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Abstract

As recently as last year, the United States was facing a monumental decision in regards to economic policy: should the debt ceiling be raised? The answer itself, while important, was not the motivation behind this research, but the actors who influenced the answer were. Specifically, the sovereign credit rating agencies influenced the process by implying that if drastic steps were not taken, they would downgrade United States debt. In influencing a decision by the largest economic actor in the world, the ratings agencies showed that they possessed authority in the global economy. If they could influence United States policy, who else could they influence? Furthermore, what variables are factored into their rating? This research explores the impact of private governance, specifically ratings agencies, on seventeen developing states and attempts to explain variations in ratings over a span of six years (2004-2009) using Fitch's ratings service. The model accounted for 77% of variations in ratings. The resulting correlations showed that the Gini coefficient, the current account, and a variable called GDP volatility that refers to GDP growth and contraction, were significantly negatively correlated with variations in rating; and a globalization score was significantly positively correlated with variations in rating. These results imply that in developing states, increasing globalization, reducing income inequality, running surpluses, and maintaining small steady growth in GDP result in higher credit ratings, and that states attempting to develop should pursue policies that achieve those goals.

Introduction

The repeated financial crises of the early 21st century continue to bring the importance of the global economy to the forefront of policy makers' minds worldwide. The economic relations of states, if not outright economic interdependence, cause the actions of one state to affect the outcomes of others. States are not the only actors, though, that influence outcomes. NGOs, IGOs, and even individual actors can all influence the end result of economic processes. Corporations are finding new and more innovative ways to turn a profit. This is nothing new or surprising. However, the same actors are at unprecedented levels also influencing the governance of those processes. While governments still possess all the official authority and play the largest role in governance, corporations and NGOs have all increasingly begun to influence regime creation and standard setting. Credit ratings agencies (CRAs) are perhaps a quintessential example of such behavior. The agencies' evolution over time, and their increasing importance in financial standards, highlight the ability of private actors to mold behaviors. The Basel accords only give more influence to the agencies, and governments have shown no sign of increasing regulation of the CRAs. This research will add to the knowledge of private governance by examining credit ratings agencies' relationships with several developing states, and then adapt a model as an attempt at explaining *how* agencies derive their ratings.

Evolution of Governance and Financial Power

Historically, states have been almost solely responsible for all forms of governance. The Treaty of Westphalia secured their absolute sovereignty from not only other states, but for over a century any other type of international actor. At that time non-governmental organizations were few and far between and even more rare on the international level. Over time as global powers took turns dominating the planet, non-state organizations, like trade guilds, began to exert some authority. After World War II, the United States showed both the will and the ability to become a global hegemon. As hegemon, the United States effectively implemented the Bretton Woods system (and with it, the World Bank, IMF, and GATT). The United States was home to the largest capital markets in the world, and it was in their interests to establish regimes that encouraged liberalization and low barriers to capital. As Bretton Woods began to fail, temporary market shocks caused fluctuations in the capital markets, and led to some hesitance to invest capital abroad. Ultimately, however, the established regimes kept the markets from becoming completely unstable, and the regimes themselves persisted.

Guided by a desire to achieve peace and limit the spread of Soviet Communism, the United States emphasized with its allies the need for liberalized economics both domestically and abroad. The lowering of trade barriers, especially in the 1980's and 1990's, represented the most recent waves of globalization. The flow of goods and capital across international borders increased economic interdependence among nations. Liberalization led to a decrease in reliance on states themselves for governance, and increased the number of non-governmental and inter-governmental organizations. Additionally, corporations grew from being primarily domestic to giant international enterprises. Organizations like GATT and the WTO facilitated cooperation,by institutionalizing norms of reciprocity. Lower barriers for trade combined with a wealth of capital in the United States led to corporations vying for access to potential investors looking for returns on their capital holdings.

Corporations, as much or more so than other forms of multinational enterprises, have increased their role in international relations, policy making, and standard setting. As the power of international corporations continues to grow, corporations have begun to participate in governance in a manner similar but not identical to states. They hire private security forces, exercise independent judicial authority when it comes to their contracts with employees, and engage in various diplomatic and legislative lobbying. As we will discuss later, corporations can also play a large role in fiscal policymaking.

For much of the past century, the primary method of capital movement was through banks. Banks represented an institutional authority, insured by the federal government that stored capital and guaranteed a return on investment. Due to overhead costs and increasing regulation of how banks invest the money with which they are entrusted, the returns banks are able to offer are minimal. The need for a more efficient process that yielded higher returns- even if it meant higher risk- drove both borrowers and investors to seek the disintermediation of the capital market. The problem, however, was that banks held a near monopoly on evaluating the default risk of potential borrowers. Lenders would still need to remedy this information asymmetry before being willing to take the risk of investing their capital.

The method of this disintermediation became the credit rating agency. The first, Moody's, was established in 1909. A second, Standard and Poor's (S&P) began operating in 1923. A year later, Fitch Ratings, the third primary rater entered the market. All three originally focused exclusively on rating corporate debt. While they shared the market with banks for decades, starting in the 1970's, regulations in the United States enforced by the Securities and Exchange Commission changed the methods of reserve banking. In 1975, banks were granted permission to lower the fraction of reserves they kept and invest more capital, as long as the bank held a high number of deposits in lower risk, safe, bonds and securities. The SEC determined that ratings agencies were the most qualified to verify the risk a borrower would default on its debt. The decision by the SEC that ratings agencies were more highly qualified to determine default risk than banks legitimated the agencies' authority. Default, though, does not necessarily mean a complete failure to repay. A failure to meet any part of the debt agreement (interest rate, payment on time, etc) or restructuring the debt agreement is considered defaulting, and will result in the lowering of a credit grade to default status, regardless of the previous rating. Ratings from all three agencies are listed on a scale, with the highest rating as AAA, then AA, then A, all the way down to C (or D if a borrower is in default). Moody's rating scale differs only in the lettering of the intervals (for example, Baa instead of BBB).

