debt, indicator for default history
Ferri et al. 1999	random effects, linear & non-linear transformation	17 countries, 1989-1998, Moody's	(+) GDP growth, development indicator (-) external debt, budget deficit, current account balance
Mulder & Perrelli 2001	pooled OLS, feasible generalized least squares, static & dynamic, linear transformation	25 countries, 1992-1999, S&P, Moody's	(+) GDP growth, fiscal balance, investment to GDP (-) inflation, debt over exports, default history
Afonso 2003	OLS, linear, logistic & exponential transformation	81 countries, June 2001, S&P, Moody's	(+) GDP per capita, GDP growth, level of economic development (-) external debt, default history
Rowland 2004	OLS, cross-section, linear transformation	49 countries, S&P, Moody's, end of July 2003	(+) GDP per capita, GDP growth, reserves to GDP (-) inflation, debt ratio
Borio & Packer 2004	OLS (including year dummies), linear transformation	52 countries, 1996-2003, average of S&P and Moody's	(+) GDP per capita, GDP growth (-) inflation, corruption, political risk score, original sin, default history
Afonso et al. 2007	pooled OLS, random effects, fixed effects; ordered probit (robust), random effects ordered probit	78 countries, 1995-2005, S&P, Moody's, Fitch	(+) GDP per capita, GDP growth, government effectiveness, external reserves (-) government debt, external debt, default history
Archer et al. 2007	OLS with panel-corrected standard errors (PCSE), linear transformation	50 countries, 1987-2003, S&P, Moody's, Fitch	(+) GDP growth, trade to GDP (-) inflation, default history
Biglaiser & DeRouen 2007	OLS with PCSE, linear transformation	16 Latin American countries, 1992-2003, S&P, Moody's	(+) trade liberalization (-) inflation, default history
Borensztein & Panizza 2009	OLS, cross-section of three-year average, linear transformation	68 countries, average of 1999-2002, S&P	(+) GDP per capita (-) inflation, external debt over exports, default, public debt to GDP
Jaramillo 2010	random effects binomial logit model (investment vs. non-investment grade)	48 emerging market countries, 1993-2008, S&P, Moody's, Fitch	(+) broad money to GDP, exports to GDP (-) potential GDP growth, external public debt to GDP, domestic public debt to GDP
Afonso et al. 2011a	linear regression (random effects), random effects ordered probit	66 countries, 1995-2005, S&P, Moody's, Fitch	short-run: (+) GDP per capita, GDP growth, (-) government debt, government balance long-run: (+) current account balance, government effectiveness, foreign reserves, (-) external debt, default history
Biglaiser & Staats 2012	linear regression, OLS with LDV, PCSE and country- and year-fixed effects	36 countries, 1996-2006, S&P, Moody's, Fitch	(+) GDP growth, trade to GDP, inflation, rule of law, judicial independence, protection of property rights (-) external debt to GDP

(+) statistically significant positive effect, (-) statistically significant negative effect

A few recent studies on sovereign ratings go beyond default history as a proxy for a sovereign's willingness to repay and start to analyze policies and political institutions. However, the results of these econometric studies are conflicting and face many empirical limitations.

Jensen (2003) shows that democratic institutions are associated with better sovereign ratings and he thus affirms the "democratic advantage" hypothesis (Schultz & Weingast 2003). Using a larger panel of data for different credit rating agencies, Archer et al. (2007) contradict these results. In their analysis, regime type is not a statistically significant factor. Except for the tenure of the chief executive's party in power, all other political criteria they test for are not statistically significant, including the chief executive's ideology, undivided government, honeymoon effects following an election, and election cycles. Block and Vaaler (2004), in contrast, argue for an impact of political business cycles and find that credit rating agencies downgrade developing countries more often in election years. In a subsequent study, Vaaler et al. (2006) show that downgrades (upgrades) become more likely if right-wing (left-wing) incumbents are more vulnerable to losing the next election. Beaulieu et al. (2012) try to provide new evidence for a democratic advantage. However, according to Biglaiser and Staats (2012), this advantage is not due to democratic institutions, but only because of the rule of law, strong courts, and property rights protection (see chapter 5 on political institutions). Regarding specific policies, Biglaiser and DeRouen (2007) show that trade liberalization is the only economic reform that positively influences sovereign ratings (see chapter 4).

The empirical literature also identifies several potential international economic agreements that could serve as a signal of a government's commitment to economic openness and reform and hence its willingness to repay in hard times. Empirical studies test whether sovereign ratings are influenced by the adoption of and compliance with international financial standards (Mosley 2003b, Petrie 2003, Hameed 2005, Arbatli & Escolano 2012), agreements with the IMF (Nelson 2010), and commitments as a member of an international organization (Dreher & Voigt 2011). However, these studies face many empirical limitations (see chapter 6).

3.2 Research Question

As seen above, the empirical literature thus far mostly neglects political factors in its analysis of sovereign rating criteria. Despite many claims on the importance of political factors for credit rating agencies, there is only limited conclusive empirical evidence. The main research question of this book is therefore: Do credit rating agencies take political factors into account for their sovereign risk assessments and if so, which political criteria do they use?

Credit rating agencies can take political factors into account on three different levels. CRAs can analyze a country's domestic policies, its political institutions, and its commitments on the international level. As CRAs have to assess a country's willingness to repay, I expect that they will look for signals of this willingness on all of these three levels. As I will develop my hypotheses on the importance of political criteria on these three levels in more detail in chapter 4-6, I will only give a brief overview here.

First, regarding domestic policies, rating agencies can take economic liberalization policies into account as signals of a government's willingness to repay because these policies are easily interpretable and costly to reverse (see chapter 4). Domestic economic reforms, in particular privatization policies, that are especially difficult to reverse are most likely to be used by CRAs.

Second, CRAs can also analyze a country's domestic political institutions (see chapter 5). If more domestic actors have to agree on a default decision, it is less likely that a country will default. CRAs will therefore give a better rating to countries with more veto players that can prevent a government from making a decision to default.

Finally, CRAs can pay close attention to a country's commitments on the international level (see chapter 6). As any domestic policies, international agreements are only credible commitment devices if their implementation or a lack of compliance is costly. Rating agencies will therefore only care about international agreements if international organizations or other states enforce these agreements by checking compliance and punishing non-compliant states.

How can we find out whether rating agencies take into account political factors on these different levels? As a first step, I will summarize what CRAs state in their methodologies on the importance of political factors for their sovereign risk

assessments (section 3.3). In section 3.4, I will then provide details on the data and methods that I will use in the subsequent chapters to find out whether CRAs go beyond simple macroeconomic indicators and also analyze political factors to measure a government's willingness to repay.

3.3 Evidence from Rating Methodologies and Quantitative Handbooks

Rating methodologies published by the CRAs can provide some evidence on whether CRAs actually take political factors into account. According to the literature, these methodologies are "opaque" (Beaulieu et al. 2012: 731) and characterized by "secrecy and vagueness" (Biglaiser & Staats 2012: 518). However, since the financial crisis in 2009, CRAs have become more transparent and have published more extensive rating methodologies (see also section 7.3.1). In these methodologies, CRAs emphasize that political factors are one of their major rating determinants and that their political analysis mainly depends on the qualitative judgments of their analysts.

S&P analyzes a country's creditworthiness based on five scores according to its most recent methodology (S&P 2013a). Four of these scores refer to a country's economic, external, fiscal, and monetary performance. However, one score is also about S&P's assessment of a country's "Institutional and Governance Effectiveness", for which S&P used the term "Political Score" until 2013 (S&P 2011a: 10-15). S&P highlights that the assessment of this political score "relies mostly on our qualitative analyses" (S&P 2013a: 11). This is also reflected in the quantitative indicators, the "Sovereign Risk Indicators", which S&P has published since 1999 (S&P 2012a). In this database, S&P does not provide any data on political factors, but only on a country's economic, fiscal, debt, balance-of-payments, and external balance sheet performance.

As S&P, Moody's also analyzes a country's "institutional strength", which is one of its four major rating factors (Moody's 2008: 8-9). According to Moody's, the "<u>starting point</u> [… are] those indexes developed by the World Bank: Rule of Law, Government Effectiveness Index" (Moody's 2008: 8, emphasis in original). The Government Effectiveness Index is also the only quantitative political indicator that Moody's provides in its Statistical Handbook (Moody's 2012a: 66-70). All other 53 quantitative indicators are on a country's economic structure and performance, government finance, external payments and debt, and a country's monetary, external vulnerability,

and liquidity indicators. Due to this lack of quantitative political data, Moody's relies on its "analysts' judgments" (Moody's 2008: 9) for its political analysis. Moody's is very explicit about the importance of its qualitative judgments:

> "While there have been continuous efforts to make the analysis more quantitative, it is our view that no quantitative model is able to fully capture the variety of situations and interference of political factors that characterize sovereign risk." (Moody's 2008: 6)

In particular, Moody's points out that political factors are central because "by the very nature of sovereignty, a government may decide not to repay its debt despite having the resources to do so" (Moody's 2008: 1). CRAs not only have to assess a country's ability but also its willingness to repay and that is why they have to take political factors into account.

Fitch also highlights the importance of a country's "credible policy framework" (Fitch 2012a: 7) and its "political will and ability to mobilise resources" (ibid.: 9) to repay its debt. Fitch mainly refers to the World Bank Governance Indicators (ibid.), which have been published by the World Bank on a yearly basis since 2002 (World Bank 2013a). In contrast to the other two CRAs, Fitch has also revealed a list of independent variables for their econometric sovereign rating model (Fitch 2012a: 18). This list includes one composite governance indicator based on the World Bank's rule of law, government effectiveness, control of corruption, and voice and accountability scores (ibid.). In addition to these scores, Fitch also provides the World Bank's stability and ease of doing business indicator in its Sovereign Data Comparator database (Fitch 2012b). Although Fitch publishes some information on its quantitative model, the agency also emphasizes the importance of its qualitative judgments on the first page of its methodology:

> "Fitch's approach to sovereign risk analysis is a synthesis of quantitative and qualitative judgements that capture the willingness as well as the capacity to meet its debt obligations." (Fitch 2012a: 1)

Overall, the three main CRAs state in their methodologies that political factors are one of their major rating drivers. As "there is no one-to-one mapping" (Kiff et al. 2012: 4) between their quantitative criteria and their ratings, we need to uncover CRAs'

quantitative and qualitative judgments. In the following section, I will describe the data and methods that I will use in the following chapters to analyze which policies and political institutions CRAs take into account.

3.4 Overview of Data and Methods

First, I will estimate a panel econometric model with sovereign ratings as dependent variable, which is comparable to previous empirical studies. I have compiled a new extensive data set, which I will describe in 3.4.1 alongside with a detailed description of the econometric methods used and the macroeconometric control variables used in the following chapters. Second, in addition to this econometric model, I will also uncover CRA rating criteria by analyzing their sovereign rating announcements (see section 3.4.2). In these announcements, CRAs explain why they have changed the rating of a certain country. This data source of more than 1,200 announcements has never been compiled and used systematically for empirical evidence thus far.

3.4.1 Panel Data

As we have seen in section 2.3, Standard & Poor's has issued 1,888 year-end sovereign ratings for 129 countries from 1980 to 2010 and Moody's 1,823 for 109 countries from 1980 to 2009. Fitch started issuing sovereign ratings in 1994 and published 1,295 year-end ratings for 111 countries until 2010. My analysis is built on this complete data set of all year-end sovereign ratings. In contrast, the first study on political variables by Archer et al. (2007) focuses on only 50 developing countries from 1987-2003 with a maximum of only 253 observations in their regressions for Standard & Poor's. The only study on liberalization policies by Biglaiser and DeRouen (2007) concentrates on only 16 Latin American countries and a maximum of 121 observations for Standard & Poor's. I can thus analyze a far more comprehensive set of sovereign ratings. Most of the following regressions are for a data set of about 100 countries and more than 1,000 observations.

The Dependent Variable: Sovereign Ratings

As the previous econometric literature, I use year-end long-term foreign-currency issuer ratings in all of the econometric models. As explained in section 2.1.2, these ratings are the basis for all other sovereign rating assessments. Since Cantor and Packer (1996: 40), most econometric studies linearly transform the different rating

categories. This approach is also taken in studies published by CRA employees (see Borio & Packer 2004: 54, Fitch 2011a, 2011b). For my estimations on a linear scale, I transform the rating categories for Moody's from Aaa=21 to C=1, for Standard & Poor's from AAA=21 to SD/ D=1 and for Fitch from AAA=22 to the default categories RD, DDD, DD, D=1 (see Table 9). This linear transformation allows a direct comparison of my results with previous research on political factors (see Archer et al. 2007: 350, Biglaiser & DeRouen 2007: 129). As a robustness check, I estimate sovereign ratings on an ordinal scale. This approach does not assume the same differences between rating categories, but estimates the cut points for an unobserved latent variable (see below).

Table 9: Linear Rating Transformation[3]

Count	S&P	Moody's	Fitch
1	D, SD	C	DDD, DD, D, RD
2	CC	Ca	C
3	CCC-	Caa3	CC
4	CCC	Caa2	CCC-
5	CCC+	Caa1	CCC
6	B-	B3	CCC+
7	B	B2	B-
8	B+	B1	B
9	BB-	Ba3	B+
10	BB	Ba2	BB-
11	BB+	Ba1	BB
12	BBB-	Baa3	BB+
13	BBB	Baa2	BBB-
14	BBB+	Baa1	BBB
15	A-	A3	BBB+
16	A	A2	A-
17	A+	A1	A
18	AA-	Aa3	A+
19	AA	Aa2	AA-
20	AA+	Aa1	AA
21	AAA	Aaa	AA+
22			AAA

Econometric Models

There are a number of different econometric approaches to identify sovereign rating criteria. Table 8 in section 3.1.2 gives an overview of the different econometric methods

[3] As I do not pool the data for the three different CRAs, the linear transformation is for each CRA individually.

used in the literature thus far. As Cantor and Packer (1996) in the first econometric study, other scholars have analyzed a cross-section of sovereign ratings with an ordinary least squares (OLS) regression (Afonso 2003, Rowland 2004, Borensztein & Panizza 2009). Using panel data, however, allows analyzing more observations and not only the cross-sectional variance but also the time variation in sovereign ratings. The most important studies on political factors (Archer et al. 2007, Biglaiser & DeRouen 2007, see also Nelson 2010) employ a Prais-Winsten transformation to correct for first-order autoregression and use panel-corrected standard errors to control for contemporaneously correlated and panel heteroscedastic errors.[4] For each model, I present this PCSE(ar1) estimator as a first comparison to the only previous study on economic reforms by Biglaiser and DeRouen (2007) and the first study on other political factors by Archer et al. (2007).

Moreover, I test my claim for other econometric models that have been used thus far in the literature on sovereign ratings. First, I estimate an ordered probit. Since there are few observations in the last categories, I follow Afonso et al. (2007, 2011a) in analyzing 16 categories from AAA (Aaa) to B- (B3) and below. I calculate robust standard errors clustered on country to deal with panel heteroskedasticity. In the ordered probit regression, one cannot simply include country fixed effects (see Gould et al. 2003). In contrast to most other cross-country political science studies (see the debate in Green et al. 2001, Plümper et al. 2005), the presence of unit-specific effects, however, would not indicate any underlying institutional country differences. Sovereign ratings are the results of a rating model of qualitative and quantitative indicators. Hence, there cannot be unit-specific effects in the sense of inherent non-measurable distinct characteristics of countries, but only in the sense of omitted variables and characteristics ascribed to countries by CRAs.

With a fixed effects regression one can circumvent the risk of omitting time-invariant explanatory variables by using only the within variation in sovereign ratings over time. However, the average time series for sovereign ratings is still quite small as the ratio of

[4] Beck and Katz (1995) suggest using a lagged dependent variable (LDV) for adjusting for autocorrelation. But for their simulations, the number of observed time periods was higher than for my data sets with an average of about 13 years (see also Beck & Katz 2011: 332). Moreover, for my estimation, the LDV model does not eliminate autocorrelation and the coefficient estimates in this model would therefore be biased (see Butler & Wilson 2007: 107). CRAs' own publications on quantitative models (Fitch 2011a, 2011b) and estimations by CRA employees (Cantor & Packer 1996, Borio & Packer 2004) do not include LDV models. Including a lagged dependent variable leads to results that are in stark contrast to everything that we know from previous research and credit rating agencies' own publications.

between and within variation is at about 4 for the three CRAs. With a fixed effects estimator, one can thus only explain a smaller percentage of the variation in sovereign ratings, the changes in ratings over time. Most econometric studies on sovereign rating criteria hence do not include country-fixed effects because they are too "costly and inefficient" (Nelson 2010: 119). This is especially the case for analyzing relatively time-invariant independent variables such as political institutions as in chapter 5. Including country-fixed effects might even cause a severe selection bias because the results would be limited to countries that change their political institutions over time which are rather unstable countries that are not representative for all rated sovereigns. Notwithstanding these limitations, I will show that my main results also hold when country-fixed effects are included.[5]

Nonstationarity is not likely to be a problem for my panel estimations. Although sovereign ratings are very persistent over time (see section 2.3 and the transition matrix in Table 6), my data are only for a short-time period of on average 13 years. As for many other political economy data sets, "while the series may be very persistent, we have no idea if a longer time period would show the series to be stationary" (Beck & Katz 2009: 13). Moreover, as the ratings are bound between D as lowest and AAA/Aaa as highest ratings, the means and variances of observations cannot grow larger and larger over time. Fisher-type unit root tests based on Dickey-Fuller and Phillips-Perron tests also indicate no evidence for nonstationarity.[6] Most of the variation in sovereign ratings and policies and political institutions is across countries and not over time (see Table 10 and chapter 4 and 5). Hence, my results will also not show a spurious correlation due to jointly trending variables because my results mainly rely on cross-sectional variance.

In addition to the PCSE(ar1), the ordered probit and the country fixed-effects model, I also report the results of a simple pooled ordinary least squares (POLS) estimator with White-robust standard errors. Although this estimator does not control for the most common problems in panel data, it is the one that Fitch uses (2011a, 2011b). In its

[5] As additional robustness check, I also show that all results hold with random effects as in Ferri et al. (1999), Mulder & Perrelli (2001), and Afonso et al. 2007), a generalised least squares estimator that puts different weights on the within- (fixed effects) and between-units estimators (see Greene 2003: 293ff.). For the ordered probit framework, I also confirm all results with a random effects ordered probit estimator. I use Frechette's (2001) implementation in Stata to compute this estimator. As in the linear framework, this random effects estimator treats the error terms and country-specific effects as random variables.

[6] Due to space considerations, the results for the eight test statistics for each of the three credit rating agencies are not reported, but are available from the author upon request.

methodology, Fitch states that the "application of OLS [...] was the preferred statistical method because of the ease of understanding the relationship between the independent variables and the rating output" (Fitch 2011b). They explain that the "standard errors are White adjusted to correct for heteroscedasticity and thus do not violate the constant variance assumption" (ibid.). At least for Fitch's rating data, this simple OLS should thus be the best approach to re-engineer their quantitative model. If they use such a model in 2011, they probably have not used more sophisticated econometric approaches over the last two decades.

Finally, it is important to note that I only re-engineer the sovereign rating model for countries that are rated by credit rating agencies. Beaulieu et al. (2012) argue that this leads to a selection bias because credit rating agencies only evaluate borrowers that are willing to enter the sovereign debt market. According to Beaulieu et al.:

> "raters will have observed a biased sample of countries and developed rules of thumb to deal with that sample. Perhaps, if random samples of autocracies and democracies had sought ratings, raters would have developed an explicit preference for democracies over autocracies." (Beaulieu et al. 2012: 714)

In contrast to their analysis, this book is not about a hypothetical different state of the world, in which CRAs could have developed other criteria. Instead, I want to uncover the sovereign rating criteria, or "rules of thumb" in Beaulieu et al.'s words, that CRAs actually use.

Macroeconomic Control Variables

In the following chapters, I will estimate the impact of economic liberalization policies and political institutions on sovereign ratings. I will discuss details on these main explanatory variables in the relevant sections (section 4.4 and 5.4). In this section, I will briefly present the main macroeconomic variables used as controls in the econometric estimations.

Despite their different methods and data sets, econometric studies identify similar significant macroeconomic indicators (see Table 8). Higher GDP per capita, GDP growth and current account surpluses have a positive influence on sovereign ratings, while higher inflation, debt ratios and past default history lead to a lower sovereign rating. To make my research comparable, I use the same set of macroeconomic control variables

that Archer et al. (2007) and Biglaiser and DeRouen (2007) take as basis for their analysis of political institutions and neoliberal economic indicators. I use the IMF's World Economic Outlook Database (IMF 2010a) to control for GDP per capita (NGDPDPC, in current prices, US dollars), GDP growth (NGDP_RPCH), current account surplus as % of GDP (BCA_NGDPD) and inflation (PCPIPCH). As the two previous studies, I control for history of past defaults with a dummy based on data by Standard & Poor's (2006) which equals one if a sovereign has defaulted on its debt in the past five years. Instead of an external debt measure, I use newly available data on public debt to GDP ratios provided by the IMF in its Historical Public Debt Database (IMF 2010b). External debt data are only available for developing countries, are not significant in most of my models and were not significant in most specifications of the two previous studies.

Table 10 provides summary statistics for all macroeconomic control variables for which the country in the specific year was rated by at least one CRA in my database. Except for a few islands and small states, the standard economic control variables are available for all rated countries. Most of these entities are only partly independent or their sovereignty is disputed. For my basic model, I have therefore 1588 observations for 112 countries for Standard & Poor's, 1648 for 102 countries for Moody's, and 1106 observations for 102 countries for Fitch.

The summary statistics in Table 10 show that the average rating is at "BBB+" (14.42) for S&P, "A3" (14.67) for Moody's, and "BBB+" (14.85) for Fitch. The between variation in ratings across countries is more than three times the within variation for countries over time. Since Fitch only began to rate sovereigns again in the mid-1990s, the time series for Fitch is shorter with an average of less than 12 years compared to an average of 15 years for S&P and almost 17 years for Moody's. The macroeconomic control variables are available for almost the same set of about 130 countries for an average of 15 ½ years. GDP per capita is on average at $13,293 with average growth rates of almost 4%. The current account is on average almost in balance across the sample. Inflation is the only macroeconomic indicator that has a substantially higher variation across time than across countries. Public debt to GDP is on average at about 50% with the highest ratios for Japan and Nicaragua. For 5% of the sample, the country is in default or has defaulted on its debt in the previous five years. Overall, 23 of the 132 rated countries defaulted on their debt in at least one of the past five years.

Table 10: Summary Statistics for Main Variables

Variable		Mean	Std. Dev.	Min	Max	Observations
Dependent Variables						
S&P Long-Term Foreign Currency Ratings	overall	14.42	5.24	1	21	N = 1806
	between		4.91	4.90	21	n = 119
	within		1.34	5.62	25.81	T-bar = 15.17
Moody's Long-Term Foreign Currency Ratings	overall	14.67	5.16	2	21	N = 1757
	between		4.84	4.46	21	n = 104
	within		1.51	8.77	24.77	T-bar = 16.89
Fitch Long-Term Foreign Currency Ratings	overall	14.85	5.23	1	22	N = 1252
	between		5.13	4.35	22	n = 106
	within		1.25	5.78	21.49	T-bar = 11.81
Independent Variables						
GDP per Capita (NGDPDPC)	overall	13293	14715	183	119521	N = 2036
	between		11319	219	61507	n = 130
	within		7770	-21827	71307	T-bar = 15.66
GDP Growth in % (NGDP_RPCH)	overall	3.87	4.07	-17.95	34.5	N = 2067
	between		2.14	0.66	13.86	n = 132
	within		3.50	-19.29	24.51	T-bar = 15.65
Current Account Surplus as % of GDP (BCA_NGDPD)	overall	-1.19	8.77	-50.69	44.61	N = 2067
	between		8.61	-34.92	26.82	n = 132
	within		5.41	-41.86	28.95	T-bar = 15.65
Inflation in % (PCPIPCH)	overall	15.48	132.77	-9.42	3079.46	N = 2070
	between		44.19	1.10	442.28	n = 132
	within		120.83	-423.59	2843.85	T-bar = 15.68
Default History (pastdefault)	overall	0.05	0.23	0	1	N = 2077
	between		0.15	0	0.8	n = 132
	within		0.17	-0.74	1.00	T-bar = 15.73
Public Debt to GDP in % (IMFdebtGDP)	overall	52.56	32.69	2.4	236.17	N = 1870
	between		29.94	5.25	167.09	n = 127
	within		16.89	-38.33	157.91	T-bar = 14.72

Data: Rating data are from S&P (2011b), Moody's (2011) and Fitch (2012c), the default history from S&P (2006a, 2011b), public debt to GDP data from the IMF's Historical Public Debt Database (IMF 2010b) and all other data from the IMF's World Economic Outlook Database (IMF 2010a).

Summary statistics are provided for the overall mean, the standard deviation (Std. Dev.), the minimum (Min), maximum (Max), the number of total observations (N), the number of countries (n), and the average time period in years (T-bar). Summary statistics are also given for the between variation (across countries) and within variation (over time).

3.4.2 Sovereign Rating Announcements

In addition to the panel econometric study, I will also analyze CRA sovereign rating announcements. CRAs publish a rating announcement for all new sovereign ratings and for each sovereign rating change on their website. These announcements are about

500-650 words long and contain an explanation why the sovereign rating is changed. In this section, I will briefly highlight the advantages of an analysis of these announcements, explain the coding process, and give some first summary statistics of the database.

The analysis of these rating announcements offers several advantages compared to previous empirical approaches. First, in contrast to surveys (see, e.g., Mosley 2003b and Petrie 2003), an analysis of rating announcements can be more systematic based on more than one point in time. Second, compared to econometric studies, an analysis of rating announcements does not run the risk of omitting important unobservables. As discussed in section 3.3, qualitative factors are important rating drivers, which are difficult to include in an econometric analysis. In comparison to the panel econometric analysis, the text analysis of sovereign rating announcements can best be compared to the country-fixed effects models. For these models, only the changes in the dependent and independent variables over time are taken into account. In a similar way, announcements are not released on an annual basis, but for rating changes only. Third and most importantly, the announcements are the relevant explanations given to policymakers for rating changes. Rating announcements are the way in which CRAs tell policymakers what to do to get a better sovereign rating.

Computer-aided text analyses have become increasingly common in the political science literature (see Krippendorff 2004: ch. 12). There are already some studies coding texts in the literature on the political economy of sovereign debt (see Bernhard & Leblang 2006: chapter 6; Enderlein et al. 2012). In particular, there have been a number of recent text analyses coding the substance of IMF program conditions (Caraway et al. 2012), IMF surveillance (Fratzscher & Reynaud 2010), and IMF boardroom discussions (Clegg 2012).

For sovereign ratings, there is only one previous analysis of announcements published in the Global Financial Stability Report by the International Monetary Fund in October 2010 (IMF 2010c: chapter 3). The IMF analyzes announcements from May 2007 to June 2010 "based on a "count" of main ratings drivers mentioned in the rating action reports" (ibid.: 19). However, following previous econometric studies, they focus only on broad categories, such as main macroeconomic drivers, for instance growth, public finances, and debt.

I use the content analysis software MaxQDA to code the frequency with which economic liberalization policies, political institutions, and international agreements are mentioned. For the liberalization policies, I also code whether CRAs are in favor of or against specific economic liberalization policies (see section 4.5.1 for details). In addition, I code CRAs' assessment of political institutions and elections (see section 5.4.3 for details). For the international agreements, I code the reasons given by CRAs why they take these political factors into account (see section 6.3 for details). I will give one example of this coding process below for the sovereign rating announcement of Mongolia on 23/12/1999 by S&P.

Box 1: Example of a Sovereign Rating Announcement

"Mongolia Assigned 'B' Long-Term Rating; Outlook Stable
23-Dec-1999

SINGAPORE (Standard & Poor's CreditWire) Dec. 24, 1999----Standard & Poor's today assigned its single-'B' long-term foreign and local currency issuer credit ratings to Mongolia. The outlook on the long-term ratings is stable.

The ratings are constrained by:
-- Very high budget deficits. General government deficits have averaged 10% of GDP over the past five years and are set to continue. While the deficit for 2000 is budgeted to decline to 8.5% (excluding privatization proceeds), this would still be the highest of all rated sovereigns. The deficit stems from high current expenditure levels, substantial capital expenditure needs, and an inefficient tax system that fails to harness the growing private sector.
-- High public debt burden. With the gross general government debt burden and net government external debt at about 88% of GDP and 100% of exports, respectively--one of the highest among single-'B' rated sovereigns--Mongolia's fiscal position is weak. Debt servicing is more moderate at 7% of government revenues, thanks to the concessional nature of the bulk of Mongolia's public debt burden. However, reflecting poor systemwide payment discipline and fiscal liquidity problems, the central government only recently cleared interest arrears on domestic bonds issued during past bank restructuring attempts.
-- The challenge of accelerating structural reforms in the face of political uncertainties surrounding the June 2000 general elections. Urgently needed reforms include overhauling the moribund banking system and public enterprises, as well as **stepping up large-scale privatization.** The banking system, crippled by past inadequacies in the supervisory regime and problem loans from directed lending, will require urgent attention. However, expected recapitalization costs (estimated at about 2% of GDP) are relatively manageable thanks to a generally very low level of bank

intermediation.
-- The vulnerabilities inherent in a small, narrowly based, low-income economy. Per capita income of about US$430 is among the lowest of all rated sovereigns. A very pronounced export dependence on three commodities (copper, gold, and cashmere) underscores commodity price and demand-related risks.

The ratings are supported by:
-- Strong donor country and multilateral support. Successive governments have demonstrated commitment to prescribed reform programs while inducing a smooth transition to democracy and a market economy from communism. Continued support from multilateral lending institutions by way of aid and technical assistance will, however, be dependent on adherence to strict performance criteria.
-- Progress into an open, stable, and market-led economy. Inflation has been gradually reduced to about 10% this year, from 268% in 1993. Economic growth continued to be robust in 1999, after having averaged 4% in the past five years, and is expected to accelerate in 2000 as key commodity prices recover. **Nevertheless, the government still needs to implement further price liberalization and regulatory reforms.** In addition, infrastructure improvements and greater diversification of product and export markets are needed to keep the economy on a stable growth trajectory.

OUTLOOK: STABLE
The stable outlook reflects the expectation that government reform policies will remain broadly on track, securing continued bilateral and multilateral support, even if the government is replaced in mid-2000, when elections are due. **The ratings could improve if the next administration continues with reforms, fiscal pressures ease, and privatization attracts more substantial foreign direct investment inflows.** Conversely, significant fiscal slippage and stalling reforms could put downward pressure on the rating. In light of Mongolia's weak fiscal position and tremendous restructuring and developmental needs, **the country's creditworthiness also hinges on continued IMF and donor support**, as well as sustained improvement in payment discipline to avoid a recurrence of payment arrears, Standard & Poor's said." (S&P 1999, emphasis added)

Box 1 gives an example of a rating announcement and the coding process. On 23 December 1999, S&P issued its first long-term foreign currency rating for Mongolia. The length of 593 words and the clear structure are very typical for all sovereign rating announcements. S&P emphasizes four factors that constrain the rating. Budget deficits, high public debt burden, and the vulnerabilities of a small low-income economy are three economic factors that are already emphasized in the previous literature and controlled for in my econometric analysis (see section 3.1.2 and 3.3). In addition, S&P states that urgently "needed reforms include […] stepping up large-scale privatization".

I code this sentence as a positive judgment by S&P on privatization as one economic liberalization policy. Another liberalization policy is mentioned by S&P as one of the two positive rating drivers. According to S&P, "the government still needs to implement further price liberalization", which I code as a positive judgment on deregulation as another domestic liberalization policy.

The second positive rating driver shows the importance that S&P attributes to multilateral support for Mongolia. As S&P makes clear in the outlook, "the country's creditworthiness also hinges on continued IMF […] support". I code this as a positive assessment of an international agreement, an IMF program. S&P takes the IMF program into account because of the financial support and the prescribed reforms that the program provides.

S&P's assessment of political institutions is less straight-forward for Mongolia. S&P is in favor of a "smooth transition to democracy", but they also highlight the negative aspects of elections. S&P argues that the rating is constrained by the "challenge of accelerating structural reforms in the face of political uncertainties surrounding the June 2000 general elections." I code this as an analysis of a domestic election. Moreover, I add this code as an example for a political business cycle that, according to S&P, prevents necessary domestic economic reforms.

Overall, this rating announcement is one example that shows how liberalization policies, international agreements, and political institutions are taken into account as political factors by a CRA in its assessment of a country's creditworthiness. In the following paragraph, I will introduce the unique data set on which my text analyses in the subsequent chapters are based. Following the example just given for the announcement accompanying Mongolia's rating in 1999, I have coded all sovereign rating announcements issued since 1995 that were available online.

Table 11: Summary Statistics for Database of Announcements

Agency	Announce-ments	Since	Up-grades	Down-grades	New/ With-drawn	Invest-ment	Specu-lative	Coun-tries
S&P	520	1995	236	209	75	216	304	117
Moody's	371	1995	200	109	62	181	190	100
Fitch	331	1999	171	105	55	143	188	100
Total	**1,222**		**606**	**424**	**192**	**540**	**682**	**137**

As in the econometric study, I focus on long-term foreign currency issuer ratings, which are the most relevant ratings because all other sovereign ratings are based on them (see section 2.1.2). Table 11 gives a summary of the comprehensive database of 1,222 rating announcements for almost all rating changes since 1995. Standard & Poor's has changed 626 sovereign ratings since 1980. On their website, they publish 520 announcements for 117 countries from 23/10/1995 to 19/05/2011 which are 97% of all rating changes in that period. 236 of these rating changes are upgrades, 209 downgrades, 72 explanations for newly rated countries, and 3 for ratings that were withdrawn (WR). 216 of the countries were rated investment grade (BBB- and higher) following the rating change and 304 were rated speculative grade. Moody's has changed 478 sovereign ratings since the 1950s. 371 announcements for a total of 100 countries are published on their website from 01/01/1995 to 31/12/2010 which are 98% of all rating changes in that period. 200 of these announcements are for upgrades, 109 for downgrades, 59 new ratings, 3 for withdrawn ratings. Half of these announcements are for investment grade-rated countries.

Fitch has changed 436 ratings since 1994. On Fitch's website, there are rating announcements for all but one of the 332 rating changes for a total of 100 countries from 26/01/1999 to 03/02/2011. Fitch does not publish its previous sovereign rating announcements online, as many of the first published ratings were still issued by companies, IBCA Limited, Duff & Phelps Credit Rating, and Thomson Financial Bank Watch, that were acquired by Fitch from 1997 to 2000 (see Fitch 2011a). 171 of these announcements are upgrades, 105 downgrades, 48 new ratings, and 7 withdrawn ratings. 143 of the announcements are for investment grade-rated countries and 188 for speculative grade-rated countries. The announcements by Fitch (624 words) and Standard & Poor's (625 words) are on average longer than the announcements by Moody's (474 words).

Table 12 provides a complete list of all countries covered in the text analysis and in the panel econometric study. The text analysis extends the econometric study by 13 sovereigns, for which no macroeconomic control variables are available. For eleven countries, the sovereign rating has not been changed from 1995 to 2010 so that there is no announcement available for the text analysis. All of these countries are, except for the Cayman Islands, Liechtenstein, and Micronesia, included in the econometric analysis. For twelve countries of the overall 137 countries, there is only one rating change or the announcement for a new rating. Russia's ratings are most often changed

with 36 announcements followed by Argentina with 33 and Indonesia and Uruguay with 32.

Combined, the econometric study and the text analysis cover 145 rated sovereigns. This new comprehensive database of sovereign ratings and rating announcements allows me to thoroughly analyze which political factors CRAs take into account in their risk assessments. Do rating agencies care about economic liberalization policies (chapter 4), political institutions (chapter 5), and countries' adoption of and compliance with international agreements (chapter 6)?

Table 12: List of Countries Covered in Panel Econometric and Text Analysis

Country	Announce-ments	In Panel since	Country	Announce-ments	In Panel since
Abu Dhabi	2	NA	Fiji Islands	7	1999
Albania	2	2007	Finland	5	1980
Andorra	5	NA	France	0	1980
Angola	3	2010	Gabon	2	2007
Argentina	33	1986	Gambia	4	2002
Armenia	4	2006	Georgia	6	2005
Aruba	2	NA	Germany	0	1983
Australia	4	1980	Ghana	4	2003
Austria	0	1980	Greece	25	1988
Azerbaijan	7	2000	Grenada	7	2002
Bahamas	2	1997	Guatemala	6	1997
Bahrain	14	1996	Guernsey	1	NA
Bangladesh	2	2010	Honduras	3	1998
Barbados	7	1994	Hong Kong	14	1988
Belarus	3	2007	Hungary	19	1989
Belgium	2	1988	Iceland	19	1989
Belize	17	1999	India	10	1988
Benin	3	2003	Indonesia	32	1992
Bermuda	2	NA	Iran	5	2002
Bolivia	13	1998	Ireland	17	1987
Bosnia-Herzegovina	3	2004	Isle of Man	1	NA
Botswana	3	2001	Israel	6	1988
Brazil	26	1986	Italy	6	1986
Bulgaria	21	1996	Jamaica	18	1998
Burkina Faso	1	2004	Japan	9	1980
Cambodia	2	2007	Jordan	4	1995
Cameroon	7	2003	Kazakhstan	20	1996
Canada	6	1980	Kenya	4	2006
Cape Verde	2	2003	Korea	21	1986
Chile	7	1992	Kuwait	10	1995
China	12	1988	Latvia	20	1997
Colombia	10	1993	Lebanon	14	1997
Cook Islands	6	NA	Lesotho	2	2002
Costa Rica	3	1997	Libya	4	2009
Croatia	5	1997	Lithuania	22	1996
Cuba	1	NA	Luxembourg	0	1989
Cyprus	10	1994	Macao	4	NA
Czech Republic	7	1993	Macedonia	5	2004
Denmark	3	1980	Madagascar	3	2004
Dominican Republic	24	1997	Malawi	4	2003
Ecuador	25	1997	Malaysia	18	1986
Egypt	7	1996	Mali	4	2004
El Salvador	7	1996	Malta	6	1994
Estonia	13	1997	Mauritius	1	1996

Mexico	15	1990	Saudi Arabia	12	1996
Moldova	14	1997	Senegal	1	2000
Mongolia	7	1999	Serbia	4	2004
Montenegro	5	2004	Seychelles	6	2006
Montserrat	1	NA	Singapore	3	1989
Morocco	5	1998	Slovak Republic	19	1994
Mozambique	3	2003	Slovenia	12	1996
Namibia	1	2005	South Africa	10	1994
Netherlands	0	1986	Spain	9	1988
New Zealand	6	1980	Sri Lanka	6	2005
Nicaragua	3	1998	Suriname	5	1999
Nigeria	3	2006	Sweden	8	1980
Norway	1	1980	Switzerland	0	1982
Oman	10	1996	Taiwan	3	1989
Pakistan	22	1994	Thailand	15	1989
Panama	7	1980	Trinidad and Tobago	9	1993
Papua New Guinea	7	1998	Tunisia	5	1995
Paraguay	12	1995	Turkey	19	1992
Peru	17	1996	Turkmenistan	5	1997
Philippines	10	1993	Uganda	2	2005
Poland	8	1995	Ukraine	22	1998
Portugal	11	1986	United Arab Emirates	5	1996
Qatar	12	1996	United Kingdom	0	1980
Ras Al Khaimah	2	NA	United States	0	1980
Romania	24	1996	Uruguay	32	1993
Russia	36	1996	Venezuela	24	1980
Rwanda	2	2006	Vietnam	7	2002
Saint Vincent	1	2007	Zambia	1	NA
San Marino	3	NA			

Data: Rating data are from S&P (2011b), Moody's (2011) and Fitch (2012c). NA = "not available" if macroeconomic control variables are not available for the specific country. Eight countries are included in the econometric analysis, but their sovereign rating has not been changed from 1995 to 2010 so that there is no announcement available for the text analysis.

4 The Promotion of Economic Liberalization Policies

In this first empirical chapter, I will analyze whether rating agencies demand certain economic policies from national governments. Although many scholars argue that CRAs promote economic liberalization policies with their rating decisions (Datz 2004, Sassen 1996, Sinclair 2005), there is only limited empirical support thus far. Most studies rely on anecdotal evidence from very few rating announcements. In the only econometric study by Biglaiser and DeRouen (2007), most liberalization policies do not have a statistically significant impact on sovereign ratings.

I provide the first comprehensive empirical study based on the new data set of sovereign rating announcements and the panel of sovereign ratings. Following a brief review of the literature (section 4.1), I will explain why I expect CRAs to take economic liberalization policies into account when assessing sovereign default risk (section 4.2). As argued in section 1.2, CRAs not only have to evaluate a country's ability but also its willingness to repay. Economic liberalization policies can serve as an important signal for this willingness to repay. In section 4.3, I will present the independent variable of my analysis, economic liberalization, and different approaches to conceptualize and measure this variable.

In the following two sections, I will test my claim econometrically and in a text analysis. In section 4.4, I will present the results for a panel econometric analysis of all sovereign ratings from 1980-2010 for all three major CRAs for more than 100 countries. In contrast to the only previous study by Biglaiser and DeRouen (2007), which analyzes sovereign ratings for 16 countries, I test for CRAs' support of economic liberalization policies in a far more comprehensive data set. Controlling for standard macroeconomic rating drivers and except for trade liberalization, all economic liberalization measures – deregulation, investment and capital account liberalization – lead to better sovereign ratings. My results are robust to alternative specifications of the regression model in an ordered probit or a linear framework using panel-corrected standard errors and controlling for autocorrelation, country-fixed effects and alternative measures of the main explanatory variables.

In section 4.5, I present additional evidence in a content analysis of all sovereign rating announcements published since the mid-1990s by the three major CRAs. In contrast to the existing literature that relies on only very few rating announcements for a small

number of countries, I test for CRAs' promotion of liberalization policies in a comprehensive data set of 1,222 announcements for 137 countries. In their announcements, CRAs strongly support economic liberalization, with 82% positive judgments of a total of 647 judgments.

In contrast to previous empirical tests, I can therefore show that economic liberalization leads to better sovereign ratings and that CRAs promote economic liberalization policies in their announcements. CRAs interpret economic liberalization policies as an important signal of a government's market-friendly type.

4.1 Literature on Sovereign Ratings and Economic Liberalization

Several studies focus on CRAs' promotion of economic liberalization policies. Sinclair, for instance, claims that CRAs promote "institutional arrangements of a neoliberal form" (2005: 139) and an "American-derived mental framework" (ibid.: 71). Sassen supports this perspective by arguing that ratings are tied to "narrow theories of market efficiency" (1996: 111), which aim for an "undistorted price signal and little if any government involvement" (ibid.). Datz argues that "sovereign ratings are embedded in a neoliberal strategy of development" (2004: 311), which is based on the "Washington-Wall Street 'consensus' on neoliberal reforms" (ibid.).

However, thus far there is only limited rigorous evidence on this "neoliberal agenda"[7]. Sinclair, Sassen, and Datz rely on only very few rating announcements for a small number of countries to support their claims. In his book on credit rating agencies, Sinclair (2005) cites only two sovereign rating announcements that show CRAs' support of economic liberalization policies. First, he refers to a rating change in 1992, in which Moody's embraces Argentina's deregulation efforts (Sinclair 2005: 145). Second, Sinclair cites Standard & Poor's first rating of Senegal in 2000, in which S&P promotes privatization policies (ibid.: 146). Sassen completely relies on Sinclair's analysis to back her claims. Datz analyzes the case of Argentina and in particular its exchange rate system that, according to Datz, signals "the ultimate commitment of the

[7] As the term "neoliberal" is highly charged in the debate, I will use the term economic liberalization instead. I will define the term in more detail in section 4.3.1. In principle, I focus on privatization and deregulation as domestic economic liberalization policies and on the liberalization of trade, foreign direct investment, and capital controls as foreign economic liberalization policies.

Argentine government to neoliberal reforms" (2004: 313). She claims that "rating agencies would downgrade Argentine debt" (ibid.: 314) if the country abandoned its parity system (ibid.). However, she does not give any evidence for this claim, such as citing rating announcements. As there are more than 1,200 sovereign rating changes and new ratings for more than 100 countries, the evidence derived from few rating announcements easily runs the risk of a selection bias and is not sufficient to support the strong claims put forward in the literature.

Thus far, the econometric analysis by Biglaiser and DeRouen (2007) is the only systematic attempt to analyze the impact of economic reforms on sovereign ratings. In their sample of 16 Latin American countries, trade liberalization has a positive impact on sovereign ratings, but all other liberalization measures – domestic financial reform, capital account liberalization, privatization, and tax reform – are insignificant. They thus conclude that "most economic reforms are apparently not essential for achieving higher bond ratings" (2007: 124). However, their sample of 16 Latin American countries from 1992-2003 only comprises a small selection of the existing sovereign ratings in the last decades, which shows the need to test for economic liberalization in a more comprehensive sample.

4.2 Argument: Economic Liberalization Policies as Signals

Sovereign creditors cannot credibly enforce sovereign debt repayment. Therefore, as argued in the introduction, CRAs not only have to assess a country's ability but also its willingness to repay. However, most studies focus only a limited number of macroeconomic factors as indicators for a country's ability to repay and use past default history as the only proxy to assess a sovereign's current willingness to repay (see section 3.1). I argue that CRAs have good reasons to use economic liberalization policies as an additional signal of a government's willingness to repay. As liberalization policies are both visible and costly to reverse, countries can use these policies as a device to signal their investor-friendly type.

First, economic liberalization policies, such as privatizations and deregulation, are visible policies that a government cannot easily adopt if these policies are not in the interest of its major supporters. I assume that groups that support these liberalization policies are in general investor-friendly and are hence in favor of sovereign debt payment to uphold good relations with investors. By liberalizing its economy, a

government can thus build an investor-friendly reputation. Most liberalization policies can also be well observed by external rating agencies. Many other domestic policy choices and reform processes, such as wage bargaining and labor reforms, are difficult to assess for an outside actor. In contrast, liberalization policies, such as privatization programs, are very visible. For instance, even without being aware of all the intricacies of domestic politics, an outsider can nevertheless observe whether a company is sold or not.

Second, most liberalization policies cannot be easily reversed. For instance, if a government wants to reverse its privatization program, it has to expropriate current owners, which will lead to visible protests that can be observed by CRAs as external observers. Moreover, the ability of a government to implement costly structural reforms can also serve as a general signal of its willingness to reform and to reverse an unsustainable fiscal trajectory in times of crisis. For these reasons, I expect that credit rating agencies take economic liberalization policies into account and that economic liberalization policies thus lead to better sovereign ratings.

4.3 The Independent Variable: Economic Liberalization Policies

4.3.1 Defining Economic Liberalization

Testing this hypothesis requires a clear definition of economic liberalization policies. In the previous literature on sovereign ratings, the term "neoliberal" is not exactly defined. Sinclair's two examples are on deregulation (2005: 145) and privatization (ibid.: 146). He also states that the "neoliberal privatization agenda is locked into the rating process as a technical assumption" (Sinclair 2000: 497). In addition to these two liberalization policies, Bruner and Abdelal analyze CRAs' stance on capital account liberalization (2005: 2000). Datz refers to the Washington Consensus as a central neoliberal reform package (2004: 311). These policies were first summarized by Williamson in 1989 and include the following: fiscal discipline, tax reform, interest rate liberalization, trade liberalization, liberalization of foreign direct investment inflows, a competitive exchange rate, secure property rights, a redirection of public expenditures, privatization, and deregulation (Williamson 1989). In the previous attempt to measure CRAs' liberalization preferences, Biglaiser and DeRouen (2007) use data by Morley et al. (1999) on structural reforms, in particular on trade liberalization, financial reform,

tax reform, capital opening, and privatization. Their list of neoliberal reforms mainly includes economic liberalization policies. Instead of using the term neoliberal, promoters of these policies prefer the term "economic freedom" (see section 4.3.2). Simmons et al. summarize privatization, deregulation, and the liberalization of foreign economic policies as "free-market oriented" reforms (2006: 781).

Since the term "neoliberal" is contested and not clearly defined in the sovereign rating literature and all cited examples are on economic liberalization policies, I will explicitly focus on these cited liberalization policies. Based on the examples above, I will analyze domestic liberalization measures, in particular governments' privatization and deregulation efforts. In addition, I will take into account the liberalization of foreign economic policies, i.e., the reduction of barriers to trade, foreign direct investment, and capital flows. All of these five liberalization policies are often contested domestically, hence implementation is costly. If they are implemented, they could therefore serve as credible signals of a government's type.

4.3.2 Measuring Economic Liberalization Policies

I will use different measures of liberalization policies based on data by the Heritage Foundation (2011) and the Fraser Institute (2011). The Heritage Foundation provides annual data for these indicators since 1995 and the Fraser Institute from 2000 to 2008. Data by these institutions are widely used in the literature. For instance, the World Bank uses several sub-indicators of the Heritage Foundation Index of Economic Freedom to construct the World Bank's Worldwide Governance Indicators (World Bank 2012). Biglaiser and Staats (2012) use several sub-indicators provided by Fraser Institute's Economic Freedom of the World Index.

I construct two indices of economic liberalization policies based on the data by the Heritage Foundation and the Fraser Institute. Heritage Foundation's Economic Freedom Index (2011) includes ten components in total. Four of these components capture economic liberalization. As foreign economic liberalization policies, Heritage Foundation's *trade freedom* variable measures trade liberalization by the absence of tariff and non-tariff barriers. *Investment freedom* provides joint data on capital account liberalization and on the liberalization of foreign direct investment (FDI) inflows. As domestic economic liberalization policy, *financial freedom* measures the liberalization of the domestic financial market, in particular the degree of privatization with lower government ownership leading to a higher score. *Business freedom* is defined as a low

overall burden of regulation and the efficiency of government in the regulatory process. For each component, the Heritage Foundation compiles data on a number of sub-indicators and then assigns a grade using a scale from 0 to 100, where 100 represents the best score from their perspective. For their overall score based on ten components, they calculate the average of the sum of all indicators. I will construct an index of liberalization policies in the same way, by calculating the average of the sum of the four liberalization sub-indicators.

The Fraser Institute provides data for three areas of liberalization policies. As foreign economic liberalization policy, their *trade liberalization*, and *capital account liberalization* variables measure the absence of tariffs and capital controls respectively. Similar to Heritage's business freedom variable, Fraser's *business deregulation* variable provides data for bureaucracy costs, administrative requirements, and price controls. For each variable, the Fraser Institute assigns values on a scale from 0 to 10. To construct a liberalization index based on their data, I take again the average of the sum of their three measures.

In addition to these two liberalization indices, I will test for specific liberalization policies. Based on the definition of liberalization policies above, I will analyze the impact of trade liberalization, capital account liberalization, the liberalization of FDI inflows, privatization, and deregulation. In addition to the two sets of liberalization indicators from Heritage and Fraser, I also use Chinn-Ito's measure of capital account liberalization (Chinn & Ito 2007, 2011) as a further robustness check. This indicator has been used in previous studies on capital account liberalization (see, e.g., Chwieroth 2007, Milner & Mukherjee 2009). As this index provides data on capital account liberalization policies from 1975 onwards, it gives a more comprehensive set of data for one specific liberalization measure. The Chinn-Ito index is a composite index on a scale from -2.5 to +2.5 based on binary dummy variables of restrictions on cross-border financial transactions in the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions.

Figure 3: Development of Liberalization Policies

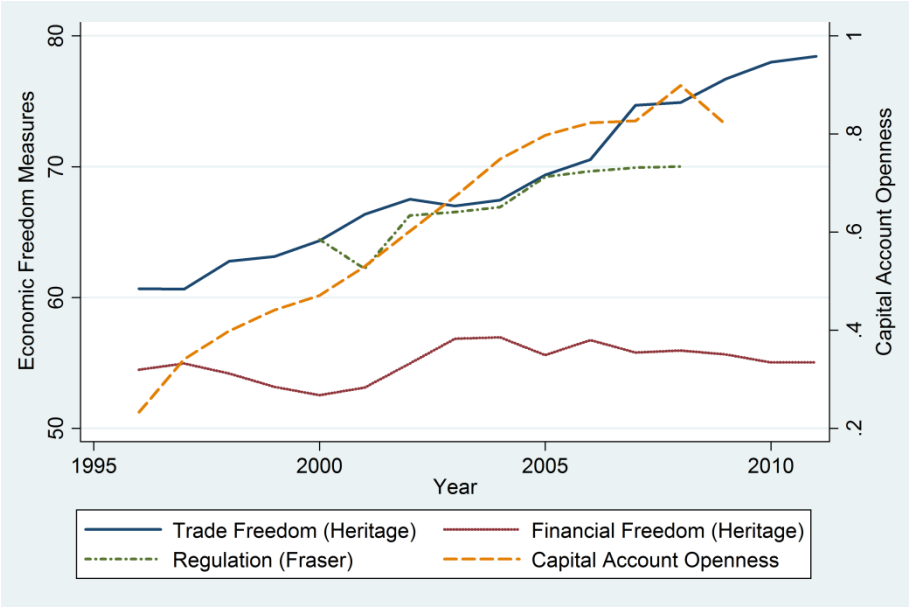


Figure 3 shows the spread of liberalization policies since 1996 for the average of more than 100 countries that were rated at least once by one of the major CRAs and for which data on liberalization policies are available.[8] Trade liberalization, as measured by Heritage, increased by 29% from 60.7 in 1995 to 78.4 in 2011. On average, domestic financial liberalization policies stayed almost at the same level as fifteen years before. Fraser Institute's measure of deregulation policies rose from 6.4 in 2000 to 7.0 in 2009 and Chinn-Ito's index of capital account openness increased from .23 in 1996 to .82 in 2009. In the following two sections, I test for these economic liberalization policies econometrically in an extensive panel data set and in a text analysis based on the new data set of sovereign rating announcements.

4.4 Panel Econometric Analysis of Sovereign Ratings

After an introduction to the data set used for this section, I will present the results for the newly constructed liberalization indices based on data by the Heritage Foundation and the Fraser Institute (section 4.4.1). In addition, I will analyze the impact of specific liberalization policies and compare the results to the main previous study in the literature (section 4.4.2).

[8] The data are for 131 countries for Heritage data, 119 countries for Fraser data, and 128 countries for Chinn-Ito's measure of capital account openness. Fraser Institute's data on the 0-10 scale are multiplied by 10 to make them directly comparable to Heritage's measure.

The panel econometric analysis is based on the comprehensive data set of sovereign ratings and macroeconomic control variables introduced in section 3.4.1 with 1,588 observations for 112 countries for Standard & Poor's, 1,648 for 102 countries for Moody's, and 1,106 observations for 102 countries for Fitch. As Heritage Foundation provides annual data for its indicators since 1995, this leads to 1,235 observations for 110 countries for Standard & Poor's, 1,261 observations for 102 countries for Moody's, and 1,068 observations for 102 countries for Fitch. For the Fraser Institute data, I can analyze a smaller sample from 2000 to 2008 with 751 observations for 103 countries for Standard & Poor's, 728 observations for 94 countries for Moody's, and 684 observations for 96 countries for Fitch. With its longer time series, Chinn-Ito's index of capital account openness allows me to analyze 1,550 observations for 110 countries for Standard & Poor's, 1,606 observations for 100 countries for Moody's, and 1,080 observations for 100 countries for Fitch. By analyzing economic policies with this set of different indicators of overall and specific liberalization measures, I aim to provide robust results that are not dependent on one particular measurement of economic liberalization.

I will test the impact of economic liberalization on sovereign ratings for all econometric models used in the previous literature and discussed in section 3.4.1. Due to space considerations, I present only the PCSE(ar1) estimator, which is a direct comparison to previous research on economic liberalization, in the main text and report all other results in the appendix.

4.4.1 Results for Economic Liberalization Indices

Table 13 reports the results of the impact of the macroeconomic variables and the two economic liberalization indices on the sovereign ratings of the three main CRAs. For all CRAs, the macroeconomic control variables, which are statistically significant, have the expected sign in all model specifications.[9] Table 20-Table 22 in the appendix show that the macroeconomic variables already explain about two thirds of the variation in sovereign ratings.

For all three CRAs, the liberalization index based on Heritage data has a significant positive effect on sovereign ratings. Its influence is substantial. In most estimations, an

[9] All of the following results also hold when they are tested for a sample of developing countries as in some of the previous literature and when political institutions are introduced as further controls (see also chapter 5).

increase by 10 points on the 0-100 Heritage scale leads to an increase in sovereign ratings of up to almost half a rating notch. This result holds for all model specifications for all CRAs (Table 23-Table 25 in the appendix). Controlling for the macroeconomic indicators in the PSCE(ar1)-estimation, an increase from the 10%- to the 90%-percentile on the liberalization scale (from 48.65 to 80.60) leads to a sovereign rating that is about 1.5 rating notches higher.

The liberalization index based on Fraser Institute data is also significantly positively correlated with sovereign ratings for all three CRAs. The results are only insignificant for Standard & Poor's and Moody's in the fixed-effects regression although they have the expected sign (see Table 32-Table 34 in the appendix). However, this is no surprise given the short time series of less than 8 years. For the other models, the effect is substantive and similar to the effect of Heritage's measure. In the linear framework, a one point increase on the 10-point Fraser scale leads to a higher rating of almost one rating notch.

To obtain simulated probabilities for the ordered probit estimations in the appendix, I use Clarify, a program developed by Tomz et al. (2003) that uses Monte Carlo simulations to interpret statistical results. For the simulation, I hold all other control variables at their mean. As for the linear estimations, the simulations show the substantive significance of liberalization policies. The predicted probability that a country has an "A" rating or higher is almost zero for the lowest actual liberalization score on Heritage's (30) or Fraser's scales (4.15). For the highest liberalization score on Fraser's (9.2) or Heritage's scale (92.5), the probability of a rating of "BB" or lower is almost zero.

Table 13: Regression of Economic Liberalization on Sovereign Ratings

VARIABLES	S&P	Moody's	Fitch	S&P	Moody's	Fitch
Ln(GDP)	2.651*** (0.135)	2.827*** (0.142)	2.665*** (0.124)	2.569*** (0.140)	2.886*** (0.156)	2.454*** (0.102)
GDP Growth	0.021 (0.019)	0.016 (0.016)	0.020 (0.019)	-0.018 (0.026)	-0.014 (0.025)	-0.019 (0.023)
Current Account Surplus	0.004 (0.011)	0.006 (0.008)	0.008 (0.011)	0.028** (0.012)	0.036*** (0.011)	0.017 (0.011)
Inflation	-0.019*** (0.007)	0.001 (0.001)	-0.011 (0.007)	-0.068*** (0.019)	-0.048*** (0.017)	-0.072*** (0.018)
Default History	0.201 (0.320)	-0.134 (0.275)	-0.030 (0.386)	-0.442 (0.618)	-0.735 (0.467)	-0.786 (0.639)
Public Debt to GDP Ratio	-0.009** (0.004)	-0.006 (0.004)	-0.002 (0.004)	-0.000 (0.005)	0.003 (0.005)	0.004 (0.005)
Heritage Liberalization	**0.048***** (0.011)	**0.039***** (0.011)	**0.044***** (0.011)			
Fraser Liberalization				**0.802***** (0.193)	**0.688***** (0.183)	**0.945***** (0.146)
Constant	-12.499*** (1.103)	-13.795*** (1.334)	-11.652*** (0.969)	-13.840*** (1.286)	-16.237*** (1.496)	-12.796*** (1.053)
Observations	1,235	1,261	1,068	751	728	684
R-squared	0.757	0.759	0.770	0.815	0.830	0.850
Countries	110	102	102	103	94	96

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

4.4.2 Results for Specific Liberalization Policies

Table 14 presents the results for individual liberalization indicators. As the individual liberalization policies are positively correlated, their effects are expected to be less significant in the joint regression below due to multicollinearity (see Table 29-Table 31 in the appendix for individual regressions of each of Heritage's indicators). However, even under these stringent assumptions, most individual liberalization policies have a significant positive impact on sovereign ratings.

For Heritage Foundation's data, I test for four liberalization policies: business, trade, investment, and financial freedom. Except for trade freedom, all indicators have a significant positive influence on sovereign ratings for all three CRAs in most estimations. An increase by 10 points in the individual indicators leads to a better rating of .10 to .18 of a rating notch. Except for the insignificant trade freedom measure, the results confirm the expectation that liberalization policies lead to better sovereign ratings.

I also test for individual liberalization policies with Fraser Institute's data on business deregulation, trade liberalization, and capital account liberalization. The results are substantially the same as for the Heritage Foundation. Business deregulation and capital account liberalization lead to better sovereign ratings. An increase by one point on Fraser's scale is associated with an increase in sovereign ratings of .1 to .4 of a rating notch. As for the overall measure, the fixed-effects results for the deregulation measure of Fraser's short time series are only significant for Fitch.

The clear results on capital account liberalization can be confirmed for the alternative measure of capital account openness by Chinn and Ito (2011, see Table 38-Table 40 in the appendix). In all estimations, higher capital account openness has a significant positive effect on sovereign ratings for all CRAs. This analysis is a further robustness test because the index covers a longer period including the 1980s. The degree of the effect is also similar to the results for other liberalization policies if these policies are regressed individually. A half point increase on the five point capital account openness scale leads to a better rating of up to one rating notch.

Table 14: Regression of Specific Liberalization Policies on Sovereign Ratings

VARIABLES	S&P	Moody's	Fitch	S&P	Moody's	Fitch
Ln(GDP)	2.689*** (0.139)	2.901*** (0.138)	2.692*** (0.126)	2.586*** (0.141)	2.925*** (0.172)	2.524*** (0.105)
GDP Growth	0.019 (0.019)	0.015 (0.016)	0.019 (0.019)	-0.008 (0.025)	-0.003 (0.024)	-0.012 (0.024)
Current Acc. Surplus	0.004 (0.011)	0.007 (0.008)	0.008 (0.010)	0.028** (0.012)	0.036*** (0.011)	0.020* (0.011)
Default History	-0.020*** (0.007)	0.001 (0.001)	-0.011 (0.007)	-0.066*** (0.019)	-0.043*** (0.016)	-0.075*** (0.020)
Public Debt to GDP	0.220 (0.325)	-0.158 (0.281)	-0.007 (0.388)	-0.396 (0.630)	-0.556 (0.459)	-0.859 (0.671)
Inflation	-0.010** (0.004)	-0.006 (0.004)	-0.003 (0.004)	-0.000 (0.006)	0.003 (0.005)	0.004 (0.005)
Business Freedom	**0.014**** (0.006)	**0.014**** (0.006)	**0.014*** (0.008)			
Trade freedom	**0.000** (0.006)	**-0.006** (0.006)	**-0.000** (0.007)			
Investment Freedom	**0.018***** (0.006)	**0.017***** (0.005)	**0.012*** (0.006)			
Financial Freedom	**0.012**** (0.005)	**0.010**** (0.005)	**0.014***** (0.005)			
Business Deregulation				**0.250**** (0.108)	**0.197*** (0.107)	**0.403***** (0.087)
Low Trade Taxation				**0.129*** (0.076)	**0.071** (0.092)	**0.053** (0.059)
Capital Acc. Liberaliz.				**0.173***** (0.055)	**0.107**** (0.054)	**0.120***** (0.045)
Constant	-12.394*** (1.059)	-13.999*** (1.225)	-11.468*** (0.932)	-12.288*** (1.099)	-14.521*** (1.501)	-10.718*** (0.873)
Observations	1,235	1,261	1,068	751	728	684
R-squared	0.759	0.765	0.771	0.811	0.823	0.843
countries	110	102	102	103	94	96

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

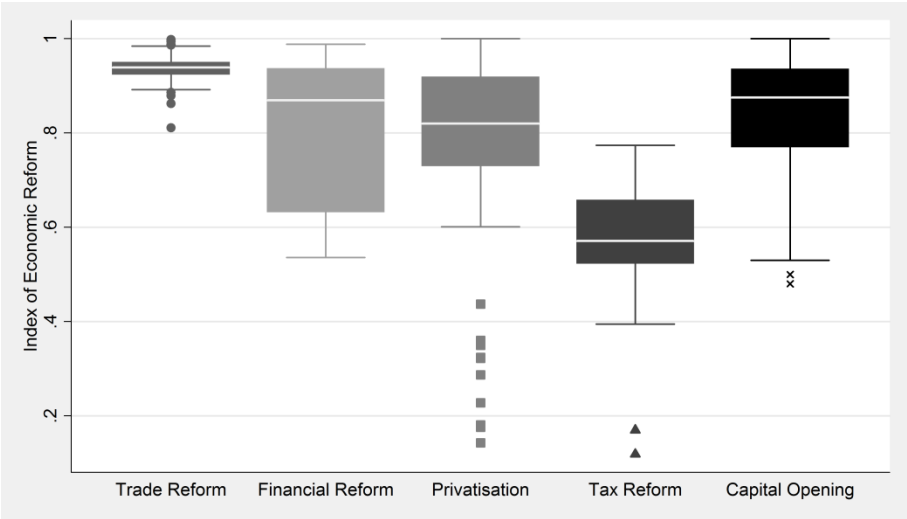
Trade liberalization is the only liberalization policy that is statistically and substantively insignificant in all model specifications. Even if I do not control for other liberalization policies, trade liberalization is still not significant (see Table 29-Table 31 in the appendix). This shows the potential limits of economic liberalization measures as signals of a government's investor-friendly type. In contrast to the other liberalization policies, trade liberalization can have a direct impact on a government's fiscal stance. Trade taxes are an important government revenue source for most developing countries (Agénor & Montiel 2008: 19). These revenues ensure the capacity of sovereign debt repayment, in particular since developing countries find it more difficult to raise other tax revenues because of insufficient institutions, such as a limited administrative capacity, a large informal sector resulting in a low tax base, and low

collection rates (Bird & Zolt 2005). Trade liberalization as a signal cannot trump the importance of these government revenues.

The consistent substantive and statistical significance of my results on the impact of liberalization policies stands in sharp contrast to the insignificance of the results presented in the only previous study thus far by Biglaiser and DeRouen (2007). The difference between the two studies is particularly puzzling because the only significant liberalization policy in Biglaiser and DeRouen, their measure of trade liberalization based on tariff policy (Biglaiser & DeRouen 2007: 127), delivers insignificant results in my analysis. Because of this surprising difference, I have a closer look at their data that Biglaiser and DeRouen (2007) gratefully provide in the data archive of International Studies Quarterly (ISQ Data Archive 2011).

In general, their sample of 108 observations for 13 countries for Moody's and 121 observations for 15 countries for Standard & Poor's is relatively small and displays only small variation for the liberalization policies on the 0 to 1 scale by Morley et al. (1999). This is even more the case for their measure of trade liberalization. There is almost no variation in trade policies on this scale (see Figure 4). Even if their result on trade reform was robust, it would be based on almost no trade policy changes on this scale in their sample. This shows the importance of increasing the sample size to test for the role of liberalization policies more extensively in a sample with more variation in liberalization policies.

Figure 4: Box Plot of Liberalization Policies in Latin America, 1995-2003



Data: Biglaiser & DeRouen (2007) for 16 Latin American countries (see ISQ Data Archive 2011)

4.5 Content Analysis of Sovereign Rating Announcements

In contrast to the insignificant results on economic reform indicators reported in the previous econometric study, I can show a substantive positive effect of economic liberalization on sovereign ratings in the panel econometric study above. In this section, I present the results of an additional content analysis based on the comprehensive sample of 1,222 sovereign rating announcements introduced in section 3.4.2. After highlighting the advantages of the content analysis, I will explain the coding process of economic liberalization policies (section 4.5.1) and present my central findings (section 4.5.2).

A content analysis of sovereign rating announcements can shed more light on the specific liberalization policies that CRAs promote and on the stated reasons for their support of specific policies. First, the text analysis can help me to identify the impact of specific economic liberalization policies on sovereign ratings. It is difficult to include qualitative factors in an econometric analysis. But qualitative factors are important rating drivers, especially for political factors as rating agencies state in their methodologies (see section 3.3). Due to the lack of appropriate cross-country data, I was only able to analyze the impact of the privatization of financial companies (included in Heritage's measure of "financial freedom") and not of privatization in general. Moreover, for specific policies, econometric studies run the risk of multicollinearity. Although it is possible to determine the overall significant positive impact of economic liberalization on sovereign ratings, it is difficult to identify which specific liberalization policies account for this positive effect of liberalization on ratings.