Internationally, the SEC has no jurisdiction, however the ratings agencies have been granted authority by the Basel Committee on Banking Supervision. The BCBS is an informal grouping facilitating cooperation in regards to international banking standards. The Basel Committee has passed three major standard agreements: Basel I, Basel II, and most recently Basel III. Basel II was significant primarily because of the importance it placed on ratings agencies. While banks were not explicitly required to use ratings agencies, the accord did carry over the option banks were given to evaluate credit risk from Basel I. Basel II did increase bankers' reliance on agencies.

It is important to note that while banks are regulated and strongly encouraged to use ratings agencies, there are no regulations officially dictating agency behavior. After gaining SEC recognition as nationally recognized statistical ratings organizations (NRSROs), agencies have full discretion and minimal oversight. According to Timothy Sinclair, it is necessary for agencies to maintain their autonomy from government because "tight regulation would potentially destroy the key thing agencies have to sell: their independent opinion on market matters." (Sinclair 2005, 9) Their independent opinion is especially necessary when considering, as this research does, sovereign debt. Excessive government oversight of the agencies would create a conflict of interest and prevent the agencies from adequately fulfilling their roles as standard setters. Increased state involvement would likely not increase governance, but confuse it. In a global economy, which state is willing and able to exorcise a sufficient amount of authority in capital markets? Any state that tries would immediately be challenged by a host of others. Furthermore, even a hegemon who attempted to control economic capital flows would use an excessive amount of political capital explaining away the inherent conflict of interest.

Non-state actors, however, can flex their authoritative muscle with fewer repercussions. Giselle Datz states that over the past fifteen years, "rating firms have shifted from being simple information providers to a sphere of governance in their own right." (Datz 2004, 304) In underdeveloped countries, this is especially true. While the IMF and World Bank have long held developing states accountable for public policy decisions, they represent public capital, and public capital is no longer the primary source of lending for developing states. Private capital is becoming a more sought after source of investment for developing countries. The agencies that rate this sovereign debt, then, play a significant role in governance. For example, if an agency downgrades a state, private investors are less likely to invest at the same level or for the same rate of return on the investment, making it more difficult for that state to gain access to capital. States, then, attempt to appease the ratings agencies by following policies they believe will gain higher ratings. These policies most frequently involve liberalization and are referred to as the Washington Consensus. Unfortunately while the underdeveloped states that follow these policy prescriptions may gain access to the capital investments they need, the policies can destroy their economies, leaving them no better off than they originally were. Developing states, in order to show their commitment to economic reform, frequently go overboard in implementing their liberalization goals harming their long-term best interests in favor of a positive short-term rating. Instead of adjusting to a short-term crisis, these states continue to make liberal reforms to signal to investors that they are committed to liberalization and are unlikely to revert to protectionist policies.

Literature Review

The financial crises of the past decade have continued to highlight the importance of economic concerns in the field of international relations. While geographical sovereignty has long been one of the pillars of IR thought, many states have little to do with others from a geographical perspective. It is, however, difficult to find states that do not have economic relations. In some way, nearly every state is economically interdependent with at least one other. This integration of state economies into a global economy, brought about by the globalization waves of the 1980's and 1990's, is modifying and changing the role of the state in governance. Globalization is increasing the amount of attention scholars pay to non-state actors. Issues that previously were dealt with in a state-centric fashion, like drug trafficking, are more and more frequently being dealt with in transnational ways. The private sector has long attempted to govern itself whenever possible. Most importantly, private economic agents are attempting to hold developing governments accountable for instituting developmental policies favorable to financial markets. A problem, however, is private entities struggle with enforcement. In something of a combination between transnational state cooperation and private governance, Public Private Partnerships (PPPs), or initiatives that require cooperation between private parties and government, are new ways that international actors address policy problems. The existence of these new forms of regulation indicates that the efficacy of state regulation is reaching its limits and needs augmentation. Globalization is at the heart of this phenomenon. Actors other than the state need to be involved in standard setting. Giselle Datz lists necessary IR standards setters as:

> States, financial markets, international investors, social actors, international financial institutions (such as the IMF and the World Bank), creditor associations, credit rating organizations, and other actors whose power over developing countries is more defining that these countries' relations among themselves or with other national states. (Datz 2004, 305)

This is not to say that the state is dead, or dying, but only that there are certain issue areas created by globalization that the state is not the most effective standard setter. The state (and even "institutions" from the liberal paradigm) is no longer the only answer to the question of who should be involved in problem solving.

There is a difference, of course, between “hard law” and “standards.” States certainly still possess a monopoly on hard law. Corporations, NGOs, and even most IGOs lack the enforcement power to produce hard law. Standards here are defined as a rule, principle, or means of judgment or estimation. Standards are frequently created outside of the functions of a state with the aid of non-state actors. A variety of non-state actors all play a role in international relations. Multinational corporations (MNCs), transnational corporations (TNCs), intergovernmental organizations (IGOs) and the broader “catch all” category nongovernmental organizations (NGOs) are historically researched global actors. This research will focus primarily on MNCs and TNCs, and will refer to them together as “corporations.”