Second, the text analysis allows me to identify the reasons stated by CRAs for specific liberalization policies. This could especially help me in understanding the unexpected results of the econometric analysis on the insignificance of trade liberalization. Third, there could be a difference between CRAs' revealed preferences in their sovereign ratings and their expressed preferences in their announcements. CRAs could demand different policy reforms from national governments than those that are relevant for their sovereign ratings. For all these reasons, a text analysis can give additional evidence on the liberalization policies that CRAs promote.

4.5.1 Coding Liberalization Policies

To make my text analysis comparable to the panel econometric results, I use the definitions of *trade, FDI, and capital account liberalization* by the Heritage Foundation and the Fraser Institute for the content analysis (see section 4.3.2). In addition to business deregulation, I also take the *deregulation* of credit and labor markets into account. Moreover, I do not only code the privatization of financial companies (as Heritage's "financial freedom" variable), but privatization in general. *Privatization* is defined as "the deliberate sale by a government of state-owned enterprises (SOEs) or assets to private economic agents" (Megginson & Netter 2001: 321). Privatization is a central and precise element of the Washington consensus policies and "suggests a commitment to the private over the public sector" according to Biglaiser and DeRouen (2007: 126).

Based on these definitions of the specific liberalization policies above, I go through all 1,222 announcements and code the frequency of all judgments on economic liberalization policies with the content analysis software MAXQDA. In addition to this frequency analysis, I also conduct a valence analysis, coding whether CRAs are in favor of or against specific economic liberalization policies. I identify CRAs' position in three ways.

First, there is often a direct statement that links the rating decision to the judgment so that it is clear what position a CRA takes. For instance, Fitch argues in a rating announcement for Nigeria on 30/01/2006 that "Nigeria's ratings are underpinned by the current government's strong commitment to economic reform, including measures to [...] accelerate privatisation". For this statement, I thus code a positive judgment on privatization policy. There are also clear judgments when CRAs relate policies to future rating changes, such as in the case of Qatar, for which Standard & Poor's states on 03/09/2001, "The ratings could be raised again if the government […] restarts the stalled privatization program".

Second, CRAs often directly demand policy changes from governments, which also shows their preferences for certain economic liberalization policies. For instance, Fitch demands the following from the Greek government on 20/06/2001, "Further privatisation, deregulation and public sector reform (particularly in the pensions sector) are all urgently required".

Third, CRAs make judgments when they explain the impact of economic liberalization on other rating drivers in their announcements. We know from CRA methodologies and previous studies (see section 3.1.2) that CRAs are in favor of a higher GDP per capita, higher economic growth, lower public debt, lower deficits, and lower inflation. In the first announcement for Kenya on 12/12/2007, Fitch, for instance, highlights that the "economy also benefits from a large and resilient private sector with ongoing privatisation further reducing the role of the state". In this announcement, there is a direct link between privatization, which increases the role of the private sector to the benefit of the economy as a whole. Hence I code this statement as a positive judgment on privatization policies.

In Table 15, I give examples for positive and negative judgments for all economic liberalization policies. If a CRA endorses the removal of policy barriers on trade, FDI, and capital account flows, this is always coded as a positive judgment. If a CRA supports controls or any barriers to entry, I code this as a negative judgment on the liberalization policy. Due to space considerations, I do not include all coded text segments here, but the MAXQDA file and all coded segments are available upon request.

Table 15: Code System with Examples

1 privatization ↳ 1 positive "Reform of the energy sector, accelerated privatization efforts, and continuation of tax reform are important tasks for the future." (Moody's 2003_11_10_Ukraine) ↳ 1 negative "As non-tax revenues fall following […] the privatization of public enterprises, the consolidated public sector deficit could approach 2% of GDP in 1997 after a small surplus in 1996." (S&P: 1997_01_22_Panama)
2 deregulation of credit, labor and business ↳ 2 positive "Further privatisation, deregulation and public sector reform (particularly in the pensions sector) are all urgently required." (Fitch 2001_06_20_ Greece) ↳ 2 negative "The financial sector is experiencing the negative symptoms of recent liberalization." (Moody's 1997_04_08_Thailand)
3 trade liberalization ↳ 3 positive "Egypt's investment-grade ratings reflect: […] Accelerating structural reforms, including privatization, trade liberalization, and deregulation, which should further strengthen government finances, raise national savings and investment, and secure more rapid economic growth longer term." (S&P 1997_01_15_Egypt) ↳ 3 negative "The newly appointed government has taken decisive steps, including an increase in the VAT rate and in customs duties, which should lead to a significant improvement in the fiscal balance in 2005." (Fitch 2005_02_15_Cameroon)
4 FDI liberalization ↳ 4 positive "Korea's sovereign ratings are supported by: -- Decisive government responses to the crisis on several fronts. The NCNP-ULD coalition has been effective in passing key legislation to open the Korean market to foreign investment" (S&P 1999_01_25_Korea) ↳ 4 negative There is no example in one of the sovereign rating announcements. As for the other policies, there could have been a judgment, such as: The recent liberalization of FDI inflows led to lower economic growth undermining X's sovereign rating.
5 capital account liberalization ↳ 5 positive "capital and price controls have caused significant damage to the private sector" (S&P 2003_07_30_Venezuela) ↳ 5 negative "The ratings could come under renewed pressure if […] capital controls are dismantled" (Fitch 2005_08_12_Venezuela)

4.5.2 Findings

Although the announcements are relatively short, about 600 words each, economic liberalization policies are often mentioned. In total, there are 647 judgments on specific liberalization policies in 450 of the 1,222 announcements. For 114 of the 137 countries, CRAs have made at least one judgment on a liberalization policy. The explanations given by the CRAs for their rating actions strongly confirm the econometric results. 82% of the judgments on liberalization policies are positive. Table 16 shows the percentage of announcements with positive and negative judgments on economic liberalization policies of the total number of 1,222 announcements. In almost a third of all announcements, there is a positive judgment on at least one of the five liberalization policies. CRAs mention negative aspects of liberalization policies in only 9% of all announcements.

This overall positive judgment on economic liberalization holds for all CRAs. Only Moody's has fewer judgments and is also more critical than Standard & Poor's and Fitch, though of Moody's 128 judgments, 75% are also positive. In contrast to previous results on the scope of financial market pressures on developed and developing countries (Mosley 2000, 2003a), there is no difference between investment- and speculative-grade rated countries in my sample.

Table 16: Announcements with Liberalization Judgments[10]

% of total announcements	Total	S&P	Moody's	Fitch	Invest-ment	Specu-lative
with judgments	37% (450)	39%	30%	40%	35%	32%
with pos. judgments	31% (385)	35%	23%	34%	30%	28%
with neg. judgments	9% (107)	7%	10%	9%	9%	8%

Privatization is the policy that is most often evaluated by CRAs in more than 20% of their announcements (see Table 17). In a similar analysis of IMF programs from 1992-2002, Stone (2008) finds that the IMF includes privatization policies in 9% of its programs. Given that these programs are more detailed than any of the short CRA announcements, the high number of privatization policies included in CRA assessments shows the importance CRAs attach to these policies. 96% of the privatization

[10] Percentage of total announcements in which there is at least one positive or negative judgment. As there can be positive and negative judgments on different policies in the same announcement, the figures do not have to add up.

judgments are positive and CRAs list a wide range of reasons for their support of privatization policies. First, according to the CRAs, privatizations directly lower the fiscal deficit[11] and hence reduce government debt[12]. Privatizations also increase foreign direct investment[13], lower the current account deficit[14], and external debt[15]. But the reasons that CRAs give for their support of privatizations are even broader. CRAs expect that privatization will lead to a reduced role of the state[16] and associated efficiency gains once state companies are privatized[17], which will ultimately lead to higher economic growth[18]. Moreover, according to CRAs, privatizations also reduce the state sector wage bill[19] and the role of loss-making state-owned firms[20]. In a few cases, CRAs recommend privatization because of IMF demands[21].

Although the benefits of privatization programs are strongly debated in the literature (Brune et al. 2004: 198ff.), CRAs mention negative aspects of privatization policies in only nine announcements. Those are instances in which privatization obviously went wrong. Moody's observes for Russia that the "decentralized privatization program left considerable power in the hands of insiders and local authorities"[22] and Fitch notes the lack of transparency in Romania's privatization program[23]. The ensuing job losses of a privatization program are only mentioned in two of the 254 announcements.[24]

Table 17: Judgments on Specific Liberalization Policies

Judgments	Total	Privati-zation	Deregu-lation	Trade Lib	FDI Lib	Cap. Ac. Lib
Positive	533	245	122	96	39	31
Negative	114	9	55	25	0	25
Total	647	254	177	121	39	56

[11] See for instance: Fitch: 2001_09_21_Lebanon; S&P: 2004_06_16_TrinidadandTobago; Moody's: 1995_06_01_Poland
[12] Fitch: Iceland 2000_02_03, 2001_07_12_Kazakhstan; S&P: 1997_01_22_Panama; Moody's: 2001_07_30_Lebanon
[13] Fitch: 1999_12_15_Slovenia; S&P: 2004_05_13_Slovenia; Moody's: 1998_03_02_Morocco
[14] S&P: 1997_04_02_Brazil
[15] Fitch: 2005_11_01_Macedonia; S&P: 1996_03_15_Iceland; Moody's: 1998_05_08_Hungary
[16] Fitch: 2007_12_12_Kenya; Moody's: 1997_11_14_Egypt
[17] Fitch: 1999_12_15_ Slovenia; S&P: 2003_05_23_Bulgaria; Moody's: 1998_03_25_Malta
[18] Fitch: 2001_06_07 Moldova; S&P: 1997_01_16_Latvia; Moody's: 1995_04_06_Tunisia
[19] Fitch: 2011_02_02_Lebanon
[20] S&P: 2010_12_21_Croatia
[21] Fitch: 2002_08_01_Indonesia, 1999_11_25_Moldova; Moody's: 2000_04_19_Moldova
[22] Moody's: 1996_10_07_Russia
[23] Fitch: 2002_06_14_Romania
[24] S&P: 1997_01_16_Latvia, 2001_08_06_PapuaNewGuinea

The results for deregulation policies seem to be more mixed at first glance, with the highest number of negative judgments for all liberalization policies analyzed. But a more refined text analysis again confirms the econometric results. In the econometric analysis, I only test for Heritage's and Fraser's measure of the deregulation of business, but not of labor and credit markets. In the text analysis, all 55 negative deregulation judgments are on the deregulation of the financial sector. Moody's is most critical of deregulation with few positive comments (see Table 18). Similarly to Standard and Poor's, Moody's demands adequate financial sector regulation, however, it also openly criticizes financial liberalization. For example for Honduras, they criticize that a "lack of adequate regulation in the banking sector has contributed to a deterioration in the overall financial health of the banking system"[25]. For Jamaica, Moody's emphasizes that "the liberalization of the financial sector ahead of the strengthening of the supervisory authority combined with high interest rates contributed to a financial sector crisis which sent the fiscal position into a hefty deficit"[26]. The deregulation of business is always positively evaluated by all three CRAs, which confirms the econometric results on "business freedom" and "business deregulation".

Table 18: Judgments by Credit Rating Agency

Policy Area	Judgment	S&P	Moody's	Fitch
Privatization	positive	120	54	71
	negative	4	3	2
Deregulation	positive	63	16	43
	negative	24	23	8
Trade Liberalization	positive	38	36	22
	negative	5	6	14
FDI Liberalization	positive	12	16	11
	negative	0	0	0
Capital Acc. Liberalization	positive	18	6	7
	negative	7	7	8

The liberalization of foreign economic policies is mentioned less often in sovereign rating announcements. In their announcements, CRAs are generally in favor of trade liberalization, but there are also negative comments. In the econometric analysis, trade liberalization measures were the only liberalization policy that was not significant. The importance of trade tax revenues suggested in section 4.4 is indeed emphasized by CRAs in their negative judgments. In a rating action for Lebanon, Fitch states, "While

[25] Moody's: 1998_09_29_Honduras
[26] Moody's: 1998_03_30_Jamaica

Fitch is generally supportive of lower trade barriers, the agency notes that in the short term this will make the task of fiscal consolidation harder; customs revenues accounted for 38.5% of total fiscal receipts in 2000"[27]. This result is especially evident for Fitch because Fitch rates a higher number of developing countries in comparison to the other two CRAs.

FDI flows are an important rating driver and are mentioned in a fourth of all announcements. CRAs argue for a number of policies to increase FDI inflows, such as better infrastructure, lower corruption, lower crime rates, and better education. However, the liberalization of FDI flows is only mentioned in 3% of all announcements. FDI liberalization policies, such as national treatment of foreign investment or a transparent investment code, are not important for CRAs in their announcements. When they mention these policies, CRAs are always in favor of them.

Capital account liberalization is also only mentioned in 4% of all announcements. CRAs take capital controls into account for other types of sovereign rating assessments, such as Transfer & Convertibility assessments by Standard & Poor's[28] or sovereign ceilings for companies by Moody's.[29] As Bruner and Abdelal (2005: 2000) already noted, CRAs were against capital controls in the prominent case of Malaysia in 1998[30], but have since become less critical. The negative statements on capital account liberalization are driven by few countries. Venezuela accounts for four of Standard & Poor's seven negative judgments on capital account liberalization and for three of Fitch's eight negative judgments. As for deregulation policies, Moody's is again more cautious and more often highlights the negative aspects that could follow because of capital account liberalization.

But aside from Moody's stance on financial deregulation and capital account liberalization, there are in fact few differences between the CRAs. All three main CRAs strongly promote economic liberalization policies in their announcements. Privatization and the deregulation of business are often mentioned and in almost all cases supported by CRAs. Foreign economic liberalization is, however, less often mentioned. One explanation for the higher importance of domestic liberalization policies could be that these liberalization measures are a more credible device for

[27] Fitch 2001_02_02_Lebanon; see also, for example, Fitch on Tunisia 2001_05_24
[28] S&P: 2008_11_24_Iceland, 2010_04_06_Bangladesh
[29] Moody's: Panama 1997_01_22
[30] S&P: 1998_09_15_Malaysia; Moody's: 1998_09_14_Malaysia; Fitch: 1999_03_22_Malaysia

governments to signal that they are investor-friendly. Privatizations and domestic deregulation measures cannot be as easily reversed as FDI or capital account liberalization policies. If the reversal of these measures is more costly, the signal is more credible. Indeed, CRAs directly highlight the importance of domestic economic liberalization policies as signals of a government's type. For instance, Fitch argues for Lebanon that "progress in privatisation next year will be an important benchmark, since it would confirm the authorities' resolve in undertaking contentious reforms"[31]. Moreover, as privatization measures can be observed directly, they are referred to as evidence for a general progress on structural reforms. Standard & Poor's suggests for Cameroon that the "upgrade is supported by the authorities' continued commitment to (…) structural reforms" which is shown "by the process of privatization [which] is pushed toward completion"[32]. Moody's highlights for Romania that the "government's economic reform program remains on-track, as evidenced by the privatization of a number of large state-owned enterprises over the past year"[33]. Governments could therefore use these policies to signal their market-friendly type and their commitment to repay.

4.6 Summary

In the literature thus far, theoretical claims and empirical evidence on CRA criteria have been inconsistent. Many scholars claim that CRAs promote economic liberalization, but econometric evidence suggested that these policies do not matter for CRAs. In contrast to previous econometric evidence, I show that economic liberalization has a substantive positive impact on sovereign ratings for all three major CRAs. My results are based on the first comprehensive data set of more than 1,000 observations for more than 100 countries. The results are robust to alternative measures of the main explanatory variables and alternative specifications of the regression model in an ordered probit or a linear framework using panel-corrected standard errors and controlling for autocorrelation and country-fixed effects. Among the specific liberalization policies tested, only trade liberalization does not consistently lead to better sovereign ratings, presumably due to the importance of trade taxes as a source of government revenue in many developing countries. Business deregulation, lower

[31] Fitch: 2001_09_21_Lebanon
[32] S&P: 2007_02_26_Cameroon
[33] Moody's 2006_10_06_Romania

barriers to FDI, and capital account liberalization are all positively correlated with sovereign ratings.

Credit rating agencies also promote economic liberalization policies in their rating announcements. In the new comprehensive data set of 1,222 announcements for 137 countries, I show that CRAs make judgments on economic liberalization policies for more than a third of all rating actions. In more than 80% of the judgments, CRAs take a positive stance on economic liberalization policies. Domestic economic liberalization policies, i.e., privatization and business deregulation, are especially important in CRAs' announcements. Trade, FDI, and capital account liberalization policies are less often mentioned and are not referred to as credible signals of a government's willingness to repay. Taken together, the econometric and the text analysis provide the first comprehensive set of evidence on the importance of economic liberalization, as one political factor, for CRAs' assessments of sovereign states.

4.7 Appendix

1. Further Summary Statistics

Table 19: Summary Statistics for Main Variables

Variable		Mean	Std. Dev.	Min	Max	Observations
Heritage Index of Economic Liberalization	overall	64.20	12.10	30	92.5	N = 1602
	between		11.67	35.07	91.77	n = 131
	within		4.36	45.14	82.10	T-bar = 12.22
Fraser Index of Economic Liberalization	overall	6.51	0.85	3.30	9.15	N = 859
	between		0.78	4.38	8.67	n = 117
	within		0.30	5.42	8.42	T-bar = 7.34
Chinn-Ito Index of Capital Account Openness	overall	0.88	1.53	-1.84	2.47	N = 1883
	between		1.40	-1.84	2.47	n = 126
	within		0.75	-1.78	3.35	T-bar = 14.94

2. Regression Results

2.1 Basic Model

Table 20: S&P Basic Model[34]

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	**S&P**	**S&P**	**S&P**	**S&P**	**S&P**	**S&P**
Ln(GDP)	3.198***	0.973***	1.287***	2.753***	1.050***	1.342***
	(0.062)	(0.076)	(0.074)	(0.149)	(0.094)	(0.044)
GDP Growth	0.049*	0.050***	0.052***	0.020	0.016	0.040***
	(0.027)	(0.009)	(0.009)	(0.017)	(0.019)	(0.008)
Current Account Surplus	0.050***	-0.035***	-0.028***	-0.005	0.019*	-0.020***
	(0.011)	(0.006)	(0.006)	(0.013)	(0.010)	(0.004)
Inflation	-0.005**	-0.002***	-0.002***	-0.001*	-0.002**	-0.002***
	(0.002)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)
Default History	-3.627***	-1.058***	-1.125***	0.476	-1.411***	-1.214***
	(0.315)	(0.173)	(0.180)	(0.320)	(0.211)	(0.154)
Public Debt to GDP Ratio	-0.013***	-0.033***	-0.031***	-0.015***	-0.006**	-0.028***
	(0.003)	(0.002)	(0.002)	(0.004)	(0.003)	(0.001)
Constant	-13.185***	7.434***	2.981***	-9.641***		
	(0.621)	(0.706)	(0.706)	(1.293)		
Observations	1,588	1,588	1,588	1,588	1,588	1,588
R-squared	0.693	0.333	0.544	0.670		
Countries	112	112	112	112	112	112

Table 21: Moody's Basic Model

	POLS	Fixed Effects	Random Effects	PCSEar1	Ordered Probit	RE Ordered Probit
VARIABLES	**Moody's**	**Moody's**	**Moody's**	**Moody's**	**Moody's**	**Moody's**
Ln(GDP)	3.156***	0.997***	1.385***	2.663***	0.982***	1.264***
	(0.070)	(0.091)	(0.087)	(0.174)	(0.119)	(0.046)
GDP Growth	0.001	0.023**	0.024**	0.008	-0.003	0.007
	(0.024)	(0.010)	(0.011)	(0.013)	(0.014)	(0.007)
Current Account Surplus	0.035***	-0.020***	-0.013*	0.000	0.011	-0.011***
	(0.011)	(0.007)	(0.008)	(0.008)	(0.009)	(0.004)
Inflation	-0.003***	-0.000	-0.000	-0.000	-0.001***	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Default History	-2.759***	-0.642***	-0.730***	0.101	-1.035***	-0.371***
	(0.440)	(0.203)	(0.210)	(0.266)	(0.254)	(0.138)
Public Debt to GDP Ratio	-0.003	-0.021***	-0.018***	-0.008**	-0.002	-0.015***
	(0.003)	(0.002)	(0.002)	(0.004)	(0.003)	(0.001)
Constant	-13.151***	6.826***	2.042**	-9.023***		
	(0.706)	(0.854)	(0.838)	(1.596)		
Observations	1,648	1,648	1,648	1,648	1,648	1,648
R-squared	0.638	0.165	0.575	0.685		
Countries	102	102	102	102	102	102

[34] In the following models, standard errors are in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Due to space consideration, I do not report cut points for the ordered probit estimators in this and the following models.

Table 22: Fitch Basic Model

VARIABLES	POLS	Fixed Effects	Random Effects	PCSEar1	Ordered Probit	RE Ordered Probit
	Fitch	Fitch	Fitch	Fitch	Fitch	Fitch
Ln(GDP)	3.143*** (0.060)	1.508*** (0.100)	1.974*** (0.090)	2.914*** (0.127)	1.251*** (0.115)	2.245*** (0.073)
GDP Growth	0.039 (0.026)	0.036*** (0.009)	0.036*** (0.009)	0.015 (0.018)	0.018 (0.015)	0.030*** (0.009)
Current Account Surplus	0.032*** (0.010)	-0.034*** (0.007)	-0.028*** (0.007)	0.001 (0.009)	0.016 (0.010)	-0.039*** (0.005)
Inflation	-0.004** (0.002)	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.000)	-0.001** (0.001)	-0.001 (0.001)
Default History	-3.443*** (0.443)	-0.749*** (0.201)	-0.849*** (0.207)	0.017 (0.357)	-1.388*** (0.264)	-1.007*** (0.171)
Public Debt to GDP Ratio	-0.005 (0.003)	-0.019*** (0.002)	-0.014*** (0.002)	-0.002 (0.004)	-0.004 (0.003)	-0.015*** (0.001)
Constant	-12.651*** (0.612)	2.429** (0.949)	-2.611*** (0.855)	-11.048*** (1.047)		
Observations	1,106	1,106	1,106	1,106	1,106	1,106
R-squared	0.745	0.350	0.712	0.753		
Countries	102	102	102	102	102	102

2.2 Heritage Foundation

Table 23: S&P Heritage Liberalization

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	S&P	S&P	S&P	S&P	S&P	S&P
Ln(GDP)	2.489*** (0.073)	1.134*** (0.099)	1.651*** (0.091)	2.651*** (0.135)	0.978*** (0.107)	1.685*** (0.057)
GDP Growth	0.081*** (0.023)	0.056*** (0.009)	0.065*** (0.009)	0.021 (0.019)	0.035** (0.016)	0.056*** (0.009)
Current Account Surplus	0.063*** (0.009)	-0.031*** (0.007)	-0.018** (0.007)	0.004 (0.011)	0.029*** (0.010)	-0.002 (0.006)
Inflation	-0.069*** (0.013)	-0.019*** (0.004)	-0.019*** (0.004)	-0.019*** (0.007)	-0.032*** (0.007)	-0.029*** (0.003)
Default History	-2.370*** (0.348)	-0.404** (0.167)	-0.485*** (0.175)	0.201 (0.320)	-1.111*** (0.246)	-0.399** (0.158)
Public Debt to GDP Ratio	-0.008*** (0.003)	-0.031*** (0.002)	-0.024*** (0.002)	-0.009** (0.004)	-0.005 (0.003)	-0.026*** (0.001)
Heritage Liberalization	**0.081***** (0.008)	**0.032***** (0.007)	**0.047***** (0.008)	**0.048***** (0.011)	**0.034***** (0.011)	**0.049***** (0.005)
Constant	-12.882*** (0.656)	3.043*** (0.966)	-3.405*** (0.856)	-12.499*** (1.103)		
Observations	1,235	1,235	1,235	1,235	1,235	1,235
R-squared	0.771	0.419		0.757		
Countries	110	110	110	110	110	110

Table 24: Moody's Heritage Liberalization

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	**Moody's**	**Moody's**	**Moody's**	**Moody's**	**Moody's**	**Moody's**
Ln(GDP)	2.685***	1.633***	1.994***	2.827***	1.024***	2.005***
	(0.077)	(0.102)	(0.094)	(0.142)	(0.129)	(0.066)
GDP Growth	0.061***	0.048***	0.055***	0.016	0.021*	0.056***
	(0.019)	(0.009)	(0.009)	(0.016)	(0.013)	(0.009)
Current Account Surplus	0.051***	-0.015**	-0.004	0.006	0.019**	0.010**
	(0.008)	(0.007)	(0.007)	(0.008)	(0.008)	(0.005)
Inflation	-0.007	-0.000	-0.000	0.001	-0.002	-0.000
	(0.005)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Default History	-2.858***	-0.940***	-1.019***	-0.134	-1.341***	-0.952***
	(0.339)	(0.181)	(0.186)	(0.275)	(0.246)	(0.164)
Public Debt to GDP Ratio	-0.002	-0.013***	-0.009***	-0.006	-0.002	-0.002
	(0.003)	(0.003)	(0.002)	(0.004)	(0.003)	(0.001)
Heritage Liberalization	**0.086*** **	**0.030*** **	**0.044*** **	**0.039*** **	**0.033*** **	**0.079*** **
	(0.008)	(0.008)	(0.008)	(0.011)	(0.010)	(0.006)
Constant	-15.628***	-2.152**	-6.840***	-13.795***		
	(0.745)	(1.038)	(0.934)	(1.334)		
Observations	1,261	1,261	1,261	1,261	1,261	1,261
R-squared	0.741	0.341		0.759		
Countries	102	102	102	102	102	102

Table 25: Fitch Heritage Liberalization

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	**Fitch**	**Fitch**	**Fitch**	**Fitch**	**Fitch**	**Fitch**
Ln(GDP)	2.505***	1.310***	1.741***	2.665***	1.079***	2.029***
	(0.087)	(0.106)	(0.097)	(0.124)	(0.119)	(0.077)
GDP Growth	0.041*	0.041***	0.046***	0.020	0.020	0.053***
	(0.024)	(0.009)	(0.010)	(0.019)	(0.014)	(0.010)
Current Account Surplus	0.055***	-0.028***	-0.019***	0.008	0.025***	-0.007
	(0.009)	(0.007)	(0.007)	(0.011)	(0.010)	(0.007)
Inflation	-0.068***	-0.019***	-0.020***	-0.011	-0.029***	-0.007
	(0.015)	(0.004)	(0.005)	(0.007)	(0.007)	(0.004)
Default History	-2.918***	-0.697***	-0.785***	-0.030	-1.224***	-0.816***
	(0.442)	(0.203)	(0.209)	(0.386)	(0.246)	(0.189)
Public Debt to GDP Ratio	-0.005	-0.020***	-0.015***	-0.002	-0.004	-0.010***
	(0.003)	(0.003)	(0.002)	(0.004)	(0.003)	(0.001)
Heritage Liberalization	**0.071*** **	**0.036*** **	**0.049*** **	**0.044*** **	**0.026*** **	**0.052*** **
	(0.010)	(0.008)	(0.008)	(0.011)	(0.010)	(0.005)
Constant	-11.289***	1.897*	-3.589***	-11.652***		
	(0.706)	(1.033)	(0.905)	(0.969)		
Observations	1,068	1,068	1,068	1,068	1,068	1,068
R-squared	0.766	0.374		0.770		
Countries	102	102	102	102	102	102

Table 26: S&P Heritage Individual Liberalization

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	**S&P**	**S&P**	**S&P**	**S&P**	**S&P**	**S&P**
Ln(GDP)	2.527***	1.259***	1.852***	2.689***	1.011***	2.505***
	(0.079)	(0.115)	(0.101)	(0.139)	(0.107)	(0.079)
GDP Growth	0.081***	0.054***	0.062***	0.019	0.036**	0.042***
	(0.022)	(0.009)	(0.009)	(0.019)	(0.015)	(0.009)
Current Account Surplus	0.063***	-0.031***	-0.016**	0.004	0.029***	-0.001
	(0.009)	(0.007)	(0.007)	(0.011)	(0.009)	(0.005)
Inflation	-0.070***	-0.020***	-0.020***	-0.020***	-0.033***	-0.020***
	(0.013)	(0.004)	(0.004)	(0.007)	(0.008)	(0.003)
Default History	-2.328***	-0.328*	-0.386**	0.220	-1.118***	-0.401***
	(0.350)	(0.168)	(0.175)	(0.325)	(0.243)	(0.153)
Public Debt to GDP Ratio	-0.010***	-0.030***	-0.023***	-0.010**	-0.006*	-0.021***
	(0.003)	(0.003)	(0.002)	(0.004)	(0.003)	(0.001)
Business Freedom	**0.041*** **	**0.002**	**0.008***	**0.014** **	**0.021*** **	**0.021*** **
	(0.007)	(0.004)	(0.005)	(0.006)	(0.007)	(0.004)
Trade Freedom	**-0.005**	**-0.003**	**-0.010***	**0.000**	**-0.005**	**-0.027*** **
	(0.008)	(0.005)	(0.005)	(0.006)	(0.008)	(0.003)
Investment Freedom	**0.030*** **	**0.008** **	**0.015*** **	**0.018*** **	**0.013** **	**0.014*** **
	(0.005)	(0.003)	(0.004)	(0.006)	(0.005)	(0.003)
Financial Freedom	**0.010***	**0.015*** **	**0.016*** **	**0.012** **	**0.003**	**0.010*** **
	(0.006)	(0.004)	(0.004)	(0.005)	(0.006)	(0.003)
Constant	-12.705***	2.755***	-3.778***	-12.394***		
	(0.670)	(1.006)	(0.865)	(1.059)		
Observations	1,235	1,235	1,235	1,235	1,235	1,235
R-squared	0.776	0.425		0.759		
Countries	110	110	110	110	110	110

Table 27: Moody's Heritage Individual Liberalization

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	**Moody's**	**Moody's**	**Moody's**	**Moody's**	**Moody's**	**Moody's**
Ln(GDP)	2.788*** (0.082)	1.875*** (0.119)	2.292*** (0.106)	2.901*** (0.138)	1.094*** (0.119)	2.512*** (0.075)
GDP Growth	0.060*** (0.019)	0.045*** (0.009)	0.051*** (0.009)	0.015 (0.016)	0.020* (0.012)	0.051*** (0.008)
Current Account Surplus	0.051*** (0.008)	-0.016** (0.007)	-0.004 (0.007)	0.007 (0.008)	0.020** (0.008)	0.016*** (0.004)
Inflation	-0.006 (0.005)	0.000 (0.001)	0.000 (0.001)	0.001 (0.001)	-0.002 (0.002)	-0.000 (0.001)
Default History	-2.758*** (0.336)	-0.835*** (0.180)	-0.913*** (0.184)	-0.158 (0.281)	-1.351*** (0.239)	-1.178*** (0.159)
Public Debt to GDP Ratio	-0.005* (0.003)	-0.013*** (0.003)	-0.009*** (0.002)	-0.006 (0.004)	-0.004 (0.003)	0.002 (0.001)
Business Freedom	**0.036***** (0.007)	**-0.007** (0.005)	**-0.000** (0.005)	**0.014**** (0.006)	**0.016**** (0.007)	**0.022***** (0.004)
Trade Freedom	**-0.009** (0.008)	**-0.011**** (0.005)	**-0.016***** (0.005)	**-0.006** (0.006)	**-0.007** (0.009)	**-0.025***** (0.003)
Investment Freedom	**0.039***** (0.005)	**0.012***** (0.004)	**0.018***** (0.004)	**0.017***** (0.005)	**0.016***** (0.005)	**0.007***** (0.002)
Financial Freedom	**0.008** (0.005)	**0.018***** (0.004)	**0.018***** (0.004)	**0.010**** (0.005)	**0.003** (0.005)	**0.011***** (0.003)
Constant	-15.505*** (0.734)	-2.859*** (1.085)	-7.605*** (0.950)	-13.999*** (1.225)		
Observations	1,261	1,261	1,261	1,261	1,261	1,261
R-squared	0.749	0.361		0.765		
Countries	102	102	102	102	102	102

Table 28: Fitch Heritage Individual Liberalization

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	**Fitch**	**Fitch**	**Fitch**	**Fitch**	**Fitch**	**Fitch**
Ln(GDP)	2.520***	1.476***	1.948***	2.692***	1.124***	2.004***
	(0.091)	(0.123)	(0.108)	(0.126)	(0.123)	(0.074)
GDP Growth	0.039	0.040***	0.045***	0.019	0.020	0.056***
	(0.024)	(0.009)	(0.010)	(0.019)	(0.014)	(0.009)
Current Account Surplus	0.053***	-0.027***	-0.020***	0.008	0.025**	-0.005
	(0.009)	(0.007)	(0.007)	(0.010)	(0.010)	(0.005)
Inflation	-0.068***	-0.020***	-0.021***	-0.011	-0.029***	-0.025***
	(0.015)	(0.004)	(0.004)	(0.007)	(0.008)	(0.004)
Default History	-2.918***	-0.667***	-0.766***	-0.007	-1.257***	-0.345*
	(0.449)	(0.204)	(0.208)	(0.388)	(0.256)	(0.182)
Public Debt to GDP Ratio	-0.006**	-0.020***	-0.015***	-0.003	-0.005	-0.011***
	(0.003)	(0.003)	(0.002)	(0.004)	(0.004)	(0.001)
Business Freedom	**0.033*** **	**0.011** **	**0.015*** **	**0.014* **	**0.014* **	**0.007**
	(0.008)	(0.005)	(0.005)	(0.008)	(0.007)	(0.004)
Trade Freedom	**0.001**	**-0.009**	**-0.015** **	**-0.000**	**-0.008**	**-0.002**
	(0.010)	(0.006)	(0.006)	(0.007)	(0.009)	(0.004)
Investment Freedom	**0.024*** **	**0.008* **	**0.014*** **	**0.012* **	**0.012** **	**0.018*** **
	(0.006)	(0.004)	(0.004)	(0.006)	(0.006)	(0.003)
Financial Freedom	**0.009**	**0.014*** **	**0.015*** **	**0.014*** **	**0.002**	**0.016*** **
	(0.007)	(0.004)	(0.004)	(0.005)	(0.007)	(0.003)
Constant	-11.057***	1.393	-3.857***	-11.468***		
	(0.797)	(1.068)	(0.913)	(0.932)		
Observations	1,068	1,068	1,068	1,068	1,068	1,068
R-squared	0.768	0.382		0.771		
Countries	102	102	102	102	102	102

Table 29: S&P Heritage Individual Indicators

	PCSE(ar1)	PCSE(ar1)	PCSE(ar1)	PCSE(ar1)
VARIABLES	**S&P**	**S&P**	**S&P**	**S&P**
Ln(GDP)	2.808*** (0.129)	2.833*** (0.150)	2.799*** (0.126)	2.797*** (0.130)
GDP Growth	0.015 (0.020)	0.011 (0.018)	0.016 (0.019)	0.014 (0.019)
Current Account Surplus	0.001 (0.010)	-0.004 (0.010)	0.000 (0.010)	-0.001 (0.010)
Inflation	-0.019*** (0.007)	-0.017*** (0.007)	-0.019*** (0.007)	-0.019*** (0.007)
Default History	0.148 (0.325)	0.301 (0.311)	0.243 (0.323)	0.280 (0.315)
Public Debt to GDP Ratio	-0.009** (0.004)	-0.009* (0.005)	-0.009** (0.004)	-0.008* (0.004)
Business Freedom	**0.019**** (0.007)			
Trade Freedom		**0.001** (0.006)		
Investment Freedom			**0.021***** (0.007)	
Financial Freedom				**0.016***** (0.005)
Constant	-12.011*** (1.121)	-11.031*** (1.180)	-11.872*** (1.139)	-11.595*** (1.143)
Observations	1,235	1,235	1,235	1,235
R-squared	0.753	0.735	0.750	0.747
Countries	110	110	110	110

Table 30: Moody's Heritage Individual Indicators

	PCSE(ar1)	PCSE(ar1)	PCSE(ar1)	PCSE(ar1)
VARIABLES	**Moody's**	**Moody's**	**Moody's**	**Moody's**
Ln(GDP)	2.884*** (0.155)	2.932*** (0.178)	2.950*** (0.138)	2.898*** (0.153)
GDP Growth	0.011 (0.016)	0.008 (0.015)	0.013 (0.016)	0.011 (0.016)
Current Account Surplus	0.002 (0.008)	-0.001 (0.007)	0.004 (0.008)	0.002 (0.007)
Inflation	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Default History	-0.083 (0.266)	-0.008 (0.259)	-0.124 (0.274)	-0.038 (0.267)
Public Debt to GDP Ratio	-0.006 (0.004)	-0.006 (0.004)	-0.006 (0.004)	-0.006 (0.004)
Business Freedom	**0.016**** (0.007)			
Trade Freedom		**-0.005** (0.006)		
Investment Freedom			**0.019***** (0.006)	
Financial Freedom				**0.013**** (0.005)
Constant	-12.888*** (1.434)	-11.783*** (1.509)	-13.454*** (1.338)	-12.641*** (1.423)
Observations	1,261	1,261	1,261	1,261
R-squared	0.749	0.737	0.758	0.749
Countries	102	102	102	102

Table 31: Fitch Heritage Individual Indicators

	PCSE(ar1)	PCSE(ar1)	PCSE(ar1)	PCSE(ar1)
VARIABLES	**Fitch**	**Fitch**	**Fitch**	**Fitch**
Ln(GDP)	2.810*** (0.119)	2.871*** (0.133)	2.818*** (0.115)	2.809*** (0.116)
GDP Growth	0.015 (0.019)	0.013 (0.019)	0.017 (0.019)	0.016 (0.019)
Current Account Surplus	0.005 (0.010)	0.002 (0.009)	0.005 (0.010)	0.006 (0.010)
Inflation	-0.010 (0.007)	-0.009 (0.007)	-0.010 (0.007)	-0.011 (0.007)
Default History	-0.092 (0.391)	0.042 (0.374)	-0.029 (0.385)	0.015 (0.388)
Public Debt to GDP Ratio	-0.003 (0.004)	-0.002 (0.004)	-0.003 (0.004)	-0.002 (0.004)
Business Freedom	**0.019**** (0.009)			
Trade Freedom		**-0.000** (0.007)		
Investment Freedom			**0.017**** (0.007)	
Financial Freedom				**0.017***** (0.005)
Constant	-11.357*** (0.990)	-10.611*** (1.009)	-11.099*** (0.969)	-11.095*** (0.955)
Observations	1,068	1,068	1,068	1,068
R-squared	0.767	0.757	0.766	0.767
Countries	102	102	102	102

2.3 Fraser Institute

Table 32: S&P Fraser Liberalization

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	**S&P**	**S&P**	**S&P**	**S&P**	**S&P**	**S&P**
Ln(GDP)	2.448***	1.142***	1.977***	2.569***	1.144***	2.762***
	(0.081)	(0.127)	(0.102)	(0.140)	(0.116)	(0.103)
GDP Growth	0.011	0.040***	0.020	-0.018	0.020	0.031*
	(0.036)	(0.015)	(0.016)	(0.026)	(0.023)	(0.018)
Current Account Surplus	0.045***	-0.006	0.018*	0.028**	0.024**	0.003
	(0.010)	(0.010)	(0.010)	(0.012)	(0.010)	(0.007)
Inflation	-0.118***	-0.024***	-0.033***	-0.068***	-0.083***	-0.116***
	(0.030)	(0.007)	(0.007)	(0.019)	(0.013)	(0.011)
Default History	-2.761***	0.218	-0.076	-0.442	-1.505***	-1.345***
	(0.429)	(0.225)	(0.239)	(0.618)	(0.338)	(0.223)
Public Debt to GDP Ratio	-0.006*	-0.024***	-0.011***	-0.000	-0.003	0.002
	(0.003)	(0.004)	(0.003)	(0.005)	(0.003)	(0.002)
Fraser Liberalization	**1.276*** **	**0.031**	**0.469*** **	**0.802*** **	**0.501*** **	**0.482*** **
	(0.141)	(0.114)	(0.113)	(0.193)	(0.115)	(0.085)
Constant	-15.229***	4.499***	-6.554***	-13.840***		
	(1.111)	(1.481)	(1.152)	(1.286)		
Observations	751	751	751	751	751	751
R-squared	0.818	0.333		0.815		
Countries	103	103	103	103	103	103

Table 33: Moody's Fraser Liberalization

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	**Moody's**	**Moody's**	**Moody's**	**Moody's**	**Moody's**	**Moody's**
Ln(GDP)	2.673***	1.462***	2.064***	2.886***	1.213***	2.284***
	(0.088)	(0.115)	(0.102)	(0.156)	(0.151)	(0.093)
GDP Growth	-0.012	0.014	0.002	-0.014	-0.010	-0.036**
	(0.030)	(0.013)	(0.014)	(0.025)	(0.020)	(0.015)
Current Account Surplus	0.039***	-0.002	0.018*	0.036***	0.021**	0.048***
	(0.009)	(0.009)	(0.009)	(0.011)	(0.009)	(0.006)
Inflation	-0.112***	-0.020***	-0.026***	-0.048***	-0.072***	-0.090***
	(0.027)	(0.006)	(0.007)	(0.017)	(0.017)	(0.009)
Default History	-3.116***	-0.530***	-0.747***	-0.735	-1.778***	-2.326***
	(0.393)	(0.201)	(0.214)	(0.467)	(0.374)	(0.261)
Public Debt to GDP Ratio	-0.001	-0.006	0.002	0.003	-0.002	-0.006***
	(0.003)	(0.004)	(0.004)	(0.005)	(0.003)	(0.002)
Fraser Liberalization	**1.223*** **	**0.094**	**0.405*** **	**0.688*** **	**0.492*** **	**0.559*** **
	(0.145)	(0.100)	(0.102)	(0.183)	(0.127)	(0.082)
Constant	-16.961***	0.794	-7.205***	-16.237***		
	(1.257)	(1.347)	(1.175)	(1.496)		
Observations	728	728	728	728	728	728
R-squared	0.816	0.325		0.830		
Countries	94	94	94	94	94	94

Table 34: Fitch Fraser Liberalization

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	**Fitch**	**Fitch**	**Fitch**	**Fitch**	**Fitch**	**Fitch**
Ln(GDP)	2.296*** (0.091)	1.384*** (0.112)	1.919*** (0.093)	2.454*** (0.102)	1.168*** (0.147)	3.064*** (0.116)
GDP Growth	-0.018 (0.034)	-0.004 (0.013)	-0.019 (0.013)	-0.019 (0.023)	0.000 (0.018)	-0.009 (0.015)
Current Account Surplus	0.030*** (0.009)	-0.001 (0.008)	0.010 (0.008)	0.017 (0.011)	0.020** (0.009)	0.017*** (0.006)
Inflation	-0.143*** (0.017)	-0.049*** (0.008)	-0.058*** (0.008)	-0.072*** (0.018)	-0.070*** (0.013)	-0.086*** (0.009)
Default History	-3.354*** (0.563)	-0.135 (0.229)	-0.374 (0.237)	-0.786 (0.639)	-1.558*** (0.378)	-1.361*** (0.253)
Public Debt to GDP Ratio	-0.001 (0.003)	-0.013*** (0.003)	-0.005* (0.003)	0.004 (0.005)	-0.001 (0.003)	0.002 (0.002)
Fraser Liberalization	**1.274***** (0.165)	**0.404***** (0.106)	**0.702***** (0.104)	**0.945***** (0.146)	**0.552***** (0.116)	**0.799***** (0.102)
Constant	-12.670*** (1.098)	0.964 (1.327)	-6.328*** (1.082)	-12.796*** (1.053)		
Observations	684	684	684	684	684	684
R-squared	0.820	0.384		0.850		
Countries	96	96	96	96	96	96

Table 35: S&P Fraser Individual Liberalization

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	**S&P**	**S&P**	**S&P**	**S&P**	**S&P**	**S&P**
Ln(GDP)	2.543***	1.273***	2.044***	2.586***	1.164***	2.370***
	(0.086)	(0.130)	(0.101)	(0.141)	(0.116)	(0.099)
GDP Growth	0.039	0.040***	0.029*	-0.008	0.030	0.030*
	(0.039)	(0.014)	(0.015)	(0.025)	(0.022)	(0.017)
Current Account Surplus	0.050***	-0.001	0.019*	0.028**	0.024**	0.052***
	(0.011)	(0.010)	(0.010)	(0.012)	(0.010)	(0.007)
Inflation	-0.127***	-0.023***	-0.031***	-0.066***	-0.087***	-0.123***
	(0.032)	(0.007)	(0.007)	(0.019)	(0.014)	(0.010)
Default History	-3.106***	0.260	-0.013	-0.396	-1.620***	-1.410***
	(0.444)	(0.221)	(0.233)	(0.630)	(0.336)	(0.230)
Public Debt to GDP Ratio	-0.007**	-0.024***	-0.012***	-0.000	-0.004	-0.013***
	(0.003)	(0.004)	(0.003)	(0.006)	(0.003)	(0.002)
Business Deregulation	**0.418*** **	**-0.071**	**0.029**	**0.250** **	**0.151**	**0.093* **
	(0.136)	(0.069)	(0.071)	(0.108)	(0.100)	(0.054)
Low Trade Taxation	**0.184** **	**-0.022**	**0.107**	**0.129* **	**0.023**	**-0.040**
	(0.073)	(0.065)	(0.066)	(0.076)	(0.081)	(0.057)
Capital Acc. Liberaliz.	**0.159** **	**0.208*** **	**0.281*** **	**0.173*** **	**0.068**	**0.123*** **
	(0.066)	(0.042)	(0.042)	(0.055)	(0.058)	(0.037)
Constant	-12.532***	2.893*	-6.643***	-12.288***		
	(1.049)	(1.490)	(1.115)	(1.099)		
Observations	751	751	751	751	751	751
R-squared	0.806	0.359		0.811		
Countries	103	103	103	103	103	103

Table 36: Moody's Fraser Individual Liberalization

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	**Moody's**	**Moody's**	**Moody's**	**Moody's**	**Moody's**	**Moody's**
Ln(GDP)	2.789***	1.576***	2.132***	2.925***	1.228***	2.771***
	(0.094)	(0.118)	(0.102)	(0.172)	(0.144)	(0.109)
GDP Growth	0.001	0.017	0.010	-0.003	-0.004	-0.023
	(0.033)	(0.013)	(0.013)	(0.024)	(0.019)	(0.015)
Current Account Surplus	0.043***	0.001	0.019**	0.036***	0.021**	0.035***
	(0.010)	(0.009)	(0.009)	(0.011)	(0.009)	(0.006)
Inflation	-0.124***	-0.019***	-0.024***	-0.043***	-0.077***	-0.081***
	(0.029)	(0.006)	(0.006)	(0.016)	(0.019)	(0.009)
Default History	-3.341***	-0.493**	-0.673***	-0.556	-1.874***	-2.107***
	(0.416)	(0.197)	(0.208)	(0.459)	(0.387)	(0.261)
Public Debt to GDP Ratio	-0.003	-0.006	0.001	0.003	-0.003	-0.009***
	(0.003)	(0.004)	(0.003)	(0.005)	(0.003)	(0.002)
Business Deregulation	**0.399*** **	**-0.052**	**0.016**	**0.197***	**0.170**	**-0.116** **
	(0.146)	(0.062)	(0.065)	(0.107)	(0.110)	(0.056)
Low Trade Taxation	**0.114**	**-0.021**	**0.057**	**0.071**	**-0.005**	**-0.015**
	(0.073)	(0.056)	(0.058)	(0.092)	(0.074)	(0.047)
Capital Acc. Liberaliz.	**0.136** **	**0.199*** **	**0.255*** **	**0.107** **	**0.057**	**0.166*** **
	(0.065)	(0.039)	(0.039)	(0.054)	(0.058)	(0.030)
Constant	-13.898***	-0.375	-7.177***	-14.521***		
	(1.145)	(1.345)	(1.150)	(1.501)		
Observations	728	728	728	728	728	728
R-squared	0.803	0.352		0.823		
Countries	94	94	94	94	94	94

Table 37: Fitch Fraser Individual Liberalization

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	**Fitch**	**Fitch**	**Fitch**	**Fitch**	**Fitch**	**Fitch**
Ln(GDP)	2.378***	1.429***	1.928***	2.524***	1.192***	2.641***
	(0.098)	(0.115)	(0.094)	(0.105)	(0.147)	(0.104)
GDP Growth	-0.008	-0.001	-0.010	-0.012	0.004	-0.027*
	(0.035)	(0.013)	(0.013)	(0.024)	(0.018)	(0.015)
Current Account Surplus	0.033***	0.001	0.010	0.020*	0.020*	-0.007
	(0.010)	(0.008)	(0.008)	(0.011)	(0.010)	(0.006)
Inflation	-0.157***	-0.047***	-0.055***	-0.075***	-0.074***	-0.109***
	(0.019)	(0.008)	(0.008)	(0.020)	(0.015)	(0.009)
Default History	-3.556***	-0.088	-0.307	-0.859	-1.615***	-0.929***
	(0.586)	(0.227)	(0.234)	(0.671)	(0.392)	(0.260)
Public Debt to GDP Ratio	-0.001	-0.012***	-0.005*	0.004	-0.001	0.007***
	(0.003)	(0.003)	(0.003)	(0.005)	(0.003)	(0.002)
Business Deregulation	**0.600*** **	**0.152** **	**0.227*** **	**0.403*** **	**0.221** **	**0.214*** **
	(0.128)	(0.065)	(0.067)	(0.087)	(0.094)	(0.059)
Low Trade Taxation	**0.181** **	**0.024**	**0.111* **	**0.053**	**0.006**	**0.108** **
	(0.083)	(0.060)	(0.060)	(0.059)	(0.087)	(0.049)
Capital Acc. Liberaliz.	**0.031**	**0.178*** **	**0.217*** **	**0.120*** **	**0.033**	**0.391*** **
	(0.060)	(0.040)	(0.040)	(0.045)	(0.055)	(0.034)
Constant	-10.114***	1.022	-5.307***	-10.718***		
	(1.031)	(1.336)	(1.069)	(0.873)		
Observations	684	684	684	684	684	684
R-squared	0.808	0.399		0.843		
Countries	96	96	96	96	96	96

2.4 Capital Account Openness (kaopen)

Table 38: S&P Capital Account Openness

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	**S&P**	**S&P**	**S&P**	**S&P**	**S&P**	**S&P**
Ln(GDP)	2.945***	0.731***	1.072***	2.543***	0.969***	1.283***
	(0.075)	(0.086)	(0.084)	(0.147)	(0.098)	(0.046)
GDP Growth	0.047*	0.048***	0.051***	0.019	0.015	0.036***
	(0.027)	(0.009)	(0.009)	(0.017)	(0.019)	(0.008)
Current Account Surplus	0.048***	-0.030***	-0.025***	-0.004	0.019*	-0.018***
	(0.011)	(0.006)	(0.006)	(0.013)	(0.010)	(0.004)
Inflation	-0.004**	-0.002***	-0.002***	-0.001	-0.002**	-0.002***
	(0.002)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)
Default History	-3.526***	-1.023***	-1.095***	0.474	-1.390***	-1.091***
	(0.316)	(0.172)	(0.179)	(0.308)	(0.212)	(0.141)
Public Debt to GDP Ratio	-0.015***	-0.034***	-0.031***	-0.015***	-0.006**	-0.028***
	(0.003)	(0.002)	(0.002)	(0.004)	(0.003)	(0.001)
Capital Account Openness	**0.425*** **	**0.250*** **	**0.230*** **	**0.384*** **	**0.132** **	**0.157*** **
	(0.064)	(0.043)	(0.044)	(0.080)	(0.058)	(0.028)
Constant	-11.272***	9.307***	4.596***	-8.119***		
	(0.689)	(0.772)	(0.768)	(1.298)		
Observations	1,550	1,550	1,550	1,550	1,550	1,550
R-squared	0.697	0.350	0.538	0.674		
Countries	110	110	110	110	110	110

Table 39: Moody's Capital Account Openness

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	**Moody's**	**Moody's**	**Moody's**	**Moody's**	**Moody's**	**Moody's**
Ln(GDP)	2.896***	0.750***	1.168***	2.512***	0.902***	1.387***
	(0.084)	(0.105)	(0.100)	(0.181)	(0.121)	(0.046)
GDP Growth	0.003	0.020*	0.022**	0.007	-0.002	0.011
	(0.023)	(0.011)	(0.011)	(0.014)	(0.014)	(0.007)
Current Account Surplus	0.033***	-0.017**	-0.011	-0.000	0.010	-0.007*
	(0.011)	(0.008)	(0.008)	(0.008)	(0.009)	(0.004)
Inflation	-0.002***	-0.000	-0.000	-0.000	-0.001***	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Default History	-2.661***	-0.610***	-0.699***	0.108	-1.013***	-0.623***
	(0.443)	(0.204)	(0.211)	(0.262)	(0.261)	(0.133)
Public Debt to GDP Ratio	-0.006*	-0.022***	-0.019***	-0.008**	-0.003	-0.013***
	(0.003)	(0.002)	(0.002)	(0.004)	(0.003)	(0.001)
Capital Account Openness	**0.421*** **	**0.279*** **	**0.253*** **	**0.291*** **	**0.127** **	**0.176*** **
	(0.067)	(0.053)	(0.053)	(0.064)	(0.055)	(0.024)
Constant	-11.176***	8.724***	3.675***	-7.966***		
	(0.788)	(0.951)	(0.926)	(1.643)		
Observations	1,606	1,606	1,606	1,606	1,606	1,606
R-squared	0.640	0.181	0.578	0.686		
Countries	100	100	100	100	100	100

Table 40: Fitch Capital Account Openness

	POLS	Fixed Effects	Random Effects	PCSE(ar1)	Ordered Probit	RE Ordered Probit
VARIABLES	**Fitch**	**Fitch**	**Fitch**	**Fitch**	**Fitch**	**Fitch**
Ln(GDP)	2.810*** (0.084)	1.211*** (0.106)	1.650*** (0.097)	2.620*** (0.134)	1.139*** (0.123)	2.260*** (0.075)
GDP Growth	0.042* (0.025)	0.034*** (0.009)	0.034*** (0.009)	0.013 (0.018)	0.019 (0.015)	0.033*** (0.009)
Current Account Surplus	0.039*** (0.010)	-0.027*** (0.007)	-0.022*** (0.007)	0.001 (0.009)	0.018* (0.010)	-0.026*** (0.005)
Inflation	-0.003** (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.000)	-0.001* (0.001)	-0.001 (0.001)
Default History	-3.411*** (0.436)	-0.708*** (0.196)	-0.800*** (0.202)	0.051 (0.345)	-1.394*** (0.255)	-0.622*** (0.189)
Public Debt to GDP Ratio	-0.008** (0.003)	-0.021*** (0.002)	-0.016*** (0.002)	-0.003 (0.004)	-0.005 (0.003)	-0.013*** (0.001)
Capital Account Openness	**0.479***** (0.084)	**0.465***** (0.055)	**0.460***** (0.056)	**0.430***** (0.095)	**0.163**** (0.073)	**0.252***** (0.039)
Constant	-10.052*** (0.762)	4.592*** (0.977)	-0.204 (0.897)	-8.817*** (1.090)		
Observations	1,080	1,080	1,080	1,080	1,080	1,080
R-squared	0.749	0.396	0.714	0.754		
Countries	100	100	100	100	100	100

5 Rating Political Institutions: Where is the Democratic Advantage?

> "Democracies as well as autocracies or other political regimes default alike."
> Moody's sovereign rating methodology (Moody's 2008: 8)

In addition to liberalization policies as signals of a government's willingness to repay, CRAs also have good reason for taking institutional constraints on the executive into account as a political factor. In the literature, starting with Schultz and Weingast (2003), several authors suggest that democratic states enjoyed a "democratic advantage" in the past as these countries had to pay lower sovereign risk premia. However, for more recent data, econometric studies cannot confirm that CRAs also regard democracy as a positive rating driver (Archer et al. 2007). For Beaulieu et al. (2012), this difference between studies on historical debt data and more recent sovereign rating data raises the question: "where is the democratic advantage?" (2012: 710).

I argue that there is actually no contradiction between the studies based on historical debt data and on more recent sovereign rating criteria if we distinguish between two political institutions: electoral competitiveness and veto players as constraints on the executive. All studies on historical data analyze the impact of constraints on the executive on borrowing costs and do not refer to these constraints as democratic. In the literature on recent debt and rating data, democracy is defined by electoral competitiveness. Using the same definition of electoral competitiveness for the studies on historical data, we cannot find any evidence for a democratic advantage. But if we take the same mechanism, constraints on the executive, that led to the alleged democratic advantage for historical data and apply them to sovereign rating data, we do indeed find an advantage: countries with many veto players or institutional constraints on the executive get better sovereign ratings.

Following a review of the democratic advantage literature (section 5.1), I explain in more detail my argument why CRAs have good reason for being in favor of constraints on the executive, but not of electoral competitiveness (section 5.2). In section 5.3, I

review the historical evidence and highlight that sovereigns in the past only got lower risk premia because of increased institutional constraints on the executive, but not because of the introduction of competitive elections. In section 5.4, I show that this mechanism still holds for recent sovereign rating data. In the panel econometric analysis of sovereign ratings for more than 100 countries since 1980, more veto players or constraints on the executive lead to better sovereign ratings. In contrast, regimes with electoral competitiveness do not get better ratings and for many cases even worse ratings. The additional text analysis of all rating announcements since the mid-1990s demonstrates that CRAs are in particular wary of the political uncertainty and instability and the political business cycles associated with electoral competitiveness.

My results can therefore help to explain the alleged puzzle in the political economy literature on the democratic advantage in sovereign bond markets. Moreover, I contribute to the recent economic literature that focuses on domestic political explanations for why countries generally try to repay their debt (see Panizza et al. 2009: 29-32 for an overview). In particular, I emphasize the importance of institutional explanations for repaying debt and for graduation from default that is also stressed by Kohlscheen (2010) and Rijckeghem and Weder (2009). Finally, I point to an alternative explanation in the general literature on democratic advantages in international relations. International Relations scholars not only argue that democracies have better access in sovereign bond markets but also that democracies have a greater propensity to trade internationally (Mansfield et al. 2002, Milner and Kubota 2005), have an advantage in war (Fearon 1994, Schultz 1999) and are more peaceful (Maoz and Russett 1993, Bueno de Mesquita et al. 1999). For the democratic peace, Tsebelis and Choi (2009) argue that there is a conceptual distinction between democracy and veto players and that veto players outweigh democracy in explaining the absence of interstate conflict. In a similar vein, I show that constraints on the executive are also a more convincing explanation for lower borrowing costs than a democratic advantage in the sovereign debt market.

5.1 Literature on the Democratic Advantage

As argued in chapter 1, CRAs not only have to assess a country's ability but also its willingness to repay. The economic literature suggests several mechanisms why countries could be willing to repay their debt. Theoretical explanations include the

threat of permanent capital market exclusion (Eaton and Gersovitz 1981) and higher borrowing costs following a default (see Cruces & Trebesch 2013 for recent empirical evidence), trade sanctions (Bulow & Rogoff 1989, Rose 2005), and military pressure (Mitchener & Weidenmier 2005, see Tomz 2007 for a critique). In recent years, the focus has shifted to domestic explanations for the willingness of national governments repay their debt (see Broner et al. 2010, Borensztein & Panizza 2008).

For the historical example of England, North and Weingast (1989) propose such a domestic explanation for sovereign debt repayment. They argue that changes following the Glorious Revolution in England put constraints on the Crown's ability to unilaterally change the terms of its sovereign debt agreements. By constraining itself, the executive was able to credibly commit to repay its debt. Schultz and Weingast (2003) extend this argument to democracies and first propose a "democratic advantage" for the sovereign debt market. As North and Weingast (1989), they argue that representative legislatures with power over budgeting create "a new "veto player" who can prevent actions" (Schultz & Weingast 2003: 13). In addition to this veto player argument, Schultz and Weingast also propose a second commitment mechanism, "mechanisms for removing representatives from office" (ibid.: 15), "such as electoral accountability" (ibid.: 14). Despite the title of their article "The Democratic Advantage", the authors acknowledge that these mechanisms on their own "are not sufficient to qualify a polity as democratic by current standards" (ibid.: 15). Although they "use the term "democracy" as a shorthand" (ibid.), they clarify that their "interest is not in democracy per se, but in a more basic set of institutions" (ibid.).

The subsequent literature does not take this clarification into account and tests the democratic advantage for recent data with a definition of democracy as a regime with electoral competitiveness. In his paper "Do Countries Have a "Democratic Advantage"?", Saiegh (2005) shows for 80 countries from 1971 to 1997 that the "'democratic advantage' argument (Schultz & Weingast 2003) [...] must be revised" (2005: 367). However, Saiegh (2005) tests the argument for a modern definition of democracies as regimes with contested elections. "Following Przeworski, Alvarez, Cheibub, and Limongi (2000), regimes are classified as democracies if during a particular year they simultaneously satisfy four criteria: (a) the chief executive is elected, (b) the legislature is elected, (c) more than one party competes in elections, and (d) incumbent parties have in the past or will have in the future lost an election and yielded office. All regimes that fail to satisfy at least one of these four criteria are classified as dictatorships (pp.

18-29)" (Saiegh 2005: 375). For his empirical estimations, Saiegh uses the democracy measure developed by Cheibub et al. (2010) based on these four rules above by Przeworski et al. (2000). As Cheibub et al. clarify, it makes sense to use this measure if one expects that "the mechanism that links political regimes to outcomes is the presence or absence of contested elections" (2010: 73). But electoral accountability was not the mechanism that North and Weingast (1989) originally proposed and it was only one of the two mechanisms that Schultz and Weingast (2003) suggested (see Table 41).

Table 41: Causal Mechanisms on Democracy and Default in the Literature

Study	Causal Mechanism
North & Weingast 1989	Veto Players
Schultz & Weingast 2003	Veto Players + Electoral Competitiveness
Saiegh 2005 & Archer et al. 2007	Electoral Competitiveness

This shift from a veto player to an electoral accountability argument becomes very clear in the paper on "Sovereign Bonds and the "Democratic Advantage"" by Archer et al. (2007). Archer et al. expect that "democratization [...] would have a positive effect on bond ratings [...] because […] electoral accountability under democratic rule support[s] credible commitments to repay debts" (2007: 358). According to them, "electoral accountability under democracy gives the populace a means to punish sovereigns that harm the citizenry, such as via debt expansion, which force governments to comply with their debt obligations" (ibid.: 348). From their theoretical perspective, democracies can credibly commit to repay not because of an additional veto player but because of electoral accountability. Archer et al. use the combined polity2 score (see Marshall et al. 2010) to estimate the impact of democracy on sovereign ratings. In addition to electoral competition as a minimal definition of democracy, this indicator also includes constraints on the executive (see section 5.3 for details). They show for 50 developing countries from 1987-2003 that democracies do not get better sovereign ratings. But given their democracy measure, they confound the two mechanisms that link political institutions and sovereign debt repayment: veto players as constraints on the executive and electoral competitiveness. As the polity2 indicator combines both mechanisms, more veto players and electoral competitiveness, it is not surprising that Archer et al. (2007) find that countries with a better polity2 score do not get better sovereign ratings.

5.2 Argument: Constraints on the Executive, Not Electoral Competitiveness

As shown above, the previous literature either defines democratic institutions only by the presence of electoral competitiveness (indicator by Cheibub et al. 2010) or by a combination of electoral competitiveness and veto players (Polity indicator by Marshall et al. 2010). However, as I will argue CRAs have good reasons to distinguish between the impact of these two political institutions – veto players as constraints on the executive and electoral competitiveness – on a country's likelihood to repay. To avoid any confusion, I will only use the terms electoral competitiveness and veto players as constraints on the executive as two distinct institutional set-ups. I expect that political constraints on the executive have a positive impact (section 5.2.1) and that electoral competitiveness has a negative impact on the likelihood to repay (section 5.2.2). The two mechanisms can be tested separately because there is a high variance of the number of veto players among regimes with electoral competitiveness and because many regimes without electoral competitiveness also have a number of veto players.

5.2.1 Constraints on the Executive

Following North and Weingast (1989), I argue that more political constraints on the executive lead to a lower likelihood of default. As explained above, North and Weingast argue that changes during the Glorious Revolution in England "limited the Crown's ability to alter rules after the fact without parliamentary consent" (1989: 829), which led to an "increasing number of veto players" (829). If the monarch wanted to default, it had to find an agreement with parliament about the financing of the budget. Tsebelis (1995, 2002) highlights that a higher number of veto players increase policy inertia. Veto players are "individual or collective decisionmakers whose agreement is required for the change of the status quo" (Tsebelis 2000: 442). A number of studies confirm that more veto players lead to less changes in economic policy, such as on taxes (Hallerberg & Basinger 1998), on labor legislation (Tsebelis 1999), on inflation (Treisman 2000), and on budget deficits (Franzese 2002). According to this approach, the impact of veto players on policy outcomes fundamentally depends on the status quo. For the democratic peace, Tsebelis and Choi (2009) claim that the status quo is no war and therefore a higher number of veto players decrease the likelihood of war. In a similar vein, I argue below that the status quo for sovereign debt is repayment and not a debt restructuring. It is important to note that my argument is not about budget deficits and debt developments, but only about debt repayment. For fiscal policy, more veto players

can lead to high budget deficits if high deficits are the status quo that cannot be changed due to policy inertia with a high number of veto players. But debt developments do not necessarily determine the willingness of a national government to default. Governments default with high and low debt levels and in economic bad and good times. Tomz and Wright (2007), for instance, show that governments have maintained debt service when faced with adverse shocks and have also defaulted in times of increasing economic output. Theoretically, I am therefore only interested in the impact of political institutions on the final decision to repay or not. In my empirical estimations in section 5.4.2, I will control for the impact of debt increases on sovereign ratings. In the remainder of this section, I will first show that debt restructurings are indeed a political decision and not due to policy inertia. Second, I will explain which political actors can prevent defaults. Finally, I will present first stylized facts about the relationship between defaults and the number of veto players.

Defaults as Political Decisions

According to Standard & Poor's, a sovereign default is the "failure to meet a principal or interest payment on the due date contained in the original terms of a debt issue" (S&P 2011a). It occurs when the "government either fails to pay scheduled debt service on the due date or tenders an exchange offer of new debt with less-favorable terms than the original issue" (ibid.). It is important to note that defaults are the outcome of a political decision and that countries therefore do not miss payments due to a lack of decisions caused by a high number of veto players. The Greek default in 2012 is only the latest example of a debt restructuring that took place before any payments were missed. It was an explicit policy decision by the executive and by the Greek parliament. Sturzenegger and Zettelmeyer (2006) review eight recent sovereign defaults in the last fifteen years. Pakistan in 1999, Moldova in 2002, Uruguay in 2003, and the Dominican Republic in 2005 all restructured their debt before any payments were missed (ibid.). In the other countries that they analyze, the default was also a political decision and not the result of policy inflexibility. The Russian default in 1998 followed an intense struggle between the president, the prime minister, and the Duma about the willingness to repay Soviet-era debt (ibid.: chapter 4). The Ukraine already made several debt exchange offers before any payments were missed (ibid.: chapter 5). In Ecuador in 1999, the default was also a political decision announced by the president and the finance minister (ibid.: 155, 164). When Ecuador defaulted again in 2008, Moody's highlighted that the "government's decision to default is based on ideological and political grounds and is not related to liquidity and solvency issues" (Moody's on

16/12/2008, see Moody's 2008). Before Argentina defaulted, debt repayment played a central role in the presidential campaign of 1999 (Saiegh 2009b: 232). When the government announced the suspension of debt payments, the default was celebrated in Congress (Sturzenegger & Zettelmeyer 2006: 201). As in Argentina and for instance also in Peru 1989, the announcement of a default often coincided with the inauguration speech of a president (Kohlscheen 2010: 65). All these different examples show that a sovereign default is not a consequence of policy inertia, but an explicit political decision that is often already made before any payments are missed.

Who Can Constrain the Executive?