Governance refers not to government, but to the rules, procedures, and processes which order the relationships between states and between states and non-state actors. It can refer to regulation, standards, norms, regimes, and even hard law. Governance is a necessarily broad term that on a general level means simply anything that helps to pattern actor behavior. On a national level, governance is an easy concept to grasp: national governments create laws, bureaucracies, and regulations that shape domestic behavior. Corporations and non-state actors may lobby the government or form contracts with other national actors, but on the whole the state has a monopoly on power. The concept of governance on the international level is especially interesting due to the anarchic nature of the world system. There is no monopoly on power, no hard law to govern state (and non state) behavior. Instead of hard law, international actors respond to norms and regimes. Tracing the creation of these norms is a difficult task, but proponents of hegemonic stability theory argue that the existence of a global hegemon allows for the creation of norms desirable for that hegemon. Robert Keohane, in *After Hegemony* put it best:

> Order in world politics is typically created by a single dominant power. Since regimes constitute elements of an international order, this implied the formation of international regimes normally depends on hegemony. The other major tenet of the theory of hegemonic stability is that the maintenance of order requires continued hegemony (Keohane 2005, 31)

Keohane agreed with the first component of HST, but disagreed that regime sustainability was tied to hegemonic sustainability. Keohane argued that cooperation could occur and regimes could exist after the decline of a hegemon, so long as another hegemon did not come to power. Michael Mastanduno agreed, and uses the United States following World War II as an example. Interestingly enough, he points out that part of the regime created by the US is the importance of private actors:

> Dominant states, generally speaking, have the resources to construct the international orders they prefer, and preponderant capabilities in the world economy over some sixty years have offered the United States opportunity, obligation, and privilege. U.S. central decision makers have therefore had the opportunity to shape the world economy according to American values and interests. Although the United States had declined that opportunity during the interwar period, U.S. decision makers proved more open to it after World War II. As a result, for more than six decades the United States has pursued the construction, maintenance, and expansion of a liberal international economic order on an increasingly global scale, an order characterized by the free flow of goods, services, capital, and technology among private rather than state actors. (Mastaduno 2009,124)

It seems only natural that those who receive goods, services, and capital would attempt to exert more control over it. So in a world order dominated by free trade liberalization regimes (as the hegemonic order under the US was), it is logical to expect corporations to begin to fill any power vacuum a state may have left available. One of the results of the liberal United States hegemony was a minimization of state influence over international capital markets.

The idea that private actors should influence governance is not a new one- indeed; there is no shortage of literature on the topic. Various authors have all examined the general idea that firms affect different policies and either take power from states (Garrett 2008) or are granted power by states to operate (Hall and Biersteker 2002). Regardless of whether power is given or taken, there appears a consensus that private actors such as MNCs and NGOs wield some authority. The bulk of the research has focused on large MNCs. This research will focus on a different type of NGO- the credit rating agency. By explaining the rating system, detailing the history of the ratings agencies, and augmenting a model developed by Nada Mora, this research will shed some light on the influence ratings agencies have on standard setting at the international level, and show their significance as non-state actors.

First, it is necessary to understand that non state actors do wield authority at times in the public sphere- and this is not only true of intergovernmental organizations, but nongovernmental organizations as well, like corporations. Some authors even argue that corporations are capable of becoming completely autonomous from their home state. One of these authors, Allison Garrett, writes, “We are witnesses to the erosion of traditional Westphalian concepts of sovereignty,” in particular the ideal that control of a specific area of land gives the basis for sovereignty. She continues, “Some of the duties of sovereign nations have fallen under their aegis. The power and influence of the world’s major corporations continue to grow, and with this growth their similarities to sovereign states increase” (Garrett 2008, 130). In regards to how corporations are acting more like states, she discusses their economic power, their ability to establish security forces, engage in diplomatic and legislative activities, and influence monetary policy. Most relevant to this discussion are the ways in which corporations, specifically ratings agencies, influence monetary and fiscal policy. The corporation is an integral part of developing the world and driving commerce,

> But much of the drive and most of the enterprise in the world economy has come from the post-World War II explosion of international companies-also called transnational enterprise (TNE) or multinational corporations (MNC)- whose internal transactions constitute more than one-fifth of world trade; and which are overwhelmingly dominant in the exploration and development of minerals (including petroleum), air and ship transport, communications, computers, and many categories of agribusiness, machinery, and consumer goods. (Cleveland 1979, 135)

The corporation is without a doubt the strongest actor in a free market. While political interests hamper the state, and the individual is too small an actor to make a large difference (in most cases) on the international scale, corporations have found a niche, helping to create international regimes and further promoting free trade.

In addition to corporations, there are other providers of governance. One provider of governance is social norms. One of these norms is that of collective action or collective enforcement. Avinash Dixit provides us with a hypothetical example: corporations holding each other accountable in regards to bribery prevention. Each corporation stands to gain from bribing government officials on an individual level. However, as a whole, they stand to benefit by not bribing officials. Dixit explains that in “small and well connected groups, the knowledge that someone gained a contract or license through bribery will spread quickly. Then the norm should stipulate that no one will deal with him." (Dixit 2009, 5) Furthermore, if the briber attempts to share the benefits of the bribery, anyone who accepts would also be labeled and isolated.