If defaults are the outcome of a political decision, it is important to examine who can prevent the executive from this decision. In his cross-country analysis of constitutions, Kohlscheen finds that the "decision of whether to service debt typically falls into a legal void" (2010: 62). In contrast to other policy areas, there are thus no clearly defined constitutional veto players. But a number of actors can act as veto players by making the decision of the executive to default extremely costly.

Parliaments are the classic example of an actor that can constrain the executive (see North & Weingast 1989). Due to the confidence requirement in parliamentary systems (see Persson & Tabellini 2003: 24-25), the executive would put its own survival at risk when defaulting in opposition to the parliament (see Kohlscheen 2007). Stasavage (2002, 2007a) criticizes this veto player approach because the parliament would only constrain the executive if a default was not also in the interest of parliament. England could thus only achieve credibility because holders of government debt were more represented in parliament (Stasavage 2002: 184). Tsebelis (2002) also highlights that the impact of veto players not only depends on their number but also on the ideological distance between them. It will thus depend on the interests of the majority in parliament whether they will veto a default decision by the executive. At least in some cases, parliamentarians and their supporters will have an interest in preventing a default. For instance, they might be directly affected by a default as creditors or by the ensuing economic turmoil and its impact on the economy and unemployment. Although a parliament hence does not have to veto the default decision of the executive, it can do so and thus increase the probability of debt repayment. Indeed, Kohlscheen (2010) finds in a sample of 59 developing countries from 1976 to 2003 that parliamentary regimes have a lower propensity to default.

An independent central bank can pose additional constraints on the executive not to default. In the 2012 Greek debt restructuring, the cooperation of the European Central Bank was, for instance, essential in quickly accepting Greek debt again as collateral. If the central bank does not support the restructuring, it can make the default very costly by not providing enough liquidity to the banking system. As in the European sovereign debt crisis, the central bank has often been a strong veto player in opposition to defaults. Uruguay, for instance, only defaulted following the resignation of several members of the Board of its central bank (Sturzenegger and Zettelmeyer 2006: 225). Central banks are directly affected by a default because they hold government bonds as collateral. Moreover, a default in the domestic currency will undermine the inflation target of an independent central bank.

An independent judiciary is another veto player that can constrain the executive. North and Weingast (1989: 816) highlight the central role of the judiciary for the English case. If debt is held under domestic law, the judiciary has to decide whether the default was legal. As in the 2012 Greek debt restructuring, the parliament can pass new laws to legitimize the default. However, the judiciary has to accept that these laws are passed in retrospect. Moreover, the executive – also in presidential regimes – then needs the support of parliament to change the law.

Finally, a number of studies emphasize the status quo bias of coalition governments (Roubini & Sachs 1989, Alesina & Drazen 1991). If the government constitutes a coalition of parties, then there has to be agreement among these parties before a country can decide to default. Saiegh (2009b) and Kohlscheen (2010) both find that there are fewer defaults in countries under coalition governments.

Stylized Facts about Default and Veto Players

Table 42 presents initial evidence on the relationship between defaults and the number of veto players for 173 countries from 1975 to 2008 (unbalanced panel with an average of 26 years). The data on veto players are from the Database of Political Institutions (DPI) that measures the number of veto players on an ordinal scale from 1 to 18 (see Beck et al. 2001 and Keefer & Stasavage 2003). Data on defaults are from Standard & Poor's (2006, 2011b). Following Rijckeghem and Weder (2009), I exclude default years after the entry into default. The data show a clear relationship between defaults and the number of veto players. As the number of veto players increases, the probability of default decreases. A simple Pearson chi-squared test indicates that there is a statistical

significant relationship between defaults and the number of veto players (chi-square with 13 degrees of freedom is 24.61, p = 0.026). Another measure of political constraints, Henisz's indicator of political constraints on a scale from 0 to 1 for a sample of 172 countries from 1960 to 2007 (Henisz 2000, 2002) is also almost double as high for countries that do not default compared to countries that default (.32 compared to .19). Although, empirically, regimes with electoral competitiveness are correlated with a higher number of veto players, there are also several regimes without electoral competitiveness with a high number of veto players. For the data in Table 42, 23 of the 107 countries that have more than three veto players in some year are regimes without contested elections as defined by Cheibub et al. (2010). Moreover, there is also a clear variation in the number of veto players between regimes with contested elections. For the data in Table 42 below, the standard deviation in veto players for these regimes for 2008 is 1.90.

Table 42: Default and Veto Players

Number of Veto Players	Number of Defaults	Total Observations	Probability of Default in %
1	76	1,809	4.20
2	13	380	3.42
3	15	849	1.77
4	14	804	1.74
5	5	342	1.46
6 or more	2	185	1.08

Data: 173 countries from 1975 to 2008; veto player data are from the World Bank's Database of Political Institutions (World Bank 2013b, Beck et al. 2001), default data are from S&P (2006a, 2011b)

Kohlscheen (2010) and Rijckeghem and Weder (2009) test the relationship between defaults and veto players more systematically in a multivariate probit and non-parametric model. Both studies find a significant negative relationship between defaults and the extent of political constraints on the executive. This empirical evidence suggests that credit rating agencies should consider constraints on the executive when evaluating the likelihood of sovereign debt repayment. In section 5.4, I will test whether rating agencies actually take these political constraints into account.

5.2.2 Regimes with Electoral Competitiveness

The central argument of this chapter is that there is a conceptual difference between political constraints on the executive and electoral competitiveness. Regimes with

electoral competitiveness will always have at least one veto player, voters. But there is a high variance of the number of veto players among regimes with electoral competitiveness and many regimes without electoral competitiveness also have a number of veto players. For instance, a parliament does not have to be competitively elected to act as a veto player and prevent a default, but could also be composed of a tribal council, for instance. Parliaments that represent a minority of people, such as wealth-holders in 17th century England, might even be more likely to veto a default decision than modern parliaments elected with universal suffrage. Foley-Fisher (2012) shows that elected leaders who default are actually more likely to be re-elected. Some veto players, such as central banks, are explicitly granted independence to follow clear rules and shield them from electoral pressures and democratically elected decision-makers (see Kydland & Prescott 1977).

Contested elections and electoral pressures could lead to a higher likelihood of default for two reasons. First, opportunist political business cycle theories suggest that contested elections lead to incentives for a "potlatch right before elections" (Nordhaus 1975: 187). If governments want to be re-elected, they have an incentive to please their voters right before an election. As debt repayment involves a short-term pain, but only a long-term gain in credibility, governments might have an incentive to default before an election. As illustrated above, debt repayment plays a central role in electoral campaigns. Governments might thus not be willing to bear the burden of debt repayment in an election year. For instance, the Mexican government in 1994 was not willing to increase interest rates to defend its currency peg and hence its solvency because of an upcoming presidential election (Mishkin 2006: 80).

Second, electoral uncertainty can increase the borrowing costs for a government in an election year and therefore increase the incentive to default. For developing countries, there are many examples how uncertainty about electoral outcomes affects a country's sovereign risk premium, such as for the case of Brazil 2002 (Brooks & Mosley 2007). Canes-Wrone and Park (2012) also show for developed countries that electoral uncertainty can have a negative impact on the decision of financial market participants to invest in the country.

When analyzing how financial market participants evaluate political institutions it is therefore important to distinguish between the impact of veto players and electoral competitiveness.

5.3 A Review of Historical Cases

The literature on recent data not only shifts from an explanation based on veto players to electoral competitiveness (see section 5.1) but also misrepresents studies based on historical data. I will first clarify which studies according to the literature on recent data allegedly show that democracies face a lower sovereign risk premium. I will then review these studies on historical data focusing on the mechanism that they suggest. Finally, I will show that it was not the introduction of electoral competitiveness, but rather more constraints on the executive that led to a lower sovereign risk premium for the historical cases.

Archer et al. argue that their results are "contrary to the broad theoretical literature that suggests democracy helps to bolster government credibility and therefore access to capital markets" (2007: 343). They not only cite Weingast and Schultz (2003) at this point but also North and Weingast (1989). They also claim that "North and Weingast argue that seventeenth-century England's adoption of more democratic institutions led to better access to capital through borrowing" (342). In a recent study on portfolio investment flows, Biglaiser et al. also suggest that some "studies indicate the benefits of democratic institutions (North & Weingast, 1989)" (2008: 1095).

Beaulieu et al. (2012) claim that the "literature exploiting historical data, which includes case studies of seventeenth- to eighteenth-century England, nineteenth-century Argentina, and nineteenth-century Brazil, along with panel data on both city states and large states, is generally supportive of the democratic advantage thesis" (Beaulieu et al. 2012: 710). They cite the studies by North and Weingast (1989), Saiegh (2009a), Summerhill (2006), Stasavage (2007b and 2011), and Dincecco (2009). According to Beaulieu et al., beginning "with North and Weingast's seminal treatment, various scholars have argued that democracies should be perceived as more creditworthy than otherwise similar autocracies, leading to a "democratic advantage" in borrowing" (2012: 730).

However, none of the cited studies on historical data suggest that democracies enjoy an advantage in sovereign debt markets and they do not refer to electoral competitiveness as a causal mechanism. North and Weingast highlight many different mechanisms leading to lower borrowing costs in their study on England from 1604 to 1750, but they do not mention democratic institutions and electoral competitiveness once. North and Weingast's main claim is that the "new constitutional settlement endowed several

actors with veto power" (1989: 818). "Increasing the number of veto players implied that a larger set of constituencies could protect themselves against political assault, thus markedly reducing the circumstances under which opportunistic behaviour by the government could take place" (ibid.: 829). They focus on the new veto powers of the parliament, but they also mention that the "political independence of the courts limited potential abuses by Parliament" (ibid.: 819). In addition to the independent judiciary, they also highlight the importance of the central bank (ibid.: 821).

In his study on Brazil in the 19th century, Summerhill (2008) presents evidence that constitutional changes in 1824 led to higher amounts of borrowing and lower sovereign borrowing costs. He focuses on the new role of parliament as an additional veto player. The "constitution of 1824 both established a parliament, and specified that parliamentary consent was required to make any changes to taxes, expenditures, or borrowing" (Summerhill 2008: 2). This "increased the number of entities with veto authority over the question of default" (ibid.). By "constitutionally establishing parliament as a veto entity on financial policies, the crown lost its ability to unilaterally default" (ibid.: 19). This is the same argument as North and Weingast's and the argument is again not about democracies as regimes with electoral competitiveness, but about veto players.

Dincecco (2009) demonstrates how changes in political institutions decreased government bond yields for 11 European countries from 1750 to 1913. He argues that by "establishing parliament's power of the purse, limited government reduced the likelihood of poor spending choices by executives" (Dincecco 2009: 34). According to his definition, "limited government emerged the year in which parliament gained the constitutional right to control the national budget on an annual basis" (ibid.: 33). Saiegh (2009a) follows Dincecco's definition of limited government in his study on 19th century Argentina. "According to these criteria – a regular veto right by parliament over budgets, and constitutional continuity, – limited government in Argentina dates back to the adoption of the 1853 constitution" (Saiegh 2009a: 12). Saiegh shows that there is a structural break in the government's borrowing costs following the introduction of limited government. Both studies focus on the role of parliament as an additional veto player and do not mention democratic institutions or electoral competitiveness.

Table 43: Overview of Historical Cases

Countries	Time	Veto Player	Boix Data	Polity Change	Polity	xrcomp	xconst
England	1604-1750	Parliament, Judiciary, Central Bank	1885	first in 1800	-2	1	7
Brazil	1824	Parliament	1946	1824 (first)	-6	1	1
Belgium	1831	Parliament	1894	1830 (first)	-4	1	5
Netherlands	1848	Parliament	1897	1847-1848	-7 → -4	1	3 → 6
Prussia	1848	Parliament	1919	1847-1848	-9 → -8	1	2
Portugal	1851	Parliament	1911	1851	-4	1	3
Argentina	1853	Parliament	1912	1851-1853	-5 → -3	1	1→ 3
Italy	1861	Parliament	1919	1861 (first)	-4	1	3
Sweden	1866	Parliament	1911	1866-1870	-5 → -4	1	4 → 5
Austria-Hungary	1867	Parliament	1920 1990	1860-1867	-6 → -4	1	1 → 3
France	1870	Parliament	1870	1869-1877	-3 → 7	1→ 3	1 → 7
Spain	1876	Parliament	1931	1873-1876	-5 → -1	1	1 → 7

Data: For the first three columns (countries, time and veto player), data are from North & Weingast (1989) for England, from Summerhill (2008) for Brazil, from Saiegh (2009a) for Argentina and from Dincecco (2009) for all other countries. "Boix data" is an update of the database of regimes with contested elections developed by Cheibub et al. (2010) (Boix et al. 2012). The last four columns are based on data from the Polity IV project (Marshall et al. 2010).

The literature on recent data claims that there is a puzzle between studies on historical and studies on more recent data. One simple check of this claim is to test the hypotheses on the democratic advantage in the same way for historical and more recent data. Table 43 gives an overview of the historical cases that are cited by the literature on recent data and that I have summarized above. A first test should be based on the definition of democratic institutions as regimes with contested elections by Cheibub et al. (2010) that is used by Saiegh (2005) and Beaulieu et al. (2012) in their empirical studies on more recent data. Boix et al. (2012) provide an update of this measure with data until 1800. Except for France, none of the countries fulfills the four criteria of contested elections at the time when they have to pay lower sovereign risk premia. These countries establish democratic institutions defined as electoral competitiveness only several decades after the introduction of parliament as a veto player. We would thus not find a democratic advantage when we replicate the studies by Saiegh (2005) or Beaulieu et al. (2012) for historical data.

Archer et al. (2007) do not use such a democracy threshold in their study, but the combined polity2 indicator by Marshall et al. (2010) on the 21-point-scale from -10 to +10. This indicator shows an increase for all countries for which a polity2 indicator is

available in the years in which political institutions were changed and borrowing conditions improved (except for Portugal). But this increase was not caused by the introduction of contested elections, but by higher constraints on the executive. The combined polity2 indicator is based on scores on the competitiveness of political participation (parcomp), the openness of executive recruitment (xropen), regulation of participation (parreg), the competitiveness of executive recruitment (xrcomp on a scale from 1 to 3), and constraints on the executive (xconst on a scale from 1 to 7) (see Marshall et al. 2010 for details). Except for France, electoral competitiveness never changed in the periods in which borrowing conditions improved. The changes in the polity2 indicator are entirely driven by higher constraints on the executive. As argued in the literature on the historical cases, it was the introduction of new veto players that led to better borrowing conditions for these countries and not the introduction of electoral competitiveness.

5.4 Empirical Evidence for Sovereign Ratings

In the past, financial market participants required lower sovereign risk premia from countries with more veto players. As argued above, if more actors can prevent the executive from defaulting, it is less likely that a country will default. CRAs have therefore good reason for taking this political factor into account in their sovereign risk assessments. In contrast to the previous literature, I will test for the impact of electoral competitiveness and veto players as two distinct institutional mechanisms. In addition to econometric evidence (section 5.4.2), I will also provide evidence based on sovereign rating methodologies (section 5.4.1) and the new database of sovereign rating announcements (section 5.4.3).

5.4.1 Evidence from Rating Methodologies

Although the rating process has been characterized as “opaque” for a long time (Beaulieu et al. 2012: 731), CRAs have become more transparent and have published more extensive sovereign rating methodologies in recent years. As shown in section 3.3, these methodologies indicate that political factors play an important role in the sovereign rating process. The methodologies can also give us a first indication of CRAs’ assessments of political institutions.

In its most recent methodology, Standard & Poor's highlights five main sovereign rating factors (S&P 2011a). The first sovereign rating factor is a political score on a scale from 1 (the strongest) to 6 (the weakest). Institutional checks and balances are one key driver for this political score. For the best political score of 1, the credit rating agency expects "extensive checks and balances between institutions" (ibid.: 11). For a score of 2, there have to be "generally effective checks and balances" (ibid.), for a score of 3, "evolving checks and balances" (ibid.), and for a score of 4 "more uncertain checks and balances between institutions" (ibid: 12). Standard & Poor's does not distinguish between democracies and autocracies.

Moody's is even more explicit on the question of a "democratic advantage". Moody's understands the political nature of defaults that can be "deliberate decisions to hurt creditors" (Moody's 2008: 16). One of Moody's four main sovereign rating criteria is the institutional strength of a country (ibid.). They state that "monitoring "institutional strength" does not entail a value judgment about the type of government in any given country – democracies as well as autocracies or other political regimes default alike." (ibid.: 8). Fitch also takes political risks into account and does not distinguish between democracies and autocracies when evaluating sovereign issuers (Fitch 2011a).

5.4.2 Panel Econometric Evidence

The most recent sovereign rating methodologies already suggest that checks and balances play a more important role in the sovereign rating process than electoral competitiveness. Panel econometric evidence can substantiate this finding. I test for the impact of political institutions on sovereign ratings in the same econometric models as in chapter 4 and as discussed in section 3.4.1.

In the tables below, I present the PCSE(ar1) estimator, which is a direct comparison to previous research on political institutions by Archer et al. (2007). Moreover, I estimate pooled ordinary least squares regressions for Fitch's sovereign ratings because Fitch has used this model in its own research (see section 3.4.1). Finally, I will show that all results also hold in an ordered probit without assuming the same differences between rating categories. Although political institutions do not vary often over time, I can show that the main results also hold when controlling for country-fixed effects. For all CRAs, the macroeconomic control variables that are statistically significant have the expected sign in all estimations.

To measure political institutions, I will use the same indicators as in the previous literature, the polity indicator by Marshall et al. (2010) and the measure of democracy as a regime with contested elections by Cheibub et al. (2010). However, as for the historical data, I will not only use a combined measure of political institutions but also test for the impact of electoral competitiveness and veto players as two distinct institutional mechanisms.

Polity Indicator

Table 44 presents the results for the combined polity2 indicator, which is used by Archer et al. (2007) and combines measures of electoral competitiveness and political constraints. At a .05 confidence level, the results are never statistically significant. Table 48 in the appendix also provides marginal effects for the polity2 score for the ordered probit model when all other control variables are held at their mean. The marginal effects of the polity2 indicator are neither statistically (at a .05 confidence level) nor substantively significant for any rating outcome in this model. As previous empirical studies, I therefore do not find a democratic advantage for recent sovereign rating data when using this combined measure of electoral competitiveness and political constraints.

Table 44: Polity2 and Sovereign Ratings

	Standard & Poor's		Moody's		Fitch		
	PCSE (ar1)	**Ordered Probit**	**PCSE (ar1)**	**Ordered Probit**	**PCSE (ar1)**	**POLS**	**Ordered Probit**
VARIABLES	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**
Ln(GDP per capita)	2.849***	1.067***	2.762***	0.967***	2.941***	3.197***	1.275***
	(0.147)	(0.103)	(0.177)	(0.123)	(0.141)	(0.070)	(0.121)
GDP Growth	0.012	0.028*	0.008	0.006	0.016	0.044*	0.021
	(0.017)	(0.016)	(0.014)	(0.013)	(0.018)	(0.026)	(0.013)
Current Acc. Surplus	-0.018*	0.013	-0.006	0.011	-0.006	0.018	0.011
	(0.009)	(0.010)	(0.009)	(0.008)	(0.010)	(0.011)	(0.011)
Inflation	-0.001	-0.002**	-0.000	-0.001***	-0.000	-0.004**	-0.001**
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.002)	(0.001)
Default History	0.418	-1.391***	0.056	-1.142***	0.043	-3.380***	-1.38***
	(0.330)	(0.218)	(0.281)	(0.303)	(0.353)	(0.469)	(0.277)
Public Debt to GDP	-0.009*	-0.005*	-0.005	-0.002	-0.000	-0.003	-0.003
	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.003)
Combined Polity Ind.	**0.023**	**0.031***	**0.036***	**0.033***	**-0.002**	**-0.002**	**0.002**
	(0.024)	(0.019)	(0.021)	(0.019)	(0.021)	(0.020)	(0.022)
Constant	-10.661***		-10.067***		-11.323***	-13.173***	
	(1.278)		(1.605)		(1.143)	(0.636)	
Observations	1,459	1,459	1,519	1,519	1,044	1,044	1,044
Fit Statistics	0.693	30.43,8.88	0.699	30.94,9.49	0.745	0.747	30.84,15.85
countries	100	100	91	91	96	96	96

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Due to space considerations, I do not report cut points for the ordered probit estimators. R-Squared fit statistics are reported for linear models. For the ordered probit model, the first value shows the percentage of correctly predicted observations (in %) and the second the percentage reduction in error (in %).

As expected, countries with a better combined polity score do not get better sovereign ratings. As for the historical cases, we need to analyze the different components of the polity indicator separately (see Table 45; in Table 49 in the appendix I include all components of the polity indicator, which leads to the same results). Except for one model for Fitch, constraints on the executive (xconst) always have a significant positive impact and competitiveness of executive recruitment (xrcomp) always has a significant negative impact on sovereign ratings. The effects are substantial. A country with electoral competitiveness of executive recruitment is rated by a third to more than three rating notches lower than a country with no electoral competitiveness. On the seven-point executive constraint scale (xconst), a one point increase in constraints on the executive leads to a higher rating of one fourth to almost an entire rating notch. While political constraints consistently lead to higher sovereign ratings, higher electoral competitiveness seems to be viewed negatively by credit rating agencies.

These results also hold over time. Table 50 in the appendix provides the results for the estimation including country fixed effects. For all credit rating agencies, countries that introduce elections get a lower sovereign rating of one third to 1.2 fewer rating notches. Except for Fitch, for which only a short time horizon is available, the introduction of more constraints on the executive also leads to a better sovereign rating over time.

Table 45: Polity2 Sub-Indicators and Sovereign Ratings

	Standard & Poor's		Moody's		Fitch		
	PCSE (ar1)	**Ordered Probit**	**PCSE (ar1)**	**Ordered Probit**	**PCSE (ar1)**	**POLS**	**Ordered Probit**
VARIABLES	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**
Ln(GDP per capita)	2.861***	1.081***	2.785***	0.986***	2.929***	3.174***	1.291***
	(0.149)	(0.102)	(0.173)	(0.121)	(0.145)	(0.071)	(0.122)
GDP Growth	0.013	0.027*	0.008	0.006	0.016	0.041	0.020
	(0.017)	(0.016)	(0.014)	(0.013)	(0.018)	(0.026)	(0.014)
Current Acc. Surplus	-0.017*	0.014	-0.005	0.013	-0.004	0.031***	0.015
	(0.009)	(0.011)	(0.009)	(0.010)	(0.010)	(0.011)	(0.012)
Inflation	-0.001	-0.002**	-0.000	-0.001***	-0.000	-0.003**	-0.001**
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.002)	(0.001)
Default History	0.402	-1.345***	0.058	-1.069***	0.020	-3.268***	-1.350***
	(0.330)	(0.226)	(0.279)	(0.302)	(0.351)	(0.438)	(0.263)
Public Debt to GDP	-0.009**	-0.005*	-0.005	-0.002	-0.001	-0.004	-0.003
	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.003)
xconst	**0.247****	**0.233****	**0.279*****	**0.267*****	**0.242**	**0.778*****	**0.245****
	(0.120)	(0.098)	(0.103)	(0.097)	(0.149)	(0.120)	(0.102)
xrcomp	**-0.371****	**-0.306***	**-0.325***	**-0.376***	**-0.429**	**-1.688*****	**-0.521****
	(0.185)	(0.179)	(0.193)	(0.201)	(0.274)	(0.258)	(0.204)
Constant	-11.114***		-10.843***		-11.516***	-13.131***	
	(1.242)		(1.554)		(1.066)	(0.590)	
Observations	1,457	1,457	1,514	1,514	1,042	1,042	1,042
Fit Statistics	0.698	29.85,8.09	0.705	30.31,8.57	0.749	0.761	30.42,15.30
countries	100	100	91	91	96	96	96

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Due to space considerations, I do not report cut points for the ordered probit estimators. R-Squared fit statistics are reported for linear models. For the ordered probit model, the first value shows the percentage of correctly predicted observations (in %) and the second the percentage reduction in error (in %).

Veto Players and Electoral Competitiveness

These results suggest that CRAs think that higher political constraints on the executive lead to a lower default risk. As robustness check, I will test this hypothesis also for the measure of regimes with contested elections by Cheibub et al. (2010), which is used in the previous literature by Saiegh (2005) and Beaulieu et al. (2012) and for another constraint index developed by Henisz (2002). The constraint index by Henisz (2002) is

closely related to the argument in section 5.2 and has been previously used in the literature on debt and default (see Kohlscheen 2010, Rijckeghem and Weder 2009). Henisz (2000, 2002) builds this indicator of political constraints (polcon V) on a zero to one linear scale based on the number veto players in the political system from the executive, the lower and the upper house of the legislature, sub-federal units, and the judiciary. He also takes into account how political preferences are distributed across and within these different veto players. In his spatial model, each additional veto player has a positive, but diminishing impact on the total level of political constraints (Henisz 2002: 363). According to Tsebelis, this indicator is "conceptually very closely correlated" (2002: 204) to his own concept of veto players and it is also used by Tsebelis and Choi (2009) in their re-analysis of the democratic peace.

Table 46 shows that Henisz' political constraints index always leads to better sovereign ratings in every model and for all rating agencies. Controlling for the standard macroeconomic indicators, a country with more veto players gets a better sovereign rating. Table 51 in the appendix shows the marginal effects of the constraint indicator for the different rating categories. More veto players lead to a significant higher likelihood of being in a rating category of A and higher. In contrast, electoral competitiveness does not have an impact on sovereign ratings. In Fitch's simple pooled OLS model, electoral competitiveness even leads to worse sovereign ratings.

Table 46: Political Constraints, Electoral Competitiveness and Sovereign Ratings

	Standard & Poor's		Moody's		Fitch		
	PCSE (ar1)	**Ordered Probit**	**PCSE (ar1)**	**Ordered Probit**	**PCSE (ar1)**	**POLS**	**Ordered Probit**
VARIABLES	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**
Ln(GDP per capita)	2.815***	1.065***	2.863***	0.957***	2.962***	3.023***	1.277***
	(0.139)	(0.111)	(0.155)	(0.132)	(0.135)	(0.073)	(0.137)
GDP Growth	0.006	0.013	0.010	-0.000	0.010	0.015	0.009
	(0.013)	(0.017)	(0.013)	(0.014)	(0.018)	(0.033)	(0.016)
Current Acc. Surplus	-0.012	0.010	0.001	0.007	-0.003	0.016	0.011
	(0.009)	(0.012)	(0.011)	(0.010)	(0.011)	(0.011)	(0.013)
Inflation	-0.001	-0.002***	-0.000	-0.001***	-0.000	-0.004**	-0.002**
	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.002)	(0.001)
Default History	0.440	-1.298***	-0.021	-1.005***	-0.210	-3.190***	-1.268***
	(0.354)	(0.221)	(0.325)	(0.310)	(0.409)	(0.474)	(0.299)
Public Debt to GDP	-0.010**	-0.008***	-0.005	-0.004	-0.001	-0.008**	-0.006*
	(0.005)	(0.003)	(0.004)	(0.003)	(0.005)	(0.003)	(0.003)
Political Constraints	**1.408*** **	**1.540*** **	**1.203*** **	**1.313*** **	**0.974* **	**2.892*** **	**1.120** **
	(0.481)	(0.391)	(0.398)	(0.410)	(0.542)	(0.438)	(0.473)
Electoral Competiti.	**-0.169**	**-0.273**	**0.009**	**-0.137**	**-0.404**	**-0.902*** **	**-0.387**
	(0.300)	(0.198)	(0.271)	(0.176)	(0.288)	(0.248)	(0.255)
Constant	-10.67***		-11.37***		-11.55***	-12.14***	
	(1.084)		(1.390)		(0.938)	(0.677)	
Observations	1,300	1,300	1,379	1,379	883	883	883
Fit Statistics	0.725	33.77,11.42	0.725	33.43,11.21	0.782	0.778	33.52,17.67
countries	98	98	94	94	97	97	97

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Due to space considerations, I do not report cut points for the ordered probit estimators. R-Squared fit statistics are reported for linear models. For the ordered probit model, the first value shows the percentage of correctly predicted observations (in %) and the second the percentage reduction in error (in %).

Table 52 and Table 55 in the appendix show that these results also hold when testing for veto players and electoral competitiveness in separate regressions. Veto players have a positive impact on sovereign ratings and electoral competitiveness has either no impact or even a negative impact on sovereign ratings.

As a final robustness check, I also test my argument for the veto player index of the Database of Political Institutions (see section 5.2.1). Table 54 in the appendix demonstrates that countries with more veto players also get a higher rating for this indicator. No matter which constraint indicator is used, constraints on the executive lead to better sovereign ratings.

5.4.3 Evidence from Sovereign Rating Announcements

Rating methodologies and econometric evidence show that CRAs assign better ratings to regimes with many veto players and do not regard electoral accountability as a

positive rating driver. CRAs' explanations for their rating decisions can provide additional evidence for this finding. First, a text analysis of rating announcements demonstrates that political stability is an important rating driver and that veto players serve as one central indicator of politically stable institutions. Second, CRAs mention in particular two types of veto players, independent central banks and an independent judiciary. Third, elections are regarded as a negative rating driver for exactly the two reasons outlined in section 5.2.2, political uncertainty and political business cycles.

Domestic political stability is a key rating factor, which is mentioned for 20%, i.e., 250 of the 1,222 rating actions for all three main CRAs since 1995. Most often, CRAs do not specify how countries can achieve domestic political stability, but for many cases, CRAs highlight the important role of institutional checks on the executive. For instance, Fitch explains that Abu Dhabi's AA rating is constrained because the "government and executive authority is not subject to the public and institutionalised checks and balances typical in most other sovereigns in the 'AA' category"[35]. Other sovereigns on the Arabian Peninsula face similar criticism.[36] This has led to public complaints about sovereign rating decisions. The Finance Minister of Saudi Arabia, Ibrahim al-Assaf, complained in the Financial Times that we "see advanced economies with double A and some of them are reduced even further, while emerging markets like my own country…we're really deserving of a higher credit rating" (Financial Times 2013). In response, Dima Jaradaneh, a Director at S&P, argues that it is "not only about money […]. The political issues […] are constraints on the ratings" (ibid.).

If countries introduce additional constraints on the executive, they can improve their sovereign rating. Kenya, for instance, was upgraded in 2010 by S&P because its "new constitution curtails the president's powers, provides new checks and balances, creates an apex court, and devolves some power to newly established counties"[37]. In contrast, countries that remove constraints on the executive are downgraded. For instance, Venezuela was downgraded several times by all three CRAs due to lower institutional checks on the executive. In 1999, S&P argues that Venezuela deserves a lower rating

[35] Fitch: 2007_07_02_AbuDhabi
[36] See, for instance, Fitch: 2008_01_23_RasAlKhaimah
[37] S&P: 2010_11_19_Kenya

because "the new constitution concentrates power in the executive, with few checks and balances"[38]. In 2005, S&P summarizes that Venezuela's ratings are constrained by:

> "Weak institutions and a continued deterioration of the system of checks and balances. The recent changes in the Central Bank Law have reinforced government control over resource allocation and greatly damaged confidence. Supporters of President Chavez now control most of the major institutions in the country, including the National Assembly, the judiciary, armed forces, and electoral council."[39]

As in this explanation for Venezuela's rating, CRAs mention in particular independent central banks and an independent judiciary as important veto players. Independent central banks are a positive rating driver for 35 rating actions, mostly for emerging market economies and developing countries. For developed countries, CRAs take independent central banks for granted, but also take an increase in central bank independence into account, such as Moody's for the case of Sweden in 1999.[40] In some cases, CRAs explicitly emphasize how central banks can constrain the executive. For instance, S&P argues that Mexico's "independent central bank […] should insulate the government's liquidity from possible negative shocks during the 2006 election campaign"[41].

An independent judiciary is mentioned as a positive rating driver for 22 rating announcements. For some countries, CRAs see a direct link between the rule of law and a country's willingness to repay. Fitch, for instance, argues that the Russian government should "promote the rule of a law and contract, not least by establishing a track record of honouring its payments to domestic and foreign creditors"[42]. Other veto players, such as subnational governments or parliaments are seldom mentioned by CRAs.

In contrast to the positive role of checks and balances, CRAs emphasize the negative impact of domestic elections on a sovereign's ratings. Domestic elections are mentioned for 24%, i.e., 297 of the 1,222 rating actions since the mid-1990s. In some cases, CRAs explicitly argue that domestic elections increase a government's willingness to default.

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[38] S&P: 1999_12_21_Venezuela
[39] S&P: 2005_08_12_Venezuela, see also S&P: 2006_02_03_Venezuela
[40] Moody's: 1999_08_23_Sweden
[41] S&P: 2005_01_31_Mexico
[42] Fitch: 2000_05_08_Russia

Fitch, for instance, suggests for Argentina in 2001 that "against a backdrop of political uncertainty due to the elections on October 14, the government's capacity to honor its debt obligations has weakened and raised the incentives to pursue debt restructuring"[43]. As argued in section 5.2.2, CRAs highlight in particular that elections can lead to policy and political uncertainty and to political business cycles.

For 68 rating actions, CRAs claim that elections lead to policy uncertainty or political instability. S&P expects, for instance, "Korea's economic recovery to falter next year, as a result of […] political uncertainties relating to the presidential election"[44]. For Paraguay, S&P argues that the upcoming elections in 2003 will increase political instability which "will continue to weaken political institutions in Paraguay and place debt repayment at risk"[45]. Fitch assumes, for example, that "the upcoming elections in Mexico inevitably bring uncertainties"[46]. For Moldova, Moody's suggests that "political uncertainty surrounding upcoming general elections may jeopardize continuity in the economic, institutional and fiscal reform process"[47] and for Russia that elections lead to "uncertainty in continuity in economic policy management"[48].

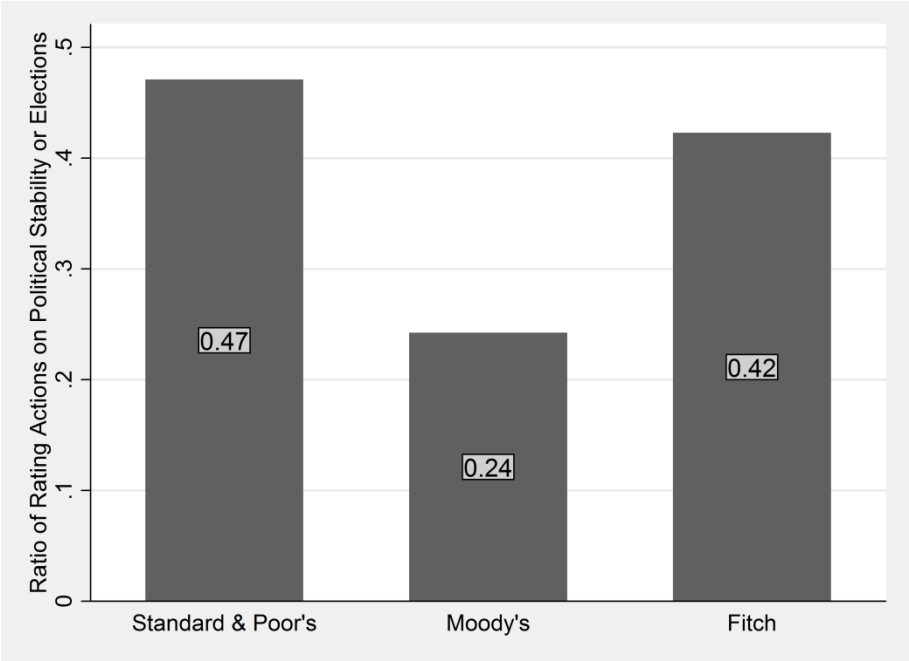
For 120 rating actions, CRAs refer to electoral or political business cycles as a negative rating driver. Most of these elections are on a national level, but CRAs also take the negative impact of local, regional, and state level elections into account for larger sovereigns, such as for Brazil in 2000, India in 2002, Turkey in 2004, and Mexico in 2010.[49] According to the CRAs, most countries are unable to contain pre-electoral spending.[50] Spending pressures are especially the result of wage increases[51], increases in social spending[52] and the inability to cut welfare payments and pension and health

[43] Fitch: 2001_10_12_Argentina
[44] S&P: 1997_10_24_Korea
[45] S&P: 2002_11_27_Paraguay
[46] Fitch: 2000_05_03_Mexico
[47] Moody's: 2010_08_12_Moldova
[48] Moody's: 1998_03_11_Russia
[49] Fitch: 2000_02_22_Brazil, Fitch: 2001_11_21_India, S&P: 2003_07_28_Turkey, Fitch: 2003_09_25_Turkey, S&P: 2009_12_14_Mexico
[50] S&P: 1997_04_02_Argentina, Moody's: 1997_10_02_Argentina, S&P: 2001_01_03_Brazil, S&P: 2003_05_09_Guatemala, Fitch: 2003_06_23_Venezuela, Fitch: 2003_07_10_PapuaNewGuinea, Fitch: 2003_07_21_Latvia, S&P: 2004_02_05_Lithuania, Fitch: 2004_09_21_Slovakia, S&P: 2004_12_03_Cameroon, Fitch: 2005_01_21_Ukraine, Fitch: 2005_01_26_Gambia, Fitch: 2005_08_03_Russia, Fitch: 2005_08_26_CzechRepublic, S&P: 2005_12_15_Russia, Fitch: 2006_08_29_Jamaica, S&P: 2007_04_02_Grenada, S&P: 2007_08_01_Grenada, S&P: 2008_02_26_Panama, S&P: 2009_02_25_Ukraine, Moody's: 2010_01_08_Turkey, S&P: 2010_08_27_Ghana
[51] S&P: 1997_06_05_Venezuela, S&P: 2003_06_02_Uruguay, Fitch: 2003_06_25_Ukraine
[52] S&P: 2002_12_30_Belize, S&P: 2005_03_03_Venezuela

entitlements before an election[53]. At the same time, according to the CRAs, governments are unable to raise revenues before an election due to limited tax reforms[54], such as a failure to pass a VAT law[55] before a looming election, pre-electoral tax cuts[56], and poor tax collection[57]. Overall, CRAs emphasize that governments lack fiscal discipline and increase budget deficits before domestic elections.[58] In addition, to pre-electoral fiscal indiscipline, CRAs also highlight that elections can undermine implementation of IMF programs[59] and necessary financial sector reforms[60], such as bank restructurings[61]. Moreover, CRAs often question a government's ability to maintain liberalization policies in the run-up to an election[62], in particular privatization policies[63].

[53] S&P: 2001_02_22_Japan, S&P: 2003_06_02_Uruguay, Fitch: 2003_06_20_CzechRepublic
[54] S&P: 1997_01_22_Panama, S&P: 1999_11_23_Suriname, S&P: 2011_01_14_ElSalvador
[55] S&P: 2000_09_18_Lebanon
[56] Fitch: 1999_10_25_Greece, S&P: 1999_11_24_Greece, S&P: 2001_03_26_Argentina, Fitch: 2003_06_25_Ukraine
[57] Moody's: 2008_05_21_Pakistan
[58] S&P: 1995_12_04_Israel, S&P: 1996_08_26_ElSalvador, S&P: 1997_06_05_Venezuela, S&P: 1997_07_16_CostaRica, Moody's: 1997_07_24_Ecuador, S&P: 1997_12_18_Peru, S&P: 1997_12_31_Indonesia, S&P: 1998_01_09_Indonesia, Moody's: 1998_03_25_Malta, S&P: 1999_11_24_Greece, S&P: 2000_11_01_Peru, Fitch: 2000_11_30_Hungary, Fitch: 2001_06_13_Ukraine, S&P: 2001_10_03_Ireland, S&P: 2002_11_21_Uruguay, S&P: 2002_12_17_Taiwan, S&P: 2003_07_28_Turkey, Fitch: 2003_09_25_Turkey, Fitch: 2003_12_18_Romania, Fitch: 2005_02_15_Cameroon, S&P: 2005_05_11_Ukraine, S&P: 2005_12_15_Russia, S&P: 2006_06_28_Brazil, S&P: 2006_09_04_Russia, S&P: 2006_12_22_Iceland, Fitch: 2007_03_15_Iceland, S&P: 2007_10_02_CzechRepublic, Fitch: 2007_10_29_Gabon, S&P: 2007_11_08_Gabon, Moody's: 2008_05_21_Pakistan, S&P: 2008_08_11_Argentina, S&P: 2008_10_27_Romania, S&P: 2008_10_31_Argentina, S&P: 2009_12_16_Greece
[59] S&P: 2001_08_06_PapuaNewGuinea, Fitch: 2004_01_30_DominicanRepublic, Fitch: 2005_01_26_Gambia, Fitch: 2005_02_15_Cameroon, Fitch: 2010_07_06_Ukraine
[60] S&P: 2002_12_17_Taiwan
[61] Fitch: 1999_06_24_Korea, S&P: 2004_08_26_Thailand
[62] S&P: 1995_10_23_Paraguay, S&P: 1996_08_26_ElSalvador, S&P: 1997_06_05_Venezuela, S&P: 1997_06_13_Uruguay, Moody's: 1998_03_30_Slovakia, S&P: 1998_08_17_Russia, Moody's: 1998_09_09_Ukraine, S&P: 1999_12_23_Mongolia, S&P: 2001_02_22_Japan, Fitch: 2001_06_13_Ukraine, Fitch 2001_11_21_India, Fitch: 2003_11_20_Indonesia, Fitch: 2003_12_18_Romania, Fitch: 2004_09_28_Brazil, S&P: 2004_11_01_Serbia, S&P: 2005_07_18_Serbia, S&P: 2005_12_15_Russia, S&P: 2011_03_24_Portugal
[63] S&P: 2001_11_13_Korea, Fitch: 2003_07_24_Bulgaria, S&P: 2004_05_13_Slovenia, Fitch: 2005_11_01_Macedonia, S&P: 2010_12_21_Croatia

Figure 5: Rating Actions on Political Stability or Elections by CRA



The text analysis shows that political stability and elections are key rating drivers. In many cases, political stability is associated with institutional constraints on the executive and independent central banks and judiciaries as veto players. Political stability and elections are mentioned for 39%, i.e., 475 of the 1,222 rating actions. As Figure 5 shows, S&P takes these criteria most often into account, for almost half of its rating actions, while Moody's refers to these political factors for one fourth of its announcements. For 121 of the 137 rated countries, political stability or elections are taken into account for at least one rating action. The few countries for which these criteria are not mentioned are mainly small sovereigns and overseas territories, such as Guernsey, Montserrat, Mauritius, and Bermuda or politically very stable countries, such as Singapore, Finland, Denmark, and Norway.

Moreover, the text analysis demonstrates that CRAs only recently started to refer to the quantitative judgment of political institutions compiled by other organizations. As discussed in the review of methodologies in section 3.3, Moody's and Fitch began to use quantitative political indicators compiled by another organization. The text analysis shows that Moody's and Fitch started to use these indicators only recently. Fitch referred to the World Bank Governance Indicators for the first time in 2008 in a rating

action for Israel and only regularly since 2010.[64] Moody's also only started to use the World Bank Governance Indicators in 2010.[65]

Overall, evidence from rating methodologies, the econometric study, and the text analysis point to the central importance of political factors for sovereign ratings. Political constraints on the executive and elections are key rating drivers. Countries with a higher number of veto players and thus a system of checks and balances get better sovereign ratings. In contrast, CRAs associate elections with political instability and pre-electoral fiscal indiscipline.

5.5 Summary

There are many unsuccessful attempts in the literature to find a democratic advantage for recent sovereign rating data because such an advantage allegedly exists for historical sovereign debt data. I offer a simple explanation for this puzzle. Countries with competitive elections never got better borrowing conditions. Instead, financial market participants value constraints on the executive that limit the likelihood of a debt restructuring. If more actors can prevent the executive from defaulting, it is less likely that a country will default. CRAs have therefore good reason for taking this political factor into account in their sovereign risk assessments. Constraints on the executive are already the central mechanism suggested in the literature on historical data. For these historical cases, an increase in veto players led to a lower sovereign risk premium. I show that this mechanism still holds for CRAs in the panel data set of more than 100 rated countries since the 1980s. Controlling for standard macroeconomic factors, different veto player indicators always have a significant positive impact on sovereign ratings. The text analysis of 1,222 rating announcements since the mid-1990s shows that political stability is a key rating driver, which CRAs often associate with institutional constraints on the executive and veto players, such as independent central banks and an independent judiciary. In contrast, CRAs expect that domestic elections lead to political uncertainty and instability and to fiscal indiscipline and limited economic liberalization policies that signal a government's unwillingness to repay in hard times. Credit rating agencies are in favor of constraints on the executive, but not of

[64] Fitch: 2008_02_11 for Israel, 2010_02_16_Jamaica, 2010_08_24_Rwanda, 2010_11_26_HongKong, 2011_02_03_Seychelles
[65] Moody's: 2010_05_26_Nicaragua, 2010_09_22_SriLanka
In section 7.3.1 of the conclusion, I will provide an explanation why these CRAs might have started to rely more on external quantitative criteria in recent years.

electoral competitiveness and in particular the electoral uncertainty and political business cycles associated with contested elections.

5.6 Appendix

Table 47: Summary Statistics

Variable		Mean	Std. Dev.	Min	Max	Observations
Polity2 Indicator	overall	6.11	5.83	-10	10	N = 1871
	between		5.96	-10	10	n = 118
	within		1.67	-6.30	13.35	T-bar = 15.85
Political Constraints on the Executive (xconst)	overall	5.78	1.77	1	7	N = 1866
	between		1.84	1	7	n = 118
	within		0.54	2.40	8.90	T-bar = 15.81
Competitiveness of Executive Recruitm.(xrcomp)	overall	2.52	0.82	0	3	N = 1866
	between		0.92	0	3	n = 118
	within		0.29	-0.01	4.29	T-bar = 15.81
Henisz Political Constraint V Index	overall	0.60	0.26	0	0.9	N = 1580
	between		0.27	0	0.89	n = 117
	within		0.09	-0.02	1.10	T-bar = 13.50
DPI Checks Veto Player Index	overall	3.50	1.82	1	18	N = 1896
	between		1.41	1	9.54	n = 125
	within		1.13	-3.03	13.47	T-bar = 15.16

Table 48: Marginal Effects of Polity2 on Sovereign Ratings

	Standard & Poor's		**Moody's**		**Fitch**	
Category	**Polity2**	**SE**	**Polity2**	**SE**	**Polity2**	**SE**
B- or below	-0.000	(0.000)	-0.000	(0.000)	-0.000	(0.000)
B	-0.001	(0.000)	-0.001*	(0.001)	-0.000	(0.000)
B+	-0.001	(0.001)	-0.001*	(0.001)	-0.000	(0.001)
BB-	-0.002*	(0.001)	-0.001	(0.001)	-0.000	(0.001)
BB	-0.003	(0.002)	-0.002	(0.001)	-0.000	(0.002)
BB+	-0.002	(0.002)	-0.003*	(0.002)	-0.000	(0.002)
BBB-	-0.002	(0.001)	-0.003	(0.002)	-0.000	(0.002)
BBB	-0.001	(0.001)	-0.001	(0.001)	-0.000	(0.000)
BBB+	-0.000	(0.000)	-0.001	(0.001)	0.000	(0.000)
A-	0.001	(0.001)	-0.000	(0.000)	0.000	(0.002)
A	0.002	(0.001)	0.001	(0.001)	0.000	(0.002)
A+	0.001	(0.001)	0.001	(0.001)	0.000	(0.001)
AA-	0.001	(0.001)	0.001	(0.001)	0.000	(0.001)
AA	0.002	(0.001)	0.003	(0.002)	0.000	(0.001)
AA+	0.002	(0.002)	0.002	(0.001)	0.000	(0.001)
AAA	0.004	(0.003)	0.005*	(0.003)	0.000	(0.001)

For all calculations of marginal effects, all other explanatory variables are held at their mean.

Table 49: Individual Polity Indicators[66]

	Standard & Poor's		Moody's		Fitch		
	PCSE (ar1)	**Ordered Probit**	**PCSE (ar1)**	**Ordered Probit**	**PCSE (ar1)**	**POLS**	**Ordered Probit**
VARIABLES	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**
Ln(GDP per capita)	2.455***	0.921***	2.348***	0.823***	2.650***	2.614***	1.175***
	(0.134)	(0.121)	(0.163)	(0.127)	(0.131)	(0.100)	(0.141)
GDP Growth	0.017	0.030**	0.011	0.000	0.016	0.011	0.009
	(0.016)	(0.013)	(0.013)	(0.013)	(0.017)	(0.025)	(0.016)
Current Acc. Surplus	-0.013	0.024**	-0.005	0.018**	-0.003	0.046***	0.024**
	(0.010)	(0.011)	(0.009)	(0.009)	(0.011)	(0.011)	(0.012)
Inflation	-0.001*	-0.002**	-0.000	-0.001***	-0.000	-0.003*	-0.001*
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)
Default History	0.200	-1.500***	-0.074	-1.118***	0.017	-3.043***	-1.332***
	(0.330)	(0.246)	(0.279)	(0.330)	(0.350)	(0.414)	(0.273)
Public Debt to GDP	-0.013***	-0.008***	-0.008**	-0.004	-0.004	-0.011***	-0.006**
	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.003)
xconst	**0.273****	**0.156**	**0.253****	**0.161**	**0.268***	**0.717*****	**0.237****
	(0.130)	(0.111)	(0.123)	(0.111)	(0.152)	(0.116)	(0.112)
xrcomp	**-0.252**	**-0.480*****	**-0.340**	**-0.567*****	**-0.316**	**-1.617*****	**-0.630*****
	(0.265)	(0.172)	(0.251)	(0.170)	(0.303)	(0.257)	(0.192)
parcomp	**-0.015**	**0.122**	**0.119**	**0.141**	**-0.150**	**-0.084**	**0.015**
	(0.134)	(0.138)	(0.167)	(0.141)	(0.160)	(0.153)	(0.177)
xropen	**0.053**	**0.349*****	**0.215**	**0.389*****	**0.176**	**0.652*****	**0.391*****
	(0.208)	(0.116)	(0.176)	(0.137)	(0.210)	(0.126)	(0.135)
parreg	**0.859*****	**0.443*****	**0.827*****	**0.432*****	**0.587*****	**0.870*****	**0.299*****
	(0.107)	(0.094)	(0.113)	(0.115)	(0.126)	(0.105)	(0.114)
Constant	-11.005***		-10.905***		-11.487***	-12.848***	
	(1.118)		(1.446)		(0.923)	(0.705)	
Observations	1,457	1,457	1,514	1,514	1,042	1,042	1,042
Fit Statistics	0.733	33.01,12.23	0.735	33.35,12.56	0.760	0.790	31.57,16.70
countries	100	100	91	91	96	96	96

[66] For all of the following models, standard errors are in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Due to space considerations, I do not report cut points for the ordered probit estimators in this and the following models. For all tables, R-Squared fit statistics are reported for linear models. For the ordered probit model, the first value shows the percentage of correctly predicted observations (in %) and the second the percentage reduction in error (in %).

Table 50: Individual Polity Indicators with Country-Fixed Effects

	Standard & Poor's		Moody's		Fitch	
	Fixed Effects	**Fixed Effects**	**Fixed Effects**	**Fixed Effects**	**Fixed Effects**	**Fixed Effects**
VARIABLES	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**
Ln(GDP per capita)	1.036***	1.062***	1.077***	1.060***	1.645***	1.650***
	(0.075)	(0.078)	(0.093)	(0.093)	(0.103)	(0.102)
GDP Growth	0.049***	0.044***	0.020*	0.018*	0.038***	0.038***
	(0.009)	(0.009)	(0.011)	(0.011)	(0.009)	(0.009)
Current Acc. Surplus	-0.040***	-0.040***	-0.010	-0.011	-0.037***	-0.037***
	(0.007)	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)
Inflation	-0.002***	-0.002***	-0.000	-0.000	-0.001	-0.001
	(0.001)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)
Default History	-1.073***	-1.065***	-0.670***	-0.736***	-0.863***	-0.854***
	(0.176)	(0.180)	(0.206)	(0.207)	(0.205)	(0.204)
Public Debt to GDP	-0.031***	-0.032***	-0.021***	-0.021***	-0.016***	-0.016***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)
xconst	**0.259*** **	**0.303*** **	**0.325*** **	**0.380*** **	**0.151**	**0.164**
	(0.093)	(0.081)	(0.112)	(0.098)	(0.120)	(0.105)
xrcomp	**-0.531*** **	**-0.765*** **	**-1.317*** **	**-1.179*** **	**-0.351* **	**-0.341* **
	(0.172)	(0.149)	(0.209)	(0.183)	(0.202)	(0.186)
parcomp	**0.206**		**0.038**		**0.073**	
	(0.153)		(0.167)		(0.180)	
xropen	**-0.037**		**0.504*** **		**0.058**	
	(0.153)		(0.165)		(0.308)	
parreg	**0.576*** **		**0.302*** **		**0.060**	
	(0.085)		(0.101)		(0.104)	
Constant	3.863***	6.915***	4.531***	7.229***	0.318	0.898
	(0.904)	(0.778)	(1.087)	(0.920)	(1.588)	(1.058)
Observations	1,457	1,457	1,514	1,514	1,042	1,042
Fit Statistics	0.400	0.355	0.201	0.188	0.369	0.368
countries	100	100	91	91	96	96

Table 51: Marginal Effects of Political Constraints on Sovereign Ratings (1)

	Standard & Poor's		Moody's		Fitch	
Category	**Henisz**	**SE**	**Henisz**	**SE**	**Henisz**	**SE**
B- or below	-0.002	(0.002)	-0.009	(0.006)	-0.003	(0.003)
B	-0.013*	(0.008)	-0.030**	(0.014)	-0.009	(0.007)
B+	-0.047**	(0.020)	-0.056**	(0.024)	-0.023*	(0.014)
BB-	-0.072***	(0.026)	-0.053**	(0.022)	-0.064**	(0.032)
BB	-0.118***	(0.040)	-0.067**	(0.029)	-0.079**	(0.039)
BB+	-0.121**	(0.048)	-0.103**	(0.041)	-0.121*	(0.065)
BBB-	-0.129***	(0.050)	-0.110**	(0.053)	-0.096*	(0.055)
BBB	-0.080***	(0.029)	-0.053*	(0.029)	-0.047	(0.031)
BBB+	-0.028	(0.017)	-0.034*	(0.018)	-0.000	(0.017)
A-	0.009	(0.024)	-0.008	(0.011)	0.078	(0.056)
A	0.077**	(0.039)	0.030	(0.033)	0.087*	(0.046)
A+	0.054**	(0.027)	0.040	(0.029)	0.034*	(0.020)
AA-	0.055**	(0.023)	0.039	(0.025)	0.080**	(0.040)
AA	0.092**	(0.039)	0.119**	(0.049)	0.075*	(0.039)
AA+	0.119**	(0.047)	0.079**	(0.036)	0.044**	(0.021)
AAA	0.205***	(0.064)	0.216***	(0.061)	0.044*	(0.024)

For all calculations of marginal effects, all other explanatory variables are held at their mean.

Table 52: Henisz's Political Constraints on Sovereign Ratings

	Standard & Poor's		Moody's		Fitch		
	PCSE (ar1)	**Ordered Probit**	**PCSE (ar1)**	**Ordered Probit**	**PCSE (ar1)**	**POLS**	**Ordered Probit**
VARIABLES	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**
Ln(GDP per capita)	2.809***	1.048***	2.866***	0.951***	2.942***	2.965***	1.240***
	(0.133)	(0.104)	(0.151)	(0.132)	(0.130)	(0.068)	(0.128)
GDP Growth	0.007	0.016	0.010	0.002	0.009	0.023	0.012
	(0.013)	(0.018)	(0.013)	(0.014)	(0.019)	(0.033)	(0.016)
Current Acc. Surplus	-0.012	0.014	0.001	0.009	0.000	0.028***	0.016
	(0.009)	(0.011)	(0.011)	(0.010)	(0.011)	(0.010)	(0.011)
Inflation	-0.001	-0.002***	-0.000	-0.001***	-0.000	-0.004**	-0.002**
	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.002)	(0.001)
Default History	0.431	-1.341***	-0.024	-1.023***	-0.305	-3.417***	-1.342***
	(0.355)	(0.220)	(0.324)	(0.312)	(0.421)	(0.486)	(0.295)
Public Debt to GDP	-0.010**	-0.007***	-0.005	-0.004	-0.001	-0.008**	-0.006*
	(0.005)	(0.003)	(0.004)	(0.003)	(0.005)	(0.003)	(0.003)
Political Constraints	**1.389*** **	**1.342*** **	**1.210*** **	**1.206*** **	**0.901* **	**2.256*** **	**0.842* **
	(0.485)	(0.418)	(0.388)	(0.448)	(0.505)	(0.445)	(0.508)
Constant	-10.733***		-11.390***		-11.610***	-11.992***	
	(1.088)		(1.390)		(0.905)	(0.675)	
Observations	1,300	1,300	1,379	1,379	883	883	883
Fit Statistics	0.726	33.46,11.00	0.725	33.13,10.83	0.784	0.775	33.29,17.39
countries	98	98	94	94	97	97	97

Table 53: Marginal Effects of Political Constraints on Sovereign Ratings (2)

	Standard & Poor's		Moody's		Fitch	
Category	**Henisz**	**SE**	**Henisz**	**SE**	**Henisz**	**SE**
B- or below	-0.002	(0.002)	-0.009*	(0.005)	-0.003	(0.003)
B	-0.012*	(0.007)	-0.028**	(0.013)	-0.008	(0.006)
B+	-0.041**	(0.018)	-0.051**	(0.022)	-0.018	(0.012)
BB-	-0.063***	(0.023)	-0.048**	(0.021)	-0.048	(0.029)
BB	-0.101**	(0.040)	-0.061**	(0.030)	-0.060	(0.039)
BB+	-0.105**	(0.048)	-0.094**	(0.043)	-0.090	(0.065)
BBB-	-0.112**	(0.049)	-0.101*	(0.055)	-0.070	(0.052)
BBB	-0.070**	(0.028)	-0.049	(0.030)	-0.036	(0.029)
BBB+	-0.026	(0.016)	-0.032*	(0.018)	-0.001	(0.013)
A-	0.006	(0.021)	-0.008	(0.010)	0.056	(0.049)
A	0.066*	(0.036)	0.027	(0.031)	0.065	(0.046)
A+	0.047*	(0.026)	0.037	(0.028)	0.026	(0.018)
AA-	0.048**	(0.023)	0.036	(0.025)	0.061	(0.041)
AA	0.080**	(0.037)	0.109**	(0.050)	0.057	(0.037)
AA+	0.104**	(0.045)	0.073**	(0.036)	0.034*	(0.021)
AAA	0.180***	(0.063)	0.198***	(0.064)	0.035	(0.022)

For all calculations of marginal effects, all other explanatory variables are held at their mean.

Table 54: DPI Veto Player on Sovereign Ratings

	Standard & Poor's		Moody's		Fitch		
	PCSE (ar1)	**Ordered Probit**	**PCSE (ar1)**	**Ordered Probit**	**PCSE (ar1)**	**POLS**	**Ordered Probit**
VARIABLES	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**
Ln(GDP per capita)	2.848***	1.070***	2.743***	0.999***	2.942***	3.107***	1.245***
	(0.138)	(0.084)	(0.167)	(0.120)	(0.123)	(0.061)	(0.115)
GDP Growth	0.018	0.024	0.007	0.003	0.016	0.046*	0.021
	(0.017)	(0.018)	(0.014)	(0.013)	(0.018)	(0.026)	(0.014)
Current Acc. Surplus	-0.014	0.020**	-0.001	0.014	0.001	0.037***	0.018*
	(0.010)	(0.010)	(0.009)	(0.008)	(0.010)	(0.010)	(0.010)
Inflation	-0.001	-0.002**	-0.000	-0.001***	-0.000	-0.004**	-0.001**
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.002)	(0.001)
Default History	0.421	-1.365***	0.091	-0.924***	0.008	-3.174***	-1.291***
	(0.335)	(0.228)	(0.276)	(0.283)	(0.372)	(0.455)	(0.259)
Public Debt to GDP	-0.013***	-0.006**	-0.008*	-0.002	-0.002	-0.005*	-0.004
	(0.005)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.003)
DPI Checks	**0.051****	**0.117*****	**0.005**	**0.114*****	**0.059**	**0.201*****	**0.092***
	(0.026)	(0.032)	(0.024)	(0.037)	(0.046)	(0.043)	(0.048)
Constant	-10.707***		-9.728***		-11.477***	-13.059***	
	(1.242)		(1.542)		(0.996)	(0.626)	
Observations	1,560	1,560	1,628	1,628	1,089	1,089	1,089
Fit Statistics	0.689	29.74,8.89	0.695	30.03,8.88	0.758	0.746	29.93,14.26
countries	109	109	100	100	101	101	101

Table 55: Democracy (Cheibub) and Sovereign Ratings

	Standard & Poor's		Moody's		Fitch		
	PCSE (ar1)	**Ordered Probit**	**PCSE (ar1)**	**Ordered Probit**	**PCSE (ar1)**	**POLS**	**Ordered Probit**
VARIABLES	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**	**Rating**
Ln(GDP per capita)	2.740***	1.033***	2.711***	0.957***	2.919***	3.145***	1.270***
	(0.153)	(0.099)	(0.176)	(0.120)	(0.133)	(0.072)	(0.126)
GDP Growth	0.027*	-0.001	0.013	-0.014	0.019	-0.014	-0.003
	(0.015)	(0.019)	(0.013)	(0.015)	(0.019)	(0.032)	(0.016)
Current Acc. Surplus	-0.000	0.023**	0.008	0.014	0.005	0.027**	0.014
	(0.014)	(0.010)	(0.010)	(0.009)	(0.011)	(0.012)	(0.012)
Inflation	-0.001*	-0.002**	-0.000	-0.001***	-0.000	-0.004**	-0.001**
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.002)	(0.001)
Default History	0.411	-1.451***	0.089	-1.065***	-0.137	-3.350***	-1.351***
	(0.345)	(0.216)	(0.296)	(0.278)	(0.382)	(0.445)	(0.253)
Public Debt to GDP	-0.014***	-0.007***	-0.006	-0.003	-0.000	-0.006*	-0.005
	(0.004)	(0.003)	(0.004)	(0.003)	(0.005)	(0.003)	(0.003)
Democracy (Cheibub)	**-0.031**	**0.231**	**0.004**	**0.251**	**-0.205**	**-0.165**	**-0.089**
	(0.322)	(0.230)	(0.256)	(0.242)	(0.222)	(0.262)	(0.295)
Constant	-9.604***		-9.574***		-11.041***	-12.161***	
	(1.169)		(1.561)		(1.035)	(0.680)	
Observations	1,470	1,470	1,541	1,541	1,008	1,008	1,008
Fit Statistics	0.669	30.88,9.68	0.693	30.43,8.92	0.756	0.752	31.94,16.54
countries	111	111	101	101	101	101	101

6 Rating Agencies and the Enforcement of International Agreements

In recent decades, each international financial crisis has led to a number of new global financial codes, standards, and rules that all countries were supposed to adopt and comply with (see Drezner 2007: 137ff., Walter 2008, Verdier 2012). However, in contrast to domestic law, the international system lacks a central enforcement agency with a monopoly of force. One of the central questions in international relations is therefore why states adopt and comply with international agreements if this entails short-term costs (Morgenthau 1978: 560, Keohane 1997: 487). In this debate, compliance with international agreements is defined as conformity between an actor's behavior and a specified rule (Raustiala & Slaughter 2002: 539, see also Young 1979: 104). International agreements are agreements signed by a sovereign state with other sovereign states or with an international institution and can range from informal standards to formal international treaties and commitments as a member of an international organization.

Given the lack of a central enforcement power, several authors argue that financial market participants can help enforce international agreements by taking them into account in their risk assessments (Porter 2001: 433, Ho 2002, Singer 2007: 10). In particular, scholars and international institutions expect that credit rating agencies, as one central actor in sovereign debt markets, enforce international agreements (Kapstein 1994: 13, IMF 2003: 18, Arner & Taylor 2009: 2, IMF 2013a). If CRAs take international agreements into account in their sovereign rating assessments, this may provide countries with an incentive to adopt and comply with these agreements in order to gain a better rating. The decisive empirical question for this chapter is therefore whether, in addition to economic liberalization policies and political institutions, CRAs also take international agreements into account in their sovereign risk assessments.

Based on the new comprehensive database of sovereign rating announcements, I show that CRAs take only the few international agreements into account that are already enforced by other states or international institutions. With their sovereign ratings, CRAs assess the default risk of sovereign states. As argued in section 1.2, countries default either because they are unable or because they are unwilling to repay. If the adoption of or compliance with an international agreement leads to financial support

by another state or an international institution, it can increase a country's ability to repay. As economic liberalization policies, international agreements can also serve as a signal of a government's willingness to repay. However, as I will argue, CRAs will only take an international agreement into account as a credible signal of a government's willingness if the agreement is enforced by other states or international institutions. If these actors do not ensure that the agreement is implemented, countries can easily adopt the agreement and superficially comply with it without incurring any costs. Without enforcement, an international agreement would then only amount to cheap talk which cannot serve for CRAs as a credible signal of the willingness to repay.

The literature identifies several potential international economic agreements that could serve as a signal of a government's commitment to economic openness and reform and hence its willingness to repay in hard times. Empirical studies test whether sovereign ratings are influenced by international financial standards (Mosley 2003b, Petrie 2003, Hameed 2005, Arbatli & Escolano 2012), agreements with the IMF (Nelson 2010), and commitments as a member of an international organization (Dreher & Voigt 2011). However, these studies face many empirical limitations (see section 6.1.2 for an empirical review of the literature). I test for CRAs' promotion of these international agreements – international financial standards, agreements with the IMF, and accession to and membership of international and regional organizations – based on the new comprehensive data set of 1,222 rating announcements for 137 countries.

I find that CRAs do not take international financial standards into account and mention agreements with the IMF and membership of international organizations (IOs) only to the extent that they lead to financial support or are enforced by the institution. First, CRAs have good reasons not to consider most international financial standards in their sovereign risk assessments because these standards are thus far not enforced by other states or international institutions. Although many countries adopt these standards, this lack of enforcement often does not lead to substantive compliance (Walter 2008). Therefore, these standards cannot serve as a credible signal of a government's willingness to repay and CRAs have no reason for taking them into account in their assessments of sovereign creditworthiness (see section 6.3.1).

Second, CRAs embrace agreements with the IMF to the extent that these recommendations are part of an IMF program that is enforced by the IMF and leads to financial support for liquidity-constrained sovereigns. The IMF is mentioned in 258

announcements and in more than half of these announcements IMF financial support is a key rating driver (see section 6.3.2).

Third, membership of other IOs does not lead to financial support in a debt crisis. For most IOs, agreements are also not enforced and can therefore not serve as a credible signal of a government's willingness to repay (see section 6.3.3). However, the European Union accession process includes policy conditionality. Accordingly, CRAs take the European Union into account in two thirds of their rating changes in Europe. In many cases, the EU accession process is highlighted as the key rating driver, often directly in the headline of the announcement (see section 6.3.4). Although this central role of the EU accession process has recently been emphasized in the literature on sovereign bond spreads (Gray 2009), it has been mainly overlooked in the literature on sovereign rating determinants.

Overall, the empirical findings show that CRAs only care about international agreements, as one political factor, to the extent that other states and international organizations do. This limited promotion of international agreements by CRAs puts into doubt international reform efforts based only on soft standards, codes, and rules. Governments should thus be wary of relying on market enforcement alone in the current new wave of international standard-setting.

6.1 Literature on Sovereign Ratings and International Agreements

Many international institutions and scholars expect that financial markets, and in particular rating agencies, help to enforce international agreements by taking these agreements into account in their sovereign risk assessments (section 6.1.1). However, most studies on the determinants of sovereign ratings focus on a narrow set of macroeconomic indicators and the few studies on international agreements face empirical limitations (section 6.1.2).