A second example of private governance is the Suffolk Banking system. In 1814, the New England area was facing a currency crisis. City banks and country banks were printing different currency, and each had a different real value. The Suffolk bank was created as a clearinghouse, taking on the task of exchanging one currency for the other. While this originally proved to be unprofitable because the country banks printed too much currency, after a brief change in their business model they returned to exchanging currencies. They began exchanging again primarily because the country banks were printing more currency on limited capital, devaluing their currency but making it the most common currency in the region. An excess of bad money (devalued due to inflation) will usually drive out and replace good money. To keep their good money from becoming a rarity, the Suffolk bank agreed to cooperate with six other banks, buying the country currency and shipping it back to the banks of issuance for redemption. Eventually, the Suffolk system gained enough legitimacy that country banks were essentially forced to become members and play by the same rules as the city banks. While the original goal of increasing the circulation of city notes was unfulfilled, by trading the country notes equally the Suffolk system curbed the worst of the inflationist banks. While Suffolk had state sanctioned authority, by denying admission into the system, they could prevent wide circulation of any bank's currency. Furthermore, if a member bank broke Suffolk's rules, other member banks would begin trading that banks currency at a discounted rate. This stabilized the banking system of the entire region.

Not only was the region stabilized, but the banking system grew and flourished. According to Murray N Rothbard,

> Bank capital, note circulation, and deposits, considered together as 'banking power,' grew in New England on a per capita basis much faster than in any other region of the country from 1803 to 1850. And there is some evidence that New England banks were not as susceptible to disaster during the several banking panics during that time. In the panic of 1837, not one Connecticut bank failed, nor did any suspend specie payments. All remained in the Suffolk system. And when in 1857 specie payment was suspended in Maine, all but three banks remained in business. (Rothbard 2002, 121)

Private governance not only caused significant growth in the banking sector, but also successfully solved the inflationary problems of the New England banking system. The government had been either unable or unwilling to solve those same problems. Ultimately, the downfall of the Suffolk system did not come from a financial crisis or government regulation, but from increased competition. The Bank of Mutual Redemption drove exchange rates lower, and Suffolk decided that instead of competing, it would leave the redemption business, effectively ending the Suffolk system and making it no different than any other bank. However, the collapse of the Suffolk system did not result in chaos in the banking industry or even a reversion to a previous norm. Because another bank replaced Suffolk, the banking sector remained stable up until the beginning of the Civil War. The bank commission of Maine stated that while the Suffolk system had never been recognized by banking law, it "proved to be a great safeguard to the public; whatever objections may exist to the system in theory, its practical operation is to keep the circulation of our banks within the bounds of safety." (Rothbard 2002, 122)

In order to create laws, regimes, or standards, an actor on the international stage must have legitimacy. States, by their very existence, have legitimacy. But how do other actors gain legitimacy? Dieter Neubert argues that legitimacy may be drawn from a wide range of sources: tradition, religion, ability to deliver public goods, or elections. Applying these criteria to ratings agencies, it appears that they suffer from a legitimacy deficiency. They do not have a traditional place in society, nor do they have anything to do with religion. They do not deliver a public good, like security, nor are they elected. Ratings agencies do not seek input from the general public. Ratings agencies do, though, provide valuable information to those holding and wishing to invest capital. They cater to a niche market. Their legitimacy, however, is derived originally from state recognition and then comes from the reputation the agencies are able to build in the market.

As markets for products grow beyond state boundaries, governments no longer are capable of providing effective regulation. This is true for markets for products as well as for capital. By rating the likelihood of debt repayment agencies are fulfilling a role that states could not adequately fulfill. When it comes to the role of rating sovereign debt, ratings agencies are in a unique position to influence the policy decisions of states and investors. States could not rate either their own debt or the debt of other states without a blatant bias, making them unqualified to fulfill this role. In regards to the agencies' relation to government, Sinclair states "Despite assumptions to the contrary, the work of ratings agencies, in terms of their criteria and decision making, is not regulated seriously anywhere in the developed world. Indeed, tight regulation would potentially destroy the key thing agencies have to sell: their independent opinion on market matters." (Sinclair 2005, 9) This is not to say that governments completely ignore the agencies. In the United States, for example, some public pension funds are required to only invest at certain ratings levels.

Credit rating agencies have existed since the early 1900's, and over time they have become one of the most important institutions in the modern economy. By rating an institution's debt, the agency eliminates or helps to eliminate an information asymmetry, which can then incentivize creditors to invest in the company or discourage them from doing so. In addition to rating the debt of corporations, they also analyze and report on sovereign debt.

In the world of international relations, in order to be a relevant entity, an actor must have sovereignty, or some form of authority over a specific area. This area can be tangible, like land in the case of states, or intangible, like tariffs in the case of the World Trade Organization. Another example, the focus of this research, is the credit ratings agencies- Standard and Poor's, Moody's, and Fitch. There are other agencies that provide similar services, but these three provide the vast majority of the supply to the market. But what do these ratings agencies do, and how long have they represented an authority figure in the international capital markets? According to Sinclair, these agencies are instrumental to financial globalization, helping to shape what governments do.

Ratings agencies evaluate the likelihood of debt repayment (or default) of corporations and sovereign entities. Originally, the agencies focused solely on corporations, but as states needed capital to develop, they recognized the emerging market for sovereign ratings and began providing those as well. One of the major critiques of ratings agencies is that they behave in a procyclical manner. By reacting to crises, and not predicting them, it has been argued that the agencies contribute to the boom and bust cycle. Even if they do not behave in a procyclical manner, their "announcements may still trigger market jitters because many institutional investors can hold only investment grade instruments." (Kaminsky and Schmukler 2002, 172) Changing sovereign debt above or below the investment grade threshold may have a drastic impact on prices because ratings changes affect the number of investors. For this reason, among others, Rahim points out that the confidence in ratings is slowly eroding. A series of market difficulties, starting with the Asian financial crisis, followed by the positively rated corporations of Enron and Worldcom, and finally the market collapse caused by the US subprime mortgage market, call in to question the validity of the entire rating system. According to Rahim, the "agencies were late in identifying the impending difficulties of the parties involved, and downgrading the ratings of the parties that got into trouble." (Rahim 2010, 435) Until five days before its bankruptcy, Enron received an investment grade rating from all three major ratings agencies. The agencies also failed to warn investors about the risks of "structured finance" or the debacle that became the subprime mortgage market. Rahim calls for holding ratings agencies accountable by forcing them to publish the standards and criteria use in establishing ratings, increasing regulation in regards to training standards for credit analysts, and decreasing the reliance on agencies through regulation like the Basel accord. There have been two Basel accords fully implemented over the past twenty-five years, with a third one to be implemented shortly. Prior to the accord, banking supervision relied on bank examiners to determine the worth of a bank's assets. Global capital flows and multiple financial crises in the 1970s and 1980s led to a call for increased supervision. This was especially true in situations where the crises caused contagion, or spread across international borders. Those responsible for regulating banks realized that the increasing competition between financial institutions, combined with governmental policies of being a lender of last resort, incentivized banks to take on too much risk. Recognizing the global nature of the financial system, central bankers determined an international agreement was required. The G-10 central banks met at the Bank for International Settlements and created the 1988 Basel Capital Accord. The first accord addressed credit risk and called for minimum capital standards operating in the countries participating in the agreement. It consists of two primary sections: the first defines capital, and the second outlines a system of risk that determines the minimum capital applied to various asset classes. The goal of the Accord is simply to force banks to carry sufficient capital to cover their risk. The first tier is further explained by the following table, which outlines the options for detailing credit risk and credit levels quantitatively for banks.

TABLE 1. Different Options Proposed in the First Pillar of Basel II

Approach	*Basic credit risk measurement technique*	*Credit risk mitigation*	*Securitization risks*	*Operational risk*
Simplified standardized	Export credit agencies (www.oecd.org, trade directorate, ECA page)	Simple: risk weight of collateral substitutes that of claim	SSA banks can only invest (cannot offer enhancements or liquidity facilities). Risk weight = 100 percent.	Basic indicator: Capital = 15% gross income
Standardized	Export credit agencies or credit rating agencies (such as S&P, Moody's, Fitch)	Simple: same as simplified standardized approach. Comprehensive: exposure amount reduced subject to claim and collateral haircuts.	Standardized: uses export credit agency ratings (only investing banks can use below BB+)	Basic indicator, or standardized approach where bank capital = weighted sum of gross income across activities.
Internal ratings-based Foundation	Banks' internal ratings for default probability and Basel II formula sets capital requirement (loss given default 45% for senior and 75% for subord).	Comprehensive, loss given default adjusted given reduction in exposure and capital requirement given by Basel formula.	IRB approach: Investing banks may use bank ratings according to a standard scale. Originators may use supervisory formula.	More sophisticated banks will be expected to graduate to the advanced measurement approach where capital requirement is given by own risk measurement system.
Advanced	Banks set internal rating (default probability), Loss given default exposure at default and maturity. Capital requirement still given by Basel formula.	Own model determines Loss given default and exposure at default; capital requirement given by formula.	As for Foundation IRB approach.	As for Foundation IRB approach.

(Marjnoni and Powell 2005, 110)

Basel I divided bank capital into two tiers: the primary tier consists of amounts paid by shareholders. The secondary tier consists of preferred shares and subordinated debt.

Basil I set the minimum level of bank capital at 8 percent of the risk adjusted asset exposure. Tier 1 capital had to make up at least half of that amount. While this agreement held all banks of the G-10 to these standards, bankers outside of the US complained that the standards were too stringent, and that only US banks needed such strict standards. According to King and Sinclair, banks responded not by following the spirit of the new regulations, but by maneuvering through every loophole imaginable. Banks "cherry picked" the riskiest assets from each category, securitized debts, and took any risky investments off their balance sheets they could. Unfortunately, Basel only applied to banks, so non-bank institutions like portfolio managers and insurance companies were able to continue to take on as much risk as they wanted without any sort of regulation. The unregulated institutions had a significant competitive advantage because they were not inhibited by the same standards banks were.

Basel II set out to address many of the problems of Basel I. In particular, Basel II set out to further limit the risks banks could take by removing exceptions for investing in OECD (Organization for Economic Development) states. Previously, banks could invest in these developing states and not take into account default risk at the same rate as if they were investing in a developed state. Exceptions for OECD states pushed capital flows in that direction and limited the incentive for investing in developed states. Developed states recognize this as a problem and are pushing for changes in Basel III.

The new Basel III (or the New Capital Accord) would require supervisory regulators to rely on ratings supplied by the agencies. Rahim speculates that the new proposal will continue to cause unequal access to credit by relaxing capital standards in industrialized states while raising requirements in developing countries. This would result in less lending to the poorer countries, further stress poverty relief programs, and increase the cost of lending in those states. (Rahim 2010, 436)

In addition to the increased difficulty for gaining access to capital in developing states, Sinclair lists several other reasons to avoid placing such importance on the ratings agencies. The first is that ratings are pro cyclical, and has already been discussed in this review. The second is that "rating agencies lack economic accountability." (King and Sinclair 2003, 353) If agencies are to be involved in regulation, should they not be held accountable for any miscues? Agencies, however, are adept at hiding behind a standard "this rating is opinion only and should not be considered investment advice" disclaimer that technically classifies their ratings as free, protected speech. In spite of multiple unpredicted market crashes, agencies have avoided increased legislative and regulatory scrutiny, while still maintaining their privileged status as standard setters in the banking industry. Sinclair argues that even if they were somehow found liable in court, they would lack the available capital to cover any damages they were held responsible for, leaving investors paying higher prices or taxpayers sponsoring a government bailout. This would leave the agency economically no worse off than before.