6.1.1 Claims on Market Enforcement and Rating Agencies

Over the last few decades, states have developed a multitude of international standards, codes, and rules. For instance, following the Asian financial crisis at the end of the 1990s, regulators established a compendium of international standards to prevent future global financial crises (FSB 2013b). One key characteristic of this

international standard-setting process was its reliance on market enforcement (Helleiner & Pagliari 2010: 4). States expected international investors to provide "clear material incentives (such as lower risk-premiums and greater capital inflows) for developing country governments to adopt the new standards" (Mosley 2009: 10). If firms used international standards to assess risk, they could put "market pressure on governments […] to comply" (Porter 2001: 433). In particular, compliance should be achieved through "the positive impact on sovereign credit ratings of adherence to these international standards" (Arner & Taylor 2009:2). CRAs are often mentioned in official statements on market enforcement as one key actor. For instance, the International Monetary Fund expects that its Reports on the Observance of Codes and Standards will be taken into account by credit rating agencies in their sovereign rating assessments (IMF 2003: 18, IMF 2013a).

Also, many scholars claim that markets help to enforce international agreements. Simmons argues that market pressures lead to high incentives to emulate the standards adopted by the dominant financial center which can explain the spread of certain international financial agreements (2001: 601-605). According to Ho, most countries implemented the Basel Accord because of market pressure (2002: 547). In this way, compliance with Basel standards became a signal of bank stability for investors (Singer 2004: 563). According to Singer, non-compliance with a global financial standard could lead to capital flight, loss of competitiveness, and a crisis of confidence (Singer 2007: 10). Kapstein argues for "enforcement […] through the marketplace, without further government intervention" (1994: 13) and already highlighted the important role of "market watchers such as debt-rating agencies" (ibid.).

6.1.2 Limited Empirical Evidence

Despite the expectation that markets, and in particular rating agencies, enforce international financial agreements, few studies have tested whether CRAs actually take the adoption of and compliance with international agreements into account. Most studies on the determinants of sovereign ratings focus on a narrow set of macroeconomic indicators for the three main CRAs that dominate the credit rating market. Despite different methods and data sets used, econometric studies identify similar significant macroeconomic variables which determine a sovereign's rating by these agencies (see section 3.1.2). Few studies go beyond these macroeconomic indicators and study the impact of international agreements.

Mosley (2003b) analyzes whether CRAs take into account the adoption of the IMF's Special Data Dissemination Standard (SDDS), one of the 12 key financial standards established following the Asian financial crisis. In her survey of CRA staff during March 2001, only 20% of CRA staff report that the SDDS plays no role in their assessments (Mosley 2003b: 347). However, Mosley directly puts into doubt her own finding because it contradicts the limited importance of the SDDS for other market participants and is based on a survey conducted for only ten CRA staff.

Petrie (2003) studies the impact on sovereign ratings for the compliance with another one of the 12 key financial standards, the Code of Good Practices on Fiscal Transparency. Since its inception, the IMF has conducted a compliance report for this standard, the fiscal transparency Reports on the Observance of Codes and Standards (ROSCs) (IMF 2002). Until March 2013, these so-called fiscal ROSCs have been published for 93 countries (IMF 2013c). In a survey, Petrie finds that 15 of the 21 sovereign rating analysts at the three major CRAs who responded to his survey read the fiscal transparency ROSCs (Petrie 2003: 11). Seven of the 21 CRA staff claim that they have used information from the fiscal ROSC as a direct input for their rating assessment (ibid.).

Hameed (2005) develops a quantitative index based on the fiscal ROSCs. For a cross-section of 32 countries with averages from 1998-2002, he finds that compliance with the fiscal ROSCs leads to better credit ratings. Arbatli and Escolano (2012) update Hameed's results for 21 advanced and 35 developing countries using the average 2010 sovereign rating by the three major CRAs as dependent variable. They find that compliance with the fiscal ROSCs has only a direct impact for developing countries. For developed countries, compliance with fiscal ROSCs has only an indirect impact through lower debt to GDP ratios and higher primary balances. For developing countries, however, a one standard deviation increase in their fiscal ROSC index leads to a sovereign rating increase of about one rating notch in their estimation.

Two studies, Nelson (2010) and Dreher and Voigt (2011), test for the impact of compliance with and adoption of international agreements on sovereign ratings beyond the key financial standards. Instead of ratings by the three major CRAs, these studies use two other measures of sovereign risk, Euromoney and Institutional Investor ratings, which are to some extent based on, but not produced by the officially recognized CRAs. Nelson (2010) analyzes the impact on sovereign ratings for the

compliance with Article VIII of the IMF's Articles of Agreement. Simmons first argued that states can use compliance with this agreement on an open current account to "enhance their credibility to markets" (2000: 819). For a panel of 112 non-OECD countries from 1979-1997, Nelson finds that non-compliance with this agreement leads to worse Euromoney and Institutional Investor ratings. Nelson also tests for the impact of IMF-supported programs on sovereign risk assessments and shows that a country is downgraded by about one point if it takes an IMF loan in the previous year (Nelson 2010: 121). However, this negative impact of IMF-supported programs on sovereign ratings should be interpreted with caution. IMF programs are always started during financial crises. Unobservables, such as uncertainty in such a financial crisis, could thus rather cause the downgrade than the IMF-supported program.

Dreher and Voigt (2011) test whether an indicator that aggregates different international agreements is a significant determinant of sovereign ratings. Their indicator is based on the ratification of four United Nations (UN) conventions[67], acceptance of International Court of Justice jurisdiction, membership of the World Trade Organization (WTO) and membership of two World Bank sub-organizations[68]. In a panel of 136 countries from 1984-2004, Dreher and Voigt (2011) show that the adoption of international agreements leads to significantly better Euromoney and Institutional Investor ratings.

In addition to this study on membership of IOs, I am not aware of any study that focuses on membership of regional organizations as a rating determinant. However, two studies analyze the impact of compliance with accession criteria used by the European Union and the European Monetary Union (EMU) on the sovereign debt market in general. Gray (2009) studies the impact of the EU accession process on sovereign bond spreads for a sample of 17 post-communist European countries from 1990-2006. Controlling for selection processes and substantive reforms prior to EU accession, Gray finds that closing the negotiation chapter with the EU on domestic economic policies leads to lower sovereign bond spreads. Based on many interviews, Mosley (2003a: 66-69, 2003b: 333-334) finds that the accession criteria for European

[67] The four UN conventions are the International Convention for Civil and Political Rights and its Optional Protocol to abolish capital punishment, the International Convention for Economic, Social, and Cultural Rights, the Convention on the Recognition and Enforcement of Foreign Arbitral Awards and the Convention Against Torture.
[68] The World Bank sub-organizations are the International Finance Corporation (IFC) and the International Center for the Settlement of Investment Disputes (ICSID).

Monetary Union membership are also taken into account by sovereign debt market participants.

Overall, this literature review shows the lack of comprehensive empirical evidence compared to the expectations by international institutions and academics that CRAs help to enforce international agreements by taking them into account in their sovereign rating assessments. Although all of the studies emphasize the importance of the adoption of and compliance with international agreements, they face several shortcomings. First, surveys of CRA staff have low response rates and directly ask about a standard at only one point in time when the standard is high on the agenda. Second, econometric studies on fiscal ROSCs are only based on a small cross-section of countries. These studies face the risk that unobservables, such as good fiscal institutions, drive the results because they are correlated with ROSCs and sovereign ratings. For IMF programs, it is particularly difficult in an econometric study to distinguish between the impact of the crisis and the ensuing program. Third, some of the interesting hypotheses, such as the impact of compliance with accession criteria on sovereign ratings, have not been tested for sovereign ratings thus far. Finally, none of the studies tests for all existing international agreements based on a theory of which agreements matter and which do not.

6.2 Argument and Hypotheses

I expect that CRAs take international agreements only into account if the agreements either lead to financial support or if the agreements are already enforced by another institution. As argued in section 1.2, CRAs not only have to assess a country's ability but also its willingness to repay. First, international agreements can increase a country's ability to repay if the adoption of or compliance with these agreements is a condition for financial support. Faced with a liquidity crisis, a country can be dependent on this short-term international financial support to prevent a default. CRAs would then not support an international agreement as such, but only to the extent that it leads to liquidity support in a debt crisis. Second, beyond this indirect impact, international agreements can also directly serve as a signal of a government's willingness to repay, but only if the agreements are already enforced by other states or international institutions (section 6.2.1). Based on these two potential reasons, I present hypotheses

on which international agreements matter for the sovereign risk assessment by rating agencies (section 6.2.2).

6.2.1 Argument: International Agreements as Signals

To assess a government's willingness to repay, CRAs have to go beyond standard economic criteria when evaluating the likelihood of sovereign default. I argue that the adoption of and compliance with some relevant international agreements can serve as another important signal of a government's willingness to repay, but only if the agreements are visible and costly.

Some international agreements can be a relevant signal of a government's willingness to repay. States can maintain multiple reputations (Downs & Jones 2002). For instance, a state's violation of human rights treaties does not necessarily indicate a low willingness to repay sovereign debt. But there are several issue areas relevant for building a reputation of sovereign debt repayment. First, Dreher and Voigt (2011) focus on international treaties that are related to property rights. The adoption of these treaties could signal a sovereign's general willingness to honor property rights as in sovereign bond contracts. Second, Nelson analyzes the IMF's Article VIII because it shows the "commitment to an open economic system" (2010: 107). In the same vein, Büthe and Milner suggest that WTO membership and participation in preferential trade agreements can serve as a signal of liberal economic policies with limited government intervention (2008: 742). If a country commits not to intervene in its domestic economy, this could show its market-friendliness in general. Third, beyond the commitment to uphold contracts and to support market interactions, international agreements could also demonstrate a state's willingness to reform in difficult economic times. Faced with an adverse shock, a country has to be willing to enact reforms to prevent a default. If a country commits to such reforms as part of an international agreement, it can build a visible track record.

Relevant international agreements can only serve as a credible signal if the agreements are visible and credibly enforced. First, CRAs' use of an international agreement for their risk assessments depends on the visibility of the agreement. Most international agreements are more visible than domestic policy announcements. Indeed, Andritzky et al. (2005) find that domestic policy announcements do not have a systematic effect on sovereign bond spreads. According to Büthe & Milner (2008: 745), visibility is one of the reasons why international agreements can serve as a signal to foreign investors. As

it is costly for investors to collect information, they have incentives to use information shortcuts (Mosley 2000: 742-744.). Domestic policy announcements are most often in the local language for a domestic audience. It is costly for CRAs to translate these announcements and to interpret them in the domestic political context. In contrast, international agreements can be a "piece of reliable, public information" (Gray 2009: 932) that can be "easily and uniformly interpreted" (ibid.: 933). IOs can also increase the visibility of compliance with international agreements if they publish regular track records.

Second, international agreements have to be costly to serve as a credible signal. If an international agreement is not enforced by other states or IOs, a country can easily adopt the agreement and superficially comply with it without actually implementing the agreement. Such an agreement does not impose any costs on the country. A country's claim to formally comply with such an international agreement amounts only to cheap talk, which cannot serve as a credible signal of a country's type. Without enforcement by international institutions or other states, CRAs cannot distinguish between countries that only pretend to comply and those that substantively comply with the agreement. Monitoring substantive compliance is too costly for CRAs. Due to these monitoring costs, I expect that CRAs will not use international agreements if they have to assess the details of a country's implementation process. Some other actor has to ensure the implementation of the international agreement. Then CRAs know that the agreement is not only cheap talk. Other states or international institutions can ensure the implementation of an international agreement with coercive measures such as funding conditionality or unilateral sanctions (see Verdier 2012: 29, Drezner 2007). If international institutions and other states do not care about the implementation of an international agreement, CRAs will regard the agreement as cheap talk and neglect a country's adoption and formal compliance with the agreement.

6.2.2 Hypotheses: Which International Agreements Matter?

Based on the criteria above, I expect that CRAs take only those international agreements into account that either lead to liquidity support or are visible and credibly enforced and can hence serve as a credible signal of a government's willingness to repay (see Table 56). To what extent do the agreements studied thus far in the literature fulfill these criteria?

Table 56: Hypotheses for Different International Agreements and IOs

	Do CRAs take into account?	**Why?** due to financial support	as signal if visible and costly
International Financial Stan.	no	no	no
Agreements with IMF	yes, for program countries	only program countries	yes, for program countries
IO Membership	no for most	no for most	no for most
EU and EMU Membership	yes, for accession countries	limited, esp. since crisis	yes, for accession countries

First, I do not expect that CRAs take the key international financial standards into account because the adoption of or compliance with these agreements does not lead to financial support and is also not enforced. Financial regulation is relevant and very visible due to the IMF's and World Bank's efforts to produce more than 1,200 ROSCs, compliance reports, thus far (IMF 2013b). However, the request for these compliance reports and the publication is voluntary. Even for the countries monitored, mock compliance is prevalent (Walter 2008, Chey 2007). Many countries adopt these standards and superficially comply with them, but regulatory forbearance by the government, blockage by the bureaucratic administration, and noncompliance by the private sector prevent substantive compliance (Walter 2008: 29-49). Therefore, adoption of and formal compliance with key international financial standards do not necessarily impose costs on countries. As potential cheap talk, these agreements cannot serve as a credible signal.

Second, I expect that agreements with the International Monetary Fund will only be taken into account by CRAs if these agreements lead to financial support or if the IMF ensures that the agreements are implemented and therefore costly for the country. Nelson explicitly focuses on an agreement within the IMF that is not enforced via IMF conditionality (2010: 109). Although adoption of Article VIII is visible (ibid.: 112) and potentially relevant, it cannot serve as a credible signal without IMF enforcement. In contrast, IMF program conditionality is highly relevant for sovereign risk assessments. In a liquidity crisis, a default often depends only on the willingness of the IMF to grant a loan. I expect that CRAs will monitor the reform progress of program countries closely to the extent that disbursements by the IMF or other countries and international organizations depend on these reforms. Moreover, agreements with the IMF can also

show a government's willingness to reform if the IMF enforces these reforms with policy conditionality attached to its loans.

Third, the membership of many IOs is not relevant for sovereign debt repayment. However, the IOs that Dreher and Voigt focus on are all relevant for a positive investment climate (2011: 330). As Dreher and Voigt emphasize, the IOs in their sample do not lead to additional financing in a crisis situation (ibid.: 329). IO membership could still matter for CRAs as a credible signal if membership ensures the implementation of reforms. I do not expect that CRAs regard the IOs in Dreher and Voigt's sample, UN conventions, the International Court of Justice, the WTO, and the World Bank sub-organizations, as credible enforcers of reforms. However, the accession process leading to membership of the European Union and European Monetary Union ensures the implementation of reforms because the EU has significant leverage in this process (Gray 2009: 946). In addition, CRAs might also take membership of this regional organization into account because they expect that members are more likely to receive liquidity support in crises times. It remains an empirical question to test for which of these international agreements CRAs expect liquidity support and which they regard as credible signals given the agreement's visibility, relevance, and costs.

6.3 Content Analysis of Sovereign Rating Announcements

Thus far, the literature has only tested for the importance of international agreements in surveys of CRA staff and in econometric studies. CRA announcements are a data source which has not been used systematically for empirical evidence thus far. The analysis of these rating announcements offers several advantages compared to previous empirical approaches. First, in contrast to surveys, an analysis of rating announcements can be more systematic based on more than one point in time.

Second, the announcements are the relevant explanations given to policymakers for rating changes. CRAs cannot enforce international agreements if policymakers do not know that CRAs take international agreements into account. Rating announcements are the way in which CRAs tell policymakers what to do to get a better sovereign rating.

Third, compared to the econometric analysis, an analysis of rating announcements does not run the risk of omitting important unobservables. In particular, all IMF programs

are started during economic crises. An econometric analysis cannot distinguish between the impact of the crisis and the IMF program if these two independent variables always coincide. In contrast to the other two empirical chapters, I will therefore only focus on the analysis of sovereign rating announcements.

As in the analysis of economic liberalization policies, I code the frequency of rating drivers in this chapter focusing on international agreements. I analyze all 1,222 announcements and code for the international agreements mentioned in the literature – the key financial standards, agreement with the IMF, and membership of international organizations and the EU. In addition to this frequency analysis, I also code for the reasons stated by CRAs why they have a taken a specific international agreement into account. In particular, I analyze whether CRAs refer to an international agreement because it leads to financial support or because it signals a government's willingness to repay.

As expected, international financial standards (section 6.3.1) and most agreements related to membership of international organizations (section 6.3.3) are not taken into account by rating agencies (see Table 57). In contrast, CRAs often refer to IMF-supported programs, in many cases only due to the financial support that the program provides (section 6.3.2). In two thirds of all rating announcements for European states, CRAs refer to the EU or EMU, in most cases due to the accession process as a credible signal of a government's willingness to reform (section 6.3.4).

Table 57: Number of Announcements by International Agreement

Factors Covered in All Announcements (Total: 1,222)	Number of Announcements
International Financial Standards, of which:	**7**
- 12 key financial standards	3
IMF programs, of which:	**258**
- only on IMF financial support	94 (36% of all IMF)
IOs	**22**
- UN Conventions	0
- International Court of Justice	1
- World Trade Organization	21 (only 2 on commitment)
- World Bank sub-organizations IFC and ICSID	0
European Union, of which:	**245** (65% of 377 rating changes in Europe)
- only on EU financial support	25 (10% of all EU)

6.3.1 International Financial Standards

Despite the expectation in the literature that CRAs enforce international financial standards, I do not find any evidence that CRAs take these standards into account. Although these standards are visible and relevant, international institutions and other states do not ensure substantive compliance with these standards. The few standards that are taken into account by CRAs are those for which substantive compliance is enforced with economic sanctions.

Most of the literature focuses on the 12 key financial standards developed at the end of the 1990s. Since 1999, the IMF and the World Bank have published compliance reports, ROSCs, on these key standards for 160 countries. Although rating agencies have published rating announcements for 121 of these countries, they have referred to key standards for only three countries (see Table 58 and Figure 6). The two key standards analyzed in the previous literature, the SDDS (Mosley 2003b) and the fiscal transparency standard (Petrie 2003, Hameed 2005, Arbatli & Escolano 2012), are never mentioned in any of the 1,222 sovereign rating assessments. Of the 12 key standards, Basel's Core Principles for banking supervision are mentioned twice, but not related to IMF or World Bank compliance reports.[69] Moreover, the Financial Action

[69] S&P: 2001_11_20_Panama, Fitch: 2000_09_28_Estonia

Task Force's standard on anti-money laundering is taken into account once.[70] However, this is exactly the one key standard that is enforced with sanctions (Drezner 2007: 142-145, Simmons 2001: 605-609). The end of sanctions is also the reason why Fitch mentions the standard. In addition to these three references to key financial standards, S&P and Fitch mention in seven announcements that regulation is in line with international standards or follows international best practice, but they do not go into any details what these international standards are.

As the more than 800 published IMF and World Bank reports on compliance with international key standards are easily accessible, lack of visibility cannot be the reason why CRAs do not take these standards into account. It is also unlikely that the issues addressed by these standards are not regarded as relevant by CRAs as many of the issues are mentioned by CRAs. For instance, all three CRAs take corporate governance reforms and fiscal transparency into account if these issues are part of an IMF program or the EU accession process (see section 6.3.2 and 6.3.4). The main reason why the key standards cannot serve as a credible signal is thus likely that international institutions or other states do not ensure substantive compliance with these standards. Attempts to introduce enforcement mechanisms for the key standards failed, such as the Group of 7's pressure to include the standards as a condition for IMF loans (Drezner 2007: 139).

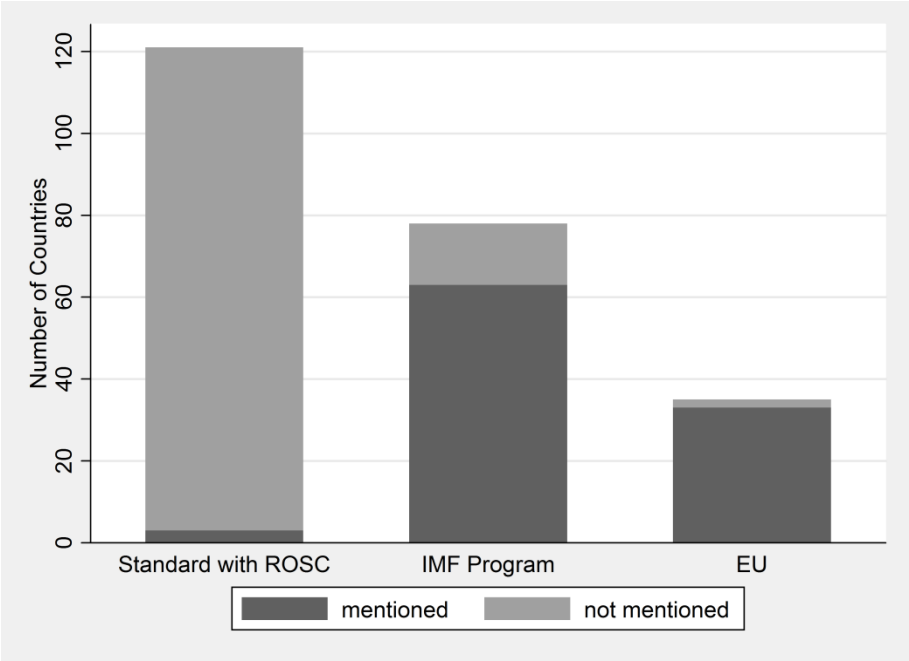
In addition to the anti-money laundering standard, only one other international regulatory initiative, the OECD's pressure on offshore financial centers, is enforced with sanctions. And indeed, the enforcement of this international agreement, which is not part of the 12 key standards, is mentioned five times by CRAs – more often than all other standards combined.[71] Financial sanctions can be costly for countries and are mentioned by CRAs 14 times in total. In one case, financial sanctions even forced CRAs to withdraw their rating for the country, which reduces the country's ability to issue debt.[72] Overall, these findings highlight that CRAs only take international financial agreements into account if the agreements are enforced by some international organization or other state.

[70] Fitch: 2003_06_25_Ukraine
[71] S&P: 2004_08_05_Barbados, 2009_12_23_Bahamas, Fitch: 2002_02_01_Cyprus, 2003_06_25_Ukraine, 2009_10_22_SanMarino
[72] Moody's: 2002_06_03_Iran, Fitch: 2008_04_24_Iran

Table 58: References to International Agreements by Number of Countries

Number of Countries with International Agreement since 1995	Financial Stand. with ROSC	IMF Program	EU
…with ROSC/IMF program/in Europe	160	111	44
…and with at least one rating change	121	78	35
…and with agreement mentioned by CRA	3	63	33

Figure 6: References to International Agreements by Number of Countries



6.3.2 IMF Programs

In contrast to international financial standards, CRAs mention agreements with the IMF very often. IMF and potential IMF programs are mentioned in 258 of the 1,222 announcements (21%, see Table 57). In some cases, the IMF program is so important that it is already included in the headline. For instance, the headline for S&P's upgrade of Ukraine on 29 July 2010 is: "Ukraine Long-Term Sovereign Foreign-Currency Ratings Raised To 'B+' On IMF Program". The approval of IMF programs can also explain the timing of sovereign rating decisions. In the Ukraine case, the rating was changed one day after the IMF decision. Fitch announced on 3 February 2010 that they will upgrade Jamaica if the IMF approved a new loan. As promised, Fitch increased the rating thirteen days later following the IMF approval of a new Stand-By Agreement.

Although CRAs also refer to some potential future IMF programs, most statements are about the start of a program or a program which is already in place. Of the 111

countries with IMF programs since 1995, 78 were rated by at least one of the three major CRAs (see Table 58).[73] For 63 countries, i.e., 81% of the rated countries with a program, CRAs refer to the IMF program as a rating determinant (see Figure 6). About half of the 258 references to the IMF are at the start of an IMF program.

CRAs refer to the IMF in 140 downgrades (64%) and in only 78 upgrades (36%) although there are overall more upgrades (606) than downgrades (424) since the mid-1990s. But this correlation between downgrades and IMF programs does not show that IMF programs lead to worse ratings, as Nelson (2010) suggests in his econometric analysis. In almost all announcements, it is very clear that the IMF program is a positive rating determinant. For instance, Fitch states in its rating announcement for the Dominican Republic on 11 August 2003: "Approval and successful implementation of an IMF program would be positive for the sovereign's creditworthiness".

CRAs criticize IMF programs in few cases. S&P emphasized right from the start of the EU/IMF program for Greece that too much fiscal consolidation will depress economic growth.[74] For some programs, CRAs also highlight implementation risks of IMF programs, in particular due to domestic resistance against IMF programs.[75] But apart from these challenges, CRAs always view IMF programs favorably. A typical positive assessment of an IMF program is the one by Moody's at the beginning of the IMF-supported program for Greece:

> "The [Eurozone/IMF support] package effectively eliminates any near-term risk of a liquidity-driven default and encourages the implementation of a credible, feasible, and incentive-compatible set of structural reforms" (Moody's: 2010_06_14_Greece)

This statement also highlights the two major reasons why CRAs are in favor of IMF programs: as an indicator for credible reforms and due to the financial support they provide. First, financial support in liquidity crises is the most important reason why CRAs support IMF programs. In more than half of the announcements (137 of 258) with references to the IMF, financial support is mentioned as a key rating determinant. In more than two thirds of these announcements, CRAs only focus on the liquidity support that the program provides and do not mention any other aspects of the program. In

[73] Data on the start and existence of IMF programs are in the following from Dreher (2006).
[74] S&P: 2010_04_27_Greece
[75] See S&P: 1998_10_12_Pakistan, 2001_08_06_PapuaNewGuinea, 2003_05_12_Indonesia

some debt crises, the likelihood of IMF disbursements becomes the most important rating driver, as Moody's statement on Latvia highlights:

> "More importantly, given the government's tight liquidity position, Moody's rating is increasingly based upon the timely provision of financial assistance from the IMF and EU." (Moody's: 2009_04_23_Latvia)

As external financial support is a key rating determinant, Belke and Burghof (2010) have called for stand-alone ratings based only on country fundamentals without taking external financial support into account. Fitch distinguishes between standalone credit fundamentals and support ratings in a number of cases, but does not indicate what the standalone rating would be.[76]

Second, in addition to the financial support that the programs provide, IMF programs are also a major rating determinant because they can serve as a signal of a country's willingness to repay. CRAs emphasize the importance of IMF programs as commitment mechanisms in many rating announcements. For instance, S&P states in a statement on Venezuela's IMF program:

> "Repeated delays in negotiations with the IMF over a macroeconomic stabilization plan and financing package cast doubt about the Caldera administration's commitment to implement reform, and over the long term, about the strength of its commitment to service its debt." (S&P: 1996_02_23_Venezuela)

CRAs highlight that IMF programs underscore a government's "commitment to macroeconomic stability"[77], show "a renewed effort to implement structural economic reforms"[78], support "the momentum of reform"[79], "signal the authorities' commitment to continued economic stability and reform"[80], and "is testament to the authorities' long-term commitment to reform"[81]. Lack of progress in negotiations with the IMF and domestic resistance "points to a further loss of reform momentum"[82], suggests some

[76] See Fitch: 2004_07_07_Slovakia, 2006_10_23_Lithuania and section 6.3.4 on the European Union.
[77] S&P: 1997_09_03_Thailand
[78] Moody's: 1996_11_06_Pakistan
[79] Fitch: 2000_04_27_Turkey
[80] Fitch: 2000_07_03_Azerbaijan
[81] Fitch: 2010_02_01_Seychelles
[82] S&P: 2001_08_06_PapuaNewGuinea

"weakening of the reform resolve"[83], and shows that the country is "unwilling to undertake the necessary fiscal correction"[84].

CRAs also emphasize that IMF programs are credible signals because programs lock in reform efforts. For instance, S&P highlights that "the government, locked into a very restrictive IMF agreement, has built a track record of more orthodox economic management"[85]. According to S&P, IMF programs "anchor the government's determination to tackle any remaining structural reforms"[86], "provide a strong policy anchor"[87], create "an anchor for fiscal and structural reforms"[88], and anchor "compliance with the new fiscal rules and its implementation of structural reforms"[89]. Moody's suggests that a country needs to establish a fiscal rule due to "the absence of an external anchor like the IMF or EU"[90]. According to Fitch, IMF programs "help maintain policy discipline"[91], "policy will remain guided by a new IMF programme"[92], and an "upgrade is driven by strong prospects for continued policy discipline, underpinned by […] the adoption of a new IMF programme"[93].

IMF program targets are also used as benchmarks by CRAs. CRAs mainly refer to fiscal reforms, which are taken into account in 84 announcements. For instance, Fitch highlights on 23 February 2011 that the "upgrade reflects Seychelles' outperformance, by a wide margin, of the fiscal targets set for it by the International Monetary Fund (IMF) programme, for a second consecutive year." CRAs remark that fiscal achievements were "better than the IMF had targeted"[94], debt targets were achieved "under its IMF program two years ahead of time"[95], the surplus exceeded "the target it agreed upon with the IMF"[96], the reform agenda conforms "to a key structural reform benchmark under Ghana's current IMF programme"[97], and a country "consistently met

[83] S&P: 2003_05_12_Indonesia
[84] S&P: 2008_11_14_Pakistan
[85] S&P: 1998_11_23_Bulgaria
[86] S&P: 2002_10_07_Bulgaria
[87] S&P: 2004_08_17_Turkey
[88] S&P: 2011_01_14_ElSalvador
[89] S&P: 2011_03_16_Serbia
[90] Moody's: 2010_01_08_Turkey
[91] Fitch: 2004_08_04_Bulgaria
[92] Fitch: 2004_11_17_Romania
[93] Fitch: 2005_01_13_Turkey
[94] S&P: 2008_01_31_Lebanon
[95] S&P: 2008_12_04_CapeVerde
[96] Fitch: 2005_01_13_Argentina
[97] Fitch: 2005_03_17_Ghana

the macroeconomic and fiscal benchmarks under its IMF program"[98]. Compliance with IMF targets is an important rating driver in many cases[99], not only because IMF financial support depends on compliance but also because "failure to stick with the IMF programme would also send mixed signals over the future for structural reform"[100].

Overall, these findings confirm the expectations about IMF agreements. In contrast to the literature (Nelson 2010), I do not find that CRAs take the adoption of Article VIII of the IMF's Articles of Agreement into account. However, IMF programs are a key rating driver, mainly due to the financial support provided by these programs. In addition to financial support, CRAs also regard IMF programs as a commitment mechanism that countries can use to signal their willingness to repay.

6.3.3 Membership of International Organizations

Agreements with other international organizations or membership of these organizations are seldom mentioned by CRAs. The agreements and organizations used in the empirical study of Euromoney and Institutional Investor ratings by Dreher and Voigt (2011) do not play a major role for sovereign risk assessments by the three major CRAs (see Table 57). First, the three CRAs never refer to any UN conventions. The International Court of Justice is only once mentioned because of its positive impact on a border dispute.[101] CRAs refer to the UN twice because of its resolution of border disputes and 14 times because of its dispute with Iran and North Korea over their nuclear programs and the impact for the region. The UN and the adoption of UN conventions are not taken into account as a signal of a government's willingness to repay.

Second, the WTO is mentioned in only 21 or 1.7% of all rating announcements. CRAs mainly highlight the WTO's positive influence on trade flows. For only two cases, CRAs mention that accession to the WTO could lock in reforms.[102] For twice as many announcements, CRAs point to negative consequences of WTO membership.[103]

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[98] Fitch: 2007_07_27_Uruguay
[99] S&P: 1997_12_18_Peru, 2011_03_16_Serbia, Moody's: 2003_12_11_Romania, 2010_03_02_Jamaica, Fitch: 2010_11_23_Mongolia
[100] Fitch: 2003_02_04_Moldova
[101] Fitch: 2001_11_27_Bahrain
[102] Moody's: 2005_07_06_Vietnam, Fitch: 2006_08_17_SaudiArabia
[103] S&P: 1998_03_02_Morocco, 1999_12_17_Barbados, Moody's: 2007_05_21_Cambodia, Fitch: 2001_11_19_Taiwan

Third, membership of the World Bank sub-organizations IFC and ICSID is never mentioned by CRAs. However, they refer to the World Bank in 35 announcements because of financial support that the World Bank provides. In most of these cases, World Bank financial support is dependent on compliance with IMF programs. For 15 rating actions, CRAs also mention World Bank policies enforced with programs, but in all of these cases, CRAs refer to the IMF at the same time. Since 2007, Fitch has used the World Bank's Doing Business Indicator for several countries.[104] In contrast to the ROSCs, the World Bank provides a quantitative indicator for their measure of business deregulation, which is updated regularly. This makes it very easy for Fitch to include the indicator in their quantitative assessment. If IOs want to push for market enforcement of international financial standards, quantitative summary statistics could thus be a way forward even without external enforcement. Although the IMF uses quantitative indicators for its own assessments of fiscal ROSCs (Hameed 2005, Arbatli & Escolano 2012), these have not been published.

6.3.4 EU and EMU Membership and Accession Process

In contrast to the few references to most international organizations, CRAs take the European Union very often into account in their sovereign risk assessments. In 65% of all rating actions for European countries (245 of 377), CRAs refer to the European Union or European Monetary Union.[105] The European Union is mentioned in 33 of the 35 countries with rating changes in Europe (see Table 58 and Figure 6). The positive role of the EU and EMU is very obvious in sovereign rating announcements, as many headlines – which usually do not specify the reasons for rating changes – highlight:

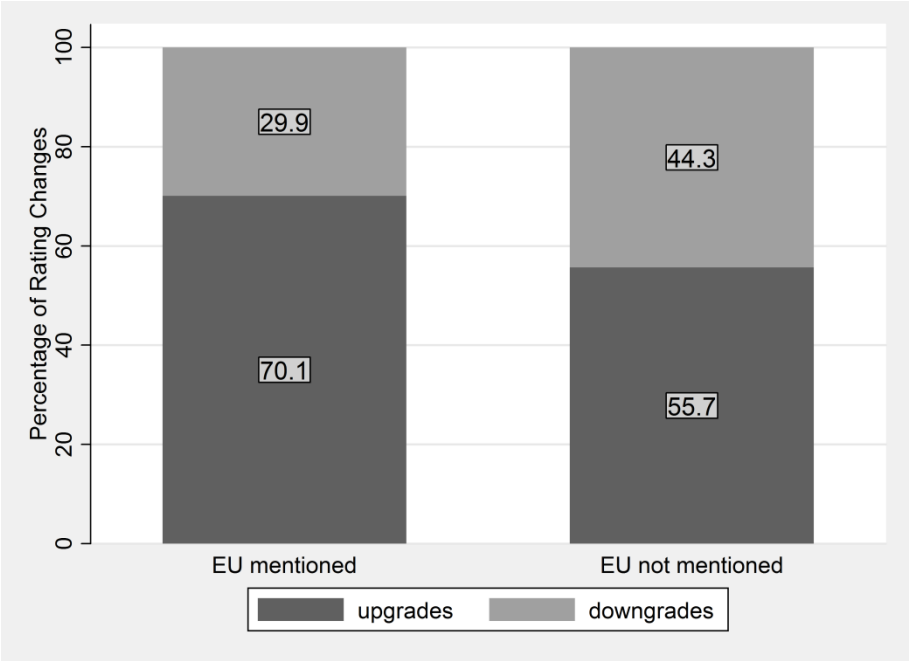
- "Bulgaria's FC Ratings Raised To 'BBB+/A-2' On Fiscal Discipline And EU Entry" (S&P: 2006_10_26_Bulgaria)
- "Republic of Estonia LT and ST Ratings Raised To 'A' and 'A-1' on EMU Prospects" (S&P: 2004_11_17_Estonia)
- "Republic of Slovenia L-T FC Rating Raised To 'AA' On EMU Entry Approval" (S&P: 2006_05_16_Slovenia)
- "Moody's raises Romania's ratings as policies reflect EU integration" (Moody's: 2005_03_02_Romania)

[104] Georgia, Kenya, Israel, Armenia, Saudi Arabia and Azerbaijan
[105] Europe is in the following defined as the UN geographical region excluding Russia, but including Turkey and Cyprus.