The third reason is that ratings agencies have authority, but lack political accountability. Because the agencies are neither political or market based, but a mixture of each, they fall into a category difficult to regulate. They gain their authority not just by being recognized by the government, but because the public believes in their reputation. The only form of accountability ratings agencies are held to is reputational hazard. If the agencies fail to predict enough crises, eventually consumers will stop trusting their judgment and will look elsewhere for the specialized informational services the agencies provide. However, no real competition is in place for the agencies (as will be discussed later) so consumers have no plausible alternative. Furthermore, by increasing the reliance on the agencies, Basel II and soon Basel III greatly limit this reputational check on the authority of the agencies. By requiring their usage, the Basel accords have legitimized the actions of the credit rating agencies.

Sinclair, in *New Masters of Capital* (2005) states that debt ratings are based on fiscal policy. Conservative fiscal policy tends to produce higher ratings. Sinclair suggests that governments should avoid being the “lender of last resort” and attempt to run budget surpluses. One of the ratings agencies, Moody’s, is “imposing on democracies economic and political decisions that the democracies, left to their own devices, simply cannot make” (Friedman 1995, 1). More simply put, democracies are usually incapable of making the toughest economic and political decisions because gaining a consensus is difficult. Most recently, this was evident in the debate on raising the debt ceiling. Political pressure imposed on politicians both by constituent demands and partisan ties had the Congress teetering back and forth between raising the debt ceiling or forcing the United States to finally operate on a budget guided by fiscal responsibility. The resulting public, heated, political debate caused a downgrade by one ratings agency (Standard and Poor’s) and a change in forecast by another (Moody’s). One of the reasons a compromise could be reached was because of the opinions voiced by the ratings agencies during the debate. The agencies implied that defaulting on the debt- by not raising the debt ceiling- would result in a downgrade, but also that continuously increasing spending without raising new revenue and putting the United States further in debt was also not the answer. Equilibrium needed to be reached. Fitch was satisfied with the compromise and left the credit rating unchanged. Standard and Poor's was unsatisfied and downgraded, while Moody's left the rating mostly the same but changed the outlook from positive to negative.

The United States is not the only country to go through the downgrade process- nor was it the last. In January of 2012, several European countries also had their rating taken down a notch, including France, Austria, Slovenia, Slovakia, and Malta. Other European countries, like Spain, Portugal, Cyprus, and Italy, were downgraded two notches each. S&P claims there are systemic issues in the Eurozone, and that the policy initiatives leadership was taking were likely to be insufficient.

Giselle Datz argues that between increasing liberalization of international markets and technological advances, sovereign credit raters have shifted from being simple information providers to a legitimate private authority governing capital flows. They are "powerful rule makers, a private site of governance that induces and controls public policy making." (Datz 2004, 304) Not only do they influence providers of capital, but also public policy, particularly in developing countries. Datz cites Argentina as a quintessential example of a state developing an economic program based on the principle of limiting sovereign risk. Global capital can essentially discipline states based on investment levels and more or less set minimal standards for acceptable economic policies. Industry is necessary for development and capital is necessary for the creation and maintenance of new industries. Assuming states are not able to provide sufficient capital themselves, as is often the case in developing or emerging economies, states must appeal to outside investors to gain the necessary capital. The majority of these outside investors are not other states but private investors. Private capital is increasingly surpassing public capital on international markets: over the past twenty years, public sector debt rose 167% while private sector debt rose 667%. (Datz 2004, 306) Developing nations represent the most fertile grounds for capital investment. This is in large part traceable to the liberalization of developing markets over the past twenty years. While a common strategy for development, particularly in Latin America, was to protect markets through high tariffs, more recently a branch of thought focusing on liberalization has taken root: the Washington Consensus.

But what is the "Washington Consensus?" According to John Marangos, the Consensus "was in principle geographically and historically specific, a lowest common denominator of the reforms that he judged 'Washington' could agree were required in Latin America at the time." (Marangos 197, 2009) And it included "the International Monetary Fund (IMF), the World Bank, and the US executive branch, the Federal Reserve Board, the Inter-American Development Bank, those members of Congress interested in Latin America, and the think tanks concerned with economic policy." (Marangos 197, 2009) The consensus was a consortium of the top developmental policy makers in the Western world, and included the following ten policy recommendations (Marangos 199, 2009):

1. Fiscal policy discipline;
2. Redirection of public spending from subsidies to social welfare programs;
3. Tax reform – tax a broad base with moderate taxes on the margins;
4. Interest rates should be determined by market forces and positive;
5. Competitive exchange rates;
6. Trade liberalization – avoid import licensing, exempt intermediate goods from tariffs;
7. Liberalization of inward foreign direct investment;
8. Privatization of state enterprises;
9. Deregulation – abolition of regulations that impede market entry or restrict competition;

10. Legal security for property rights.

While these appear to be broad, navigable reforms for developing countries to take, many struggle to do so, and in the case of Argentina, it helped contribute to a total financial collapse. Datz explains the boom and bust cycle of Argentina, pointing out that first, international capital markets see a shift in financial opportunities that lead to credit expansions as investors seek high profits. Speculation increases, creating an artificial boom in the price of highly sought assets- as speculation about price increases goes up, perceived potential profits goes up, drawing in more investors. At some point, investors realize the market is nearing its peak and will start to cash out. Fearing loss of investment and trying to cash out with as much profit as possible, other investors follow suit. Prices fall and continue to fall until eventually the bubble of speculation bursts, prices collapse, and panic spreads causing investors to flee the market. In the case of sovereign bond markets, when the bubble bursts it leaves the developing country in a severe recession with minimal amounts of capital to invest in industry that was expecting growth, which can in turn cause unemployment and inflation. Borrower states, according to Rahim, are pressured to make domestic policy decisions that garner the approval of the ratings agencies. These procyclical policies (expansionary policies in booms, contractionary policies in busts) are further exacerbated by the agencies themselves, and push sovereigns further into depressions and into higher unsustainable peaks. Datz notes that "along with a volatile financial context, the shift in developing country financing from multilateral lenders to private investors and the liberalization of financial markets gave rating agencies a more critical role than was generally understood." (Datz 2004, 307)

Another example is the country of Hungary. Hungary is a former member of the Soviet bloc that only began liberalization in earnest in the 1990s. Between 1990 and 1995, free market capitalism operated in stark contrast to the state centric economy of before: thousands of new small businesses began. Some failed. Both the state and corporations carried less debt. Private contracts were enforced, and the banking sector grew. All of these lead to an increase in foreign capital flows, and starting in 1996 Hungary was graded as investment level (BBB) or higher by Fitch. Janos Kornai attributes performance of the export sector to the strong inward flow of capital. Kornai continues explaining post-soviet development:

> "The sale of state assets, if it takes place at a correct price, does not alter the distribution of wealth or income. The wealth of the state is not reduced; it simply changes form. Revenue from privatization has to be invested usefully, not consumed. Hungary managed to employ its receipts to reduce foreign debt, at least during the big wave of privatization, when much of the energy and telecommunications sectors were sold. *The consequent reduction in interest payments and marked improvement in the country's credit rating brought real benefits for all the country's citizens.* (Kornai 2000, 17) (emphasis added)

While not every state in this research is undergoing a post-communist shift in economic and political ideology, Kornai underscores the importance of both privatization and the reduction of foreign debt as an independent variable to measuring credit ratings.

While credit rating has long been a fixture on Wall Street, the emergence of the sovereign bond market has put ratings agencies front and center in the global economy. Why? Even in domestic markets ratings agencies played an important role in eliminating information asymmetries. Borrowers have a much more complete understanding of their ability and willingness to repay loans than lenders do, and in order for potential lenders to engage in lending, information needs to be distributed to warn lenders of potentially insolvent borrowers. This disintermediation is also related to the inherent costs of banking as opposed to other methods of investment. Banks must maintain infrastructures, check the creditworthiness of borrower, set the terms for loans, and administer and monitor the payment of those loans. Banks must also keep fractional reserves compared to loans outstanding, creating an opportunity cost that banks are unable to maneuver around. Mutual funds (and other capital funds) have only a fraction of the overhead costs of banks, meaning they are able to offer higher financial rewards than banks on the same investments. Ratings agencies are usurping the previous role of banks in regards to judging the worthiness of potential borrowers. However, banks and agencies maintain different motives: banks want to “minimize the cost of borrowing and maximize their real return from lending” whereas raters simply want to “issue a rating which reflects the probability of repayment at the contracted rate of interest.” (Sinclair 2005, 451) One of the biggest differences between banks deciding on creditworthiness and ratings agencies deciding is that banks are focused on financial variables while agencies are focused on economic variables. Whereas banks at times require collateral for loans, no such requirement exists in the bond market. Therefore investors are taking greater risks but in the hopes of a greater payoff. By focusing on big picture variables, like demographics of a tax base, ratings agencies attempt to quantify risk in ways banks never had to.

While the ratings agencies play a vital role in the markets, it is interesting to note that in spite of increased demand there are only three major agencies: Standard and Poor’s (S&P) Moody’s, and Fitch. While S&P and Moody’s have opened up offices in foreign countries, no foreign ratings agencies have been able to penetrate the US market. The Security and Exchange Commission set up regulations that make it difficult for these foreign agencies to become NRSROs, which prevents these potential competitors from gaining the necessary legitimacy to become relevant. The SEC refuses to adopt an official procedure for obtaining NRSRO status and (allegedly) delays processing applications for several years for foreign agencies. This lack of competition gives the three US ratings agencies, but especially Moody's and S&P due to their size, a notable oligopoly on the ratings market. Dependency theorists argue that this is yet another example of a developed country stacking the deck in their favor against the developing world.

The chart below shows the different "grades" a country can receive from each rating agency. "Investment grade" is the minimum level required by most banking standards in order to invest in a bond, and "speculative grade" is viewed as a high risk. Generally speaking, speculative grade bonds yield higher returns on investment, making them more appealing for capital fund managers. However, due to the higher risk, regulations require that only specific types of funds be allowed to invest in speculative grade bonds. For example, public pension fund managers are not able to invest in bonds below investment grade.

Moody's	S&P's	Fitch
Aaa	AAA	AAA
Aa	AA	AA
A	A	A
Baa	BBB	BBB
*Ba	*BB	*BB
*B	*B	*B
*Caa	*CCC	*CCC
*C		*CC, C
*speculative grade		

Argentina began a process in 1991 to liberalize their economy, and also to signal to investors that this change was real and lasting. To limit inflation, Argentina linked the Argentine peso to the dollar. In combination with a domestic privatization program, this linkage enabled Argentine exports to flourish, and the government increased its stock of foreign reserves. International capital poured in, which only reinforced the policy decisions of Argentine policymakers. Argentina continued to follow the prescriptions of the Washington Consensus: less regulation, more privatization, and fiscal responsibility. Then, worldwide recession hit: the Asian financial crisis of the late 1990's had global consequences, in 2000, the value of the euro declined, and Argentina's chief competition, Brazil, devalued their currency causing Argentine exports to be significantly less competitive. As markets adjusted (and capital began flowing elsewhere) unemployment skyrocketed. Still, Argentine policy makers persisted in trying to prove they were committed to the reforms that drew the capital in. With a weakening export sector and a massive public debt burden, policy needed to change, specifically the linkage of the peso to the dollar. By the end of 2001, Argentina defaulted on its $132 billion dollar debt. Ratings agencies, despite Argentina's commitment to the Washington Consensus, had downgraded the debt to CCC+, one of the lowest ratings possible above default. In addition to all the quantifiable problems Argentina faced, and in large part caused by those problems, political unrest followed. Political stability is yet another factor that plays in to credit ratings, meaning it will continue to be difficult for Argentina to recover.