- "Moody's upgrades foreign currency ratings of eight EU accession countries" (Moody's: 2002_11_12)
- "Fitch Upgrades Estonia, Latvia, Lithuania And Slovenia On Credible Euro Convergence" (Fitch: 2004_07_07)
- "Fitch Upgrades Cyprus and Malta on Final Euro Decision" (Fitch: 2007_07_12)

Figure 7 shows that the EU or EMU are more often mentioned for upgrades than for downgrades. CRAs refer to the EU in 152 upgrades (70%) and in only 49 downgrades. In 57 of the 245 cases, the EU or EMU are only used as a comparison group. In most other cases, CRAs use the EU and EMU as a positive rating determinant.

Figure 7: Rating Changes in Europe by Rating Action and References to the EU



In contrast to the IMF, the EU's financial support is less important with only 10% (25 of 245) of the announcements focusing only on potential EU support, most of them in the sovereign debt crisis since 2009. However, the EU accession process is a key rating driver signaling a government's willingness to reform. Of the 122 announcements with references to the EU before the beginning of the financial crisis in October 2008 and where the EU is not used as comparison group, 85% (103) are about the EU accession process. Compared to the high number of references to the accession process, EU membership is mentioned only seven times for old member states (five times for

Greece and once for Sweden, five days after its EU accession) and twelve times for new member states. For all other cases, CRAs focus on the accession process and not on the benefits of membership. According to the CRAs, the EU's enforcement power in the accession process "with no absolute assurance of eventual membership […] is arguably even stronger than for those countries already comfortably inside the union".[106]

All three CRAs often emphasize the central role of the EU accession process as an information short-cut for a government's willingness to reform. According to S&P, for "most of the new EU members that joined the Union in May 2004, prospective EU membership served as a strong policy anchor, which in turn resulted in ratings upgrades."[107] The EU accession process "provides an important anchor […] to pursue further reform"[108] and "supported continued implementation of structural reforms"[109]. Countries' reforms are credible due to "the discipline forged by […] EU aspirations"[110], "against the backdrop of EU accession"[111], "on the back of a modernization process accelerated by EU accession requirements"[112], and "motivated by the prospect of EU accession"[113].

Moody's also emphasizes that the EU accession process leads to a "stepped up pace of structural reforms"[114], "provides both the framework and incentives to the government to continue along the path of reform and reduces policy variability"[115], "provides the incentives for the country to continue on the path of reform"[116], and "should also bolster reform efforts".[117] Fitch highlights that the demands of the EU accession process "spurred the country's politicians to sink their differences"[118], led "to steady progress […] with structural reforms as the government has sought to remain near the front of the race for EU accession"[119], "enhanced the incentives to pursue sound financial policies and economic reform"[120], "should support continued policy discipline"[121],

[106] Moody's: 2005_12_14_Turkey
[107] S&P: 2004_07_30_Macedonia
[108] S&P: 2001_10_30_SlovakRepublic
[109] S&P: 2001_11_20_Estonia
[110] S&P: 1998_11_05_CzechRepublic
[111] S&P: 2002_04_22_Lithuania
[112] S&P: 2002_08_20_Latvia
[113] S&P: 1999_12_03_Cyprus
[114] Moody's: 2001_12_19_Romania
[115] Moody's: 2003_06_05_Bulgaria, Moody's: 2004_11_17_Bulgaria
[116] Moody's: 2003_12_11_Romania
[117] Moody's: 2008_03_12_Montenegro
[118] Fitch: 1999_12_15_Slovenia
[119] Fitch: 2000_09_28_Estonia
[120] Fitch: 2000_11_16_Romania

"remains a big driver of policy discipline and hence improving creditworthiness"[122], and "is a vital anchor to political stability, security, institution building and economic reform."[123] CRAs do not mention policy details of the accession requirements, but focus on their credibility due to EU enforcement.

CRAs also often refer to the European Monetary Union as a positive rating driver, in total in 106 rating actions, for two main reasons. First, the EMU accession process is regarded as a credible commitment to reform signaling a government's willingness to repay. As for the European Union, the process leading to membership requires credible reform efforts and not EMU membership as such. Compliance with the Maastricht convergence criteria is mentioned for 31 rating actions. The same compliance mechanisms for EMU members, the Stability and Growth's Pact deficit criterion of 3% and the excessive deficit procedure, are mentioned for only five rating actions. This finding contradicts Mosley's claim that the EMU convergence criteria and the 3% deficit acquired "independent status" (2003b: 334) for financial market participants. CRAs have taken this "most successful case of standard setting by an international institution" (ibid: 333) only into account as long as it was credibly enforced by other member states during the EMU accession process.

Second, euro area membership also leads to better sovereign ratings because membership reduces balance of payment pressures and foreign exchange risk[124] and because EMU members can expect to be bailed out in a debt crisis. Since 2008, the expectation of euro area bailouts is a key rating driver. EMU members "can rely on the availability of substantial external support […] a feature that supports the credit"[125], as Moody's highlights. Fitch "expects the adoption of the euro to increase […] ratings by 2-3 notches"[126]. Fitch already assumed in 2001 that EMU members will "derive credit support from their membership of the currency union."[127] As for the IMF, CRAs take EMU membership into account because membership leads to financial support in a debt crisis.

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[121] Fitch: 2004_08_04_Bulgaria
[122] Fitch: 2004_11_17_Romania
[123] Fitch: 2005_11_01_Macedonia
[124] S&P: 2001_03_13_Greece, 2004_02_05_Lithuania, 2004_05_13_Slovenia, 2004_07_29_Latvia, 2004_11_17_Greece, Fitch: 2001_06_20_Greece, 2004_07_07 for several new member states, 2009_12_08_Greece
[125] Moody's: 2010_12_17_Ireland
[126] Fitch: 2004_07_07 in an announcement for Slovenia, Lithuania, Latvia and Estonia
[127] Fitch: 2001_06_20_Greece

Before the official introduction of the euro, S&P and Fitch also pointed to potential risks and demands of EMU membership. In particular, they highlighted the need for wage moderations, fiscal consolidation, and product market liberalization in response to the loss of the exchange rate mechanism for adjustment.[128] Fitch even downgraded Belgium and placed Italy on a negative outlook ahead of the introduction of the euro in 1999 due to the loss of monetary sovereignty.[129] However, after the introduction of the euro, they put these doubts aside and only focused on the benefits of EMU membership as the potential downsides of monetary union membership did not materialize in the beginning.[130] Once the European debt crisis started, CRAs began to realize again the downsides of a monetary union.[131] In its most recent methodology, S&P even introduced a one notch downgrade for smaller members of a monetary union "to reflect that members of monetary unions generally have less flexibility relative to sovereigns with their own central banks" (S&P 2013a: 35). But overall, S&P and Fitch still view euro area membership favorably. S&P upgraded Estonia "on Eurozone accession"[132] and Fitch also sees "disadvantages, most noticeably the "one size fits all" nature of monetary policy […] being outweighed by the positives".[133] Moody's never emphasized any risks or demands of EMU membership.

6.4 Summary

Many international institutions and scholars expect that rating agencies enforce international agreements by taking these agreements into account in their sovereign risk assessments. Based on the new comprehensive database of sovereign rating announcements, I show that rating agencies only care about international agreements under two conditions. First, CRAs take international agreements into account to the extent that these agreements lead to direct financial support. Second, the agreement has to be enforced by some other institution. Then, CRAs regard the agreement as a credible signal of a government's willingness to repay. If the adoption and formal

[128] S&P: 1998_05_06_Ireland, 1999_11_24_Greece, 2001_03_13_Greece, Fitch: 1999_10_25_Greece, 2000_07_27_Greece
[129] Fitch: 2002_06_17_Belgium, 2002_06_17_Italy
[130] The only exception is an announcement by S&P for Slovakia: 2005_12_19_Slovakia.
[131] S&P: 2008_04_24_Cyprus, 2008_11_27_Slovakia, 2009_01_19_Spain, 2009_01_21_Portugal, 2009_03_30_Ireland, 2010_06_10_Estonia, Fitch: 2007_07_12_Cyprus, 2007_07_12_Malta, 2008_07_08_Slovakia
[132] S&P, 2010_06_10_Estonia
[133] Fitch: 2007_07_12_Cyprus, 2007_07_12_Malta

compliance with an international agreement is not enforced, a country's promise to implement it is just cheap talk.

As key international financial standards are not enforced by international organizations or other states, there are good reasons why CRAs almost never mention these standards. In contrast, IMF programs are a key positive rating driver to which CRAs refer for 63 of the 78 rated IMF program countries. For 36% of the 258 rating announcements with references to IMF programs, CRAs focus only on the financial support that these programs provide. For most other announcements, CRAs also emphasize that a country can credibly signal its willingness to reform by accepting an IMF program. The accession process leading to EU and EMU membership also shows that CRAs only take international agreements into account as long as these agreements are enforced. The EU is often used as a positive rating driver, a factor which has not been emphasized by previous empirical studies on the determinants of sovereign ratings. But the EU mainly matters during the accession process when the EU has leverage over a country. In the same way, CRAs take the 3% deficit limit only into account for EMU accession countries, but neglect this limit for EMU member states because states do not credibly enforce the deficit limits for member states.

Overall, the empirical findings highlight the limited promotion of international agreements by CRAs. Governments should be wary of relying on market enforcement alone in the current new wave of setting international and regional standards for financial regulation and fiscal policy. If governments do not enforce international agreements themselves or link these agreements to financial support, market actors will also not take them into account in their risk assessments.

7 Conclusion

Economic liberalization policies, political institutions, and certain international agreements are key political indicators that rating agencies use in assessing a country's likelihood to repay its debt. In this chapter, I will summarize my main findings in section 7.1. In particular, I will highlight the central importance of political factors by merging the findings from the text analyses of the unique database of rating announcements.

In the following section 7.2, I will discuss implications of these findings for rated countries and regulators. In order to gain a better sovereign rating, a country cannot only improve macroeconomic factors but also has to signal its investor-friendliness and impose institutional constraints on governments that are willing to default. For regulators, my findings imply that they should not rely on rating agencies to enforce international agreements.

In section 7.3, I will outline how rating agencies and regulators have responded since 2011 to criticism and challenges arising from the European sovereign debt crisis. Since rating agencies have good reason for taking political factors into account, they cannot simply neglect these criteria in response to public criticism. Instead, CRAs have tried to fend off criticism in the European debt crisis by becoming more transparent and by using quantitative political indicators compiled by other institutions (section 7.3.1). Regulators across both sides of the Atlantic have tried to promote alternatives to the main CRAs' sovereign ratings, but have thus far failed to establish convincing alternative indicators (section 7.3.2).

In section 7.4, I will highlight avenues for further research on sovereign rating criteria and on criteria that other financial market participants use. The mixed methods approach of this study, combining text and panel econometric analyses, could be an interesting avenue for future projects on the constraints that financial markets place on national governments.

7.1 Political Factors as Key Rating Determinants

The econometric and text analyses for 145 countries have demonstrated that political criteria are indispensable rating drivers. In this section, I will first briefly sum up the

specific findings for the three political indicators investigated in this study: economic liberalization policies, political institutions, and international agreements. I will then present the combined findings for all three factors based on the unique database of sovereign rating announcements.

First, rating agencies take economic liberalization policies into account as signals of a government's willingness to repay because these policies are easily interpretable and costly to reverse. Domestic economic reforms, in particular privatization policies that are especially difficult to reverse and hence the most credible signal, are most often mentioned by CRAs.

Second, CRAs analyze the number of veto players of a country's political system and closely follow domestic elections. CRAs reward political systems with a higher number of veto players. They argue that veto players can lead to political stability and impose constraints on the government if the government wants to default. In contrast, CRAs take a negative stance on the uncertainty and political business cycles associated with electoral competitiveness. It is not democracies that enjoy a rating advantage, but regimes with many domestic veto players.

Third, CRAs do not take all international agreements into account that governments try to promote. Rating agencies only refer to such agreements if the agreement either leads to direct financial support for the rated sovereign or if some other institution, such as the IMF or the EU, enforces the terms of the agreement. As for economic liberalization policies, the adoption of and compliance with international agreements can only serve as a credible signal if it is costly for a country to reverse these policies.

Overall, these findings show that political factors are an important and indispensable component of sovereign ratings. Political factors have two crucial functions in CRAs' rating assessments. More than any other macroeconomic indicator, they are a clear signal that helps CRAs to assess a government's willingness to honor its debt. Moreover, by taking into account the number of veto players as a proxy for the political system's checks and balances, CRAs can evaluate the constraints placed on governments that are willing to default.

Table 59 merges the findings of the text analyses in the previous three chapters and highlights the central importance of political factors in CRAs' announcements.

Economic liberalization policies are mentioned in more than a third of all 1,222 rating announcements since the mid-1990s. CRAs take a positive stance on economic liberalization policies for more than 80% of their judgments on these policies. Political stability and elections are also key rating drivers mentioned in 250 and 297 announcements respectively and overall in 475 announcements. Most international agreements are seldom mentioned. However, IMF programs and agreements with the European Union are often taken into account, each of these in about 250 rating decisions. Overall, political factors are rating drivers for 880, or 72%, of the 1,222 rating changes since 1995 (see Table 59).

Table 59: Number of Announcements with Political Factors

Indicator	**Number of Rating Actions** (Total=1,222)
Economic Liberalization	450
Political Stability, Elections and Veto Players	475
International Agreements	468
At Least One of the Three Political Factors	880

Figure 8 compares the ratio of rating actions with political factors for all three CRAs. In chapter 4, I have already highlighted that Moody's refers less often to liberalization policies and is more cautious about financial deregulation and capital account liberalization. Moody's also takes political stability, elections, and international agreements less often into account. While S&P and Fitch refer to political factors for more than three quarters of all rating decisions, Moody's only mentions these factors in 56% of its announcements. This finding also holds when limiting the comparison to only those countries rated by all three CRAs and when controlling for the length of rating announcements. In its "crude analysis" (IMF 2010c: 102) of sovereign rating methodologies, the IMF finds that "Moody's attaches a relatively higher weight to the ability to pay, whereas Fitch and S&P focus relatively more on willingness to pay" (ibid.). Moody's lower attention to a government's willingness to repay explains why they also focus less on political factors, which are central indicators for this willingness to repay.

Figure 8: Rating Actions with Political Factors by CRA

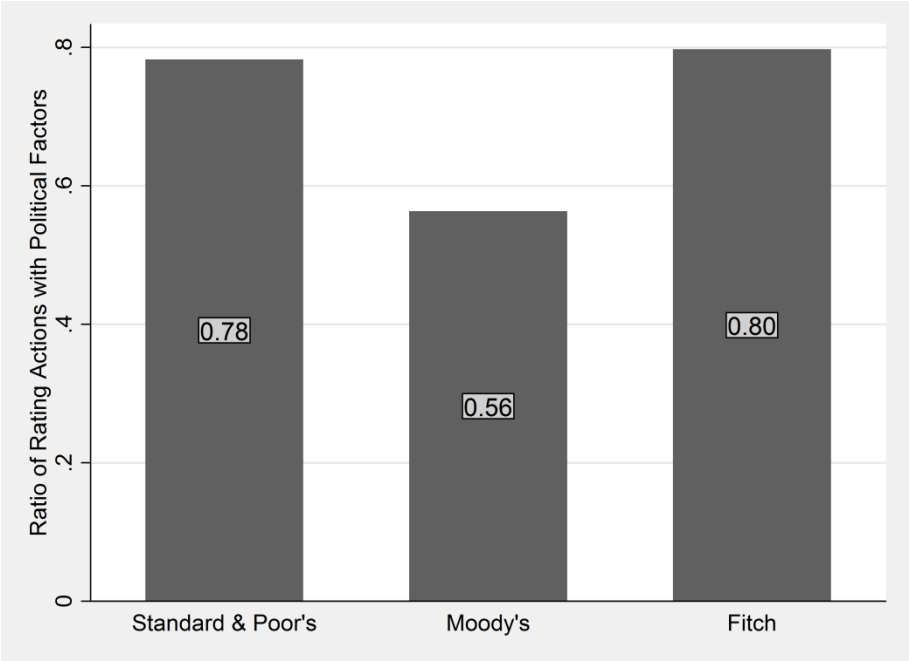

Table 60 shows that CRAs refer to political factors to the same degree for countries that are up- and downgraded and for speculative and investment grade-rated countries. The previous literature makes a clear distinction between the criteria used by financial market participants for developed and developing countries (see, e.g., Mosley 2000, 2003a). According to this literature, financial market participants consider few indicators, such as fiscal deficits and inflation, in their sovereign risk analysis of developed countries. My findings do not support this line of argument for one of the central sovereign debt market actors, credit rating agencies. Using the World Bank income classifications, CRAs refer to political factors to the same degree for low, middle, and high income countries. CRAs do not only analyze developed countries' fiscal deficits and inflation rates but also refer to political factors for these countries. Political factors are a central rating determinant for at least one rating decision for almost all 137 countries.[134]

According to the previous literature, market actors neglect a broader set of criteria for developed countries because default risk is only an important factor for developing countries. However, the recent European sovereign debt crisis has highlighted that default risk is also relevant for developed countries. CRAs thus need to analyze a

[134] CRAs only mention none of the political factors in the announcements for Singapore and the three British overseas territories and dependencies Bermuda, Guernsey, and Montserrat.

country's ability and willingness to repay in detail for both developed and developing countries. As Table 60 illustrates, CRAs in fact do this and use political factors as indicators for a country's willingness to repay.

Table 60: Rating Actions with Political Factors by Rating Level and Rating Action

	Specul.	Investm.	Upgrade	Downgr.	New/WR
Announcements with Political Factors	503/682 =74%	377/540 =70%	444/607 =73%	288/423 =68%	148/192 =77%

7.2 Implications for Rated Countries and Regulators

These findings have implications for both rated countries and regulators. If countries want to receive a better sovereign rating, they should not only aim to improve macroeconomic outcomes but also policies and political institutions. In the short-run, governments can use economic liberalization policies, such as privatizations and deregulation policies, to signal their investor-friendliness. Privatization plans have often not led to expected revenue increases, as the recent case of Greece shows (see Pisani-Ferry et al. 2013: 60ff.). But even though these policies do not lead to an increase in the ability to repay, a government still has an incentive to use these policies as signals to rating agencies and to investors more generally of its willingness to repay.

In the same vein, IMF programs and the EU and EMU accession processes can increase investor confidence not only in a government's ability to repay through financial support but also in its willingness to honor its debt. Even if a government is not convinced of the overall benefits of such agreements, they should not neglect the impact of these agreements on its sovereign ratings and hence on its refinancing costs on private markets. For rating agencies, the credible stamp of approval by the IMF and the EU matters. Therefore, governments can use IMF or EU backing to signal their willingness to repay.

Political institutions also have an impact on a country's sovereign rating. If a country wants to improve its rating, it has to establish institutional constraints on governments that might be willing to default. An independent central bank can become one important veto player. If the central bank decides independently about the eligibility of government bonds for its credit operations, it can put additional costs on a government that tries to default. A strong and independent domestic judiciary has the power to

enforce the property rights of bondholders even against a government's interests and thus make a government's promise to repay more credible.

For regulators, the findings in chapter 6 imply that they should not rely on rating agencies to enforce international agreements. Most international agreements, especially on financial regulation, are not credibly enforced by international organizations. Hence, CRAs also have no incentive to care about these agreements. CRAs will only regard these agreements as credible signals if the agreements are backed by financial support or by some credible enforcement mechanism. In the debate about new international financial regulatory standards, regulators should thus be wary of relying on soft law and market enforcement alone and rather find other means to enforce regulatory agreements.

7.3 Reactions to the European Sovereign Debt Crisis since 2011

Beyond these implications of my study, the European sovereign debt crisis has led to further criticism of CRAs for their political judgments (see chapter 1). How have rating agencies and regulators responded to these criticisms since 2011?

7.3.1 Rating Agencies' Response

As shown in this study, political factors are indispensable rating drivers and CRAs have good reason for incorporating them in their ratings as indicators for a government's willingness to repay. For CRAs, this finding implies that they should not simply disregard their political analysis in response to criticism of their political assessments. Neglecting political factors would decrease the reliability of sovereign ratings. In response to criticism in the debt crisis, CRAs have instead opted to become first more transparent and second to rely more on quantitative political indicators compiled by other institutions.

CRAs have become more transparent in recent years by publishing longer and more precise rating methodologies, by discussing changes to their methodologies with investors, and by providing additional reports to explain their decisions. All of these actions were attempts to fend off criticism of their "secrecy and vagueness" (Biglaiser & Staats 2012: 518) and their "opaque" work (Beaulieu et al. 2012: 731).

First, as analyzed in section 3.3, CRAs have published more extensive methodologies in recent years. Until the crisis in 2009/2010, rating methodologies by all three CRAs were about 7000 words or less (S&P 2002, 2004, 2005, 2006b, 2008, 2010b, 2011a, 2013a, Moody's 2006, 2008, 2012b, Fitch IBCA undated, Fitch 2009, 2011a, 2011b, 2012a). In their most recent methodologies, CRAs now provide more than double that amount of text (ibid.). But these methodologies are not only longer, but also more specific on the indicators that CRAs use in their risk assessments. In its 2011 methodology, Fitch has published a quantitative sovereign rating model for the first time (Fitch 2011b). Moody's also revealed the weighting of sub-factors and details of specific indicators in its proposal for a new methodology in 2012 (Moody's 2012b).

Second, Moody's proposal for a new methodology was also a new way for CRAs to engage investors. Moody's specifically asked for "market feedback on a range of refinements" (2012b: 1). In a similar way, S&P had already requested comments on its new methodology in 2010 (S&P 2010c). These calls for comments are attempts by the CRAs to ensure that their sovereign ratings remain relevant to and accepted by investors.

Third, in response to public criticism, CRAs have also published additional reports to explain their decisions in the European debt crisis. For instance, S&P published a research update on 22 June 2012 titled, "In the Debt Debate, Our Sovereign Ratings Have No Austerity Bias" (S&P 2012b) to convince the public that they do not demand harsh austerity measures. S&P also directly responded to criticism of its sovereign ratings issued in an academic working paper by Gärtner and Griesbach (2012) (S&P 2012c). Moreover, S&P's then Managing Director for European sovereign ratings, Moritz Kraemer, explained S&P's decisions in many interviews, in talk shows, and as guest at political events (see, e.g., Grüne Bundestagsfraktion 2012).

In addition to increasing transparency, in recent years, CRAs have also begun to rely more on quantitative political indicators compiled by other institutions. By using these external quantitative political indicators, CRAs can shy away from making their own assessments and claim to use objective indicators that are not based on their subjective political analysis. The introduction of new external quantitative indicators is evident for all three political factors analyzed in this book.

All three CRAs have started using some external quantitative indicator for the quality of a country's economic liberalization policies. Fitch provides the World Bank's stability and ease of doing business indicators in its sovereign risk database (Fitch 2012b, see also section 3.3). As shown in my text analysis, Fitch has used these indicators for the first time in 2007. S&P also mentions the World Bank's Doing Business reports in its 2010 and 2011 methodologies (S&P 2010b: 15, S&P 2011a: 12) although they suggest they still rely mostly on their qualitative analyses and have dropped references to these reports in their most recent methodology updates (S&P 2013a). Moody's mentions the World Economic Forum Competitiveness Report for the first time in its 2008 methodology and also takes this measure into account as one specific sub-indicator in its 2012 proposal for a new methodology.

For their assessments of a country's political institutions, all three CRAs have begun to refer to the World Bank Governance Indicators in recent years. As shown in the text analysis in chapter 5, Fitch mentioned this indicator for the first time in 2008 in a rating action for Israel and regularly only since 2010.[135] Moody's started to use the World Bank Governance Indicators in 2010.[136] As for the liberalization policies, S&P only refers to this indicator in its 2010 and 2011 methodologies, but not anymore in its most recent methodology (S&P 2010b: 15, S&P 2011a: 12, S&P 2013a). S&P still sees a strong need for qualitative judgments in its assessments of political stability and elections (ibid.).

In its most recent 2013 methodology update, S&P also introduced some external quantitative assessments for evaluating the compliance with international agreements. In contrast to the period up to 2010 that is investigated in this book (see chapter 6), S&P now started to refer to the IMF's Special Data Dissemination Standard as part of its balance of payments analysis (S&P 2013a: 21) and to compliance with Article VIII obligations as part of its monetary policy analysis (S&P 2013a: 31).

It remains to be seen whether these recent methodological changes actually increase the acceptance of sovereign ratings by investors, policy-makers, and the general public without decreasing the quality of sovereign ratings. For now, these changes are one

[135] Fitch: 2008_02_11 for Israel, 2010_02_16_Jamaica, 2010_08_24_Rwanda, 2010_11_26_HongKong, 2011_02_03_Seychelles
[136] Moody's: 2010_05_26_Nicaragua, 2010_09_22_SriLanka

way for CRAs to limit criticism of their qualitative political judgments without neglecting political factors completely.

7.3.2 Regulators' Response

As I have argued in chapter 2, sovereign ratings derive at least some of their impact from regulatory endorsements. Public regulation forces financial institutions to use the sovereign ratings of the three main CRAs. In response to the debt crisis, policymakers have tried to reduce their regulatory reliance on credit rating agencies' assessment of political factors. However, all attempts to reduce reliance on sovereign ratings on the international level, in the US, and in the EU have been unsuccessful.

On the international level, policymakers and regulators have discussed reducing their reliance on the three main CRAs at several meetings without taking any clear decisions. The new Basel III framework did not remove the central role of rating agencies (BCBS 2011: 51ff.) although the Basel Committee on Banking Supervision continues its discussions on this issue (see FSB 2013a: 1). In 2010, the Financial Stability Board passed a list of principles for reducing over-reliance on ratings (FSB 2010). The FSB published its most recent report and an interim peer review report on 29 August 2013 for the St Petersburg G20 Summit (FSB 2013a: 1). Except for the US and the EU, the FSB sees a lack of progress in most jurisdictions (ibid.).

In the United States, the Dodd-Frank financial reforms force the US regulatory agencies to find alternative indicators to the assessments of the three leading CRAs. For sovereigns, the US regulatory agencies wanted to use official sovereign ratings produced by the OECD (Federal Deposit Insurance Corporation 2012: 21, BCBS 2012: 23). As discussed in chapter 2, the OECD strongly objects to the US' use of its country risk ratings and has simply stopped publishing any ratings for high income OECD and Euro area countries (OECD 2013c). This leaves US regulators without any alternatives to the sovereign ratings provided by the main CRAs.

In the European Union, the European Parliament called for the creation of a European credit rating foundation in a resolution in 2011 (European Parliament 2011). But the European Commission has not followed up on this proposal. The European Union also shied away from promoting banks' own internal sovereign risk assessments in the EU's revision of the capital requirements directive (EC 2013a: 31). According to the EC, "sometimes external ratings – however imperfect – remain the best solution available"

(EC 2013a: 31). Moreover, they had learned from the US experience that it would not be appropriate "to remove references to ratings without having alternatives in place" (EC 2013b: 11). Instead, the European Union has passed three regulations since 2010 with two main attempts to reduce reliance on the three main CRAs (see EC 2013b).

First, the EU tried to promote rating competition. For this purpose, the EU has introduced a common registration procedure and publishes all ratings on a common platform (ibid.). The EC also discussed the introduction of a rotation model, which would have forced issuers to change CRAs and hire new ones (EC 2013b: 10). But in the end, the EC proposed this model for all ratings except for sovereigns and the European Parliament limited the rotation model only to the ratings of re-securitizations. It is thus unlikely that the new regulations will promote competition in the sovereign rating market.

In particular, it is unclear how new competitors can finance their sovereign rating business as more and more states do not pay for their sovereign ratings. New competitors have therefore better chances in other niches, such as in the rating of insurance companies or specific financial products. Despite the wide attention to sovereign ratings during the European debt crisis, new competitors were mainly unsuccessful in entering the sovereign rating market due to a lack of financing. Only four of the 17 newly EU-recognized CRAs until the end of 2012 provide sovereign ratings and one of these CRAs, Capital Intelligence (Cyprus), has already withdrawn most of its sovereign ratings (ESMA 2013a).

The German consultancy Roland Berger tried to establish a new independent European rating agency financed by a foundation backed by financial companies (Roland Berger 2012). But their proposal failed due to a lack of investors (EU Observer 2013). The Bertelsmann Foundation also proposed a new sovereign rating agency financed by an international non-profit foundation (Bertelsmann Foundation 2013). Thus far, their proposal has not led to the creation of a new rating organization. It is also unclear why their new sovereign model should perform better than the sovereign risk assessments by the three main CRAs. The Bertelsmann Foundation suggests that the new competitor could produce better sovereign ratings if it paid attention to "qualitative indicators in addition to traditional macroeconomic data" and political indicators "such as governance" (ibid.). However, as argued in this book, the three main CRAs already take political factors into account in their rating assessments.

Second, the EU chose to regulate and supervise CRAs more closely. In an attempt to reduce the market impact of sovereign ratings, CRAs are only allowed to publish rating changes on Fridays after close of business (EC 2013b). Moreover, CRAs have to announce changes to their methodologies, ask for comments, and give explanations for their changes to the European Securities and Market Authority. ESMA can also investigate CRAs. In December 2013, the regulatory agency published its first results of a sovereign rating investigation. All of these measures increase regulators' influence on CRAs' choice of criteria (ESMA 2013b).

However, conflicts of interest are apparent if governments attempt to meddle with their own sovereign ratings produced by private companies. Moreover, stricter state regulation could limit CRAs' leeway to update their criteria and to base their decisions on important qualitative political factors, which could reduce the accuracy of sovereign ratings. The new common registration procedure and the regulation and supervision of rating methodologies also give the impression that ratings have an official seal of approval. Without regulatory endorsements, CRAs' risk assessments would be one opinion on sovereign risk among many others. If the attempts to promote rating competition fail, the new regulations might thus even embed ratings more strongly into the regulatory system and force investors to use them.

7.4 Avenues for Further Research

The responses by policymakers and rating agencies to the European sovereign debt crisis open an interesting avenue for further research. Moreover, further research on sovereign rating criteria and the criteria used by other financial market participants is necessary to determine the constraints that financial markets place on national governments. The mixed methods approach of this book could prove a promising way forward in this area of research.

As rating agencies become more transparent and precise in their methodologies, further research might be able to analyze sovereign rating criteria in even more detail. In chapter 5, I have shown that CRAs take the number of veto players into account in their sovereign risk assessments. In their announcements, CRAs most often mention an independent central bank and independent judiciary as central veto players that can prevent a government from defaulting. The role of specific veto players could also be tested econometrically if we develop a database on the constitutional rules and laws

that determine a country's default decision. For each country, such a database has to identify who can constrain a government willing to default.

As more sovereign ratings and announcements become available over time, it will also be possible to analyze changes in sovereign rating criteria over time. During the European debt crisis, rating agencies announced several changes to their methodologies. Do the CRAs follow up on these proposals and to what extent do these methodological changes influence rating decisions?

If new competitors enter the sovereign rating market, it would also be interesting to compare their criteria to those of the established CRAs (see Fuchs & Gehring 2013). As shown in this book, the three main CRAs seldom differ on their choice of criteria. Political factors are indispensable rating drivers for all of them. Do new competitors also take political factors into account as a signal of a government's willingness to default?

The analysis of sovereign rating criteria is a promising first step in analyzing the constraints that CRAs as one important sovereign debt market participant place on national governments. However, to assess these constraints more broadly, we need to extend the analysis of political factors beyond the criteria used by CRAs. Do the political factors analyzed in this book play the same role for other financial market actors, for a government's perception of its financing constraints, and for actual default risk?

First, the importance of political factors can be tested for other financial market participants. Thus far, the literature mainly focuses on analyzing sovereign bond yields, spreads, and CDS spreads. Since these market indicators are imperfect measures of financial market participants' assessments of sovereign default risk, it could be promising to analyze the reports published by banks and other financial institutions. Methodologically, this book has shown the benefits of combining econometric analyses, which have been the standard in the literature thus far, with detailed text analyses. Beyond CRAs, this mixed methods approach could also be a promising avenue for research for other financial market participants.

Second, if we are interested in the extent to which governments are constrained by financial markets, we should aim to analyze actual financing costs of governments on primary markets. It is also important to understand governments' perception of

financial market preferences. What do governments think that sovereign debt market participants, such as CRAs, demand from them? And do governments act accordingly?

Finally, it could be interesting to extend the analysis of political factors from CRAs' default risk assessment to the actual likelihood of default. Sovereign ratings give an indication of default risk. However, some scholars suggest that CRAs' default risk assessment is biased because CRAs have developed their criteria based on a biased sample, which consists only of countries that seek a sovereign rating (Beaulieu et al. 2012). As more defaults happen in rated and unrated countries over time, we can also directly test the impact of political factors on the likelihood of default. The longer track record of defaults could show us whether CRAs do not only have good reason but are also right in taking political factors into account as one indicator of a government's willingness to repay.

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