The case of Argentina is not the only case of private standard setters influencing policy makers. While some states are capable of making the massive reforms these standard setters attempt to enforce, most governments are not. Those who fail but remain committed risk putting their country in a cycle of economic and political self-destruction. External forces (particularly the devaluation of the Brazilian currency) played a large part in the Argentine default, showing the influence of globalization on domestic economies and demonstrating that policy flexibility is important for developing states.

While a currency crisis in Brazil played a part in the Argentine default, Brazil has done a much better job developing. Brazil historically favored protectionist policies. According to Pinheiro, Gill, Serven, and Thomas, “Brazil’s growth pattern during the 20th century is unique in more than one way. Until 1980, Brazil was among the fastest-growing economies in the world.” (Pinheiro, Serven, Thomas, & Gill 2004, 4) Brazil achieved this growth by maintaining industrial protectionist policy, and only recently (1990) began to lower tariffs. Even today, however, Brazil remains one of the “emerging” economic powers, but also one of the more protectionist modern economies according to Eliana Cordoso, who says “In 2007, Brazil ranked 92nd out of 125 according to the Trade Tariff Restrictiveness Index.” (Cordoso 2009, 10) Brazil has taken a gradual approach to liberalization, has not pandered to ratings agencies, and as a result has never seen its rating dip below B. They remained flexible during their crises, and instead of defaulting came up with a policy solution (currency devaluation) that enabled them to not only avoid default but increase their sovereign credit rating to BBB in the span of only a few years. In fact, Brazil’s rating (only its outlook) never dropped during the currency crisis. While it is possible that this could represent a weakness in the legitimacy of the ratings agencies, it is more likely that the agencies recognized the situation in Brazil required creative solutions and rewarded Brazil for implementing sustainable policies.

Developing states are not the only ones affected by ratings agencies, however. In the summer of 2011, the United States was facing a political and economic crisis. Congress was faced with the (supposedly) difficult decision of raising the debt ceiling or defaulting on US public debt. In previous years, the vote to raise the debt ceiling has been considered a guarantee. It happens almost every year, and never causes much debate. 2011, though, was different. Several conservative lawmakers were holding out and convincing multiple others to do the same, leading to the real possibility of the United States defaulting. Cooperation between conservative and liberal lawmakers was nonexistent, until the credit ratings agencies publicly announced that if a deal was not met, a downgrade would be necessary. This was enough of a shock to the public that constituent demand became enough for Congress to reach a compromise. Perhaps most interesting, though, was that the agencies did not merely say a compromise would be enough to save the rating. The announcement implied that while raising the debt ceiling was necessary, the government also needed to become more fiscally responsible. Ultimately, Standard and Poor's continued with the downgrade in spite of the higher debt ceiling because they recognized that the political instability the deadlock between conservatives and liberals in Congress created. The official S&P report said,

> we have changed our view of the difficulties in bridging the gulf between the political parties over fiscal policy, which makes us pessimistic about the capacity of Congress and the Administration to be able to leverage their agreement this week into a broader fiscal consolidation plan that stabilizes the government's debt dynamics any time soon. (Swann, Beers, and Chambers, 2011, 2)

It is this subjective assessment of the political credentials of a country that is one of the most controversial aspects of the ratings process. Obviously, a lack of cooperation either within the legislative branch or between the different branches of a federal government is an indication of political instability. However, given the frequency of Congressional elections, and that ratings agencies tend to focus on long term instead of short term indicators, it hardly seems like a summer of squabbling would be sufficient for a downgrade.

The cases of Argentina, Brazil, and the United States represent three distinct cases of private actors wielding authority that previously was reserved for states. Argentina, as a nation struggling to develop, represents one end of the political and economic spectrum, while the United States represents the other. Brazil represents a kind of middle ground between the two, and provides an excellent example of avoiding the trap of basing policy strictly on ratings. Brazilian policy makers, by devaluing their currency, made their exports more attractive than Argentine exports, which in turn made it more attractive to invest capital in Brazilian debt than Argentine. It prevented a ratings downgrade in Brazil and caused (or contributed to causing) a downgrade in Argentina. Generally, ratings are not zero sum (an upgrade for one does not mean a downgrade for another) but in this case the two countries were closely related. Ratings agencies played a vital role in influencing policy makers in both countries and “directing” investment in one direction. The Brazilian economy’s continued rapid growth is due in large part to their avoidance of both a default and a downgrade.

The following model elaborates on several of the factors that appeared to lead to the downgrade in Argentina. By looking at sixteen countries economically similar to Argentina, I show several variables of importance to ratings agencies by comparing them to changes in rating over time.

Data:

This study is based on a previous model developed by Nada Mora. Mora used data on Moody's and Standard & Poor's sovereign credit ratings for long term, foreign currency debt. This study, however, uses Fitch rating service, because recent ratings data was most readily (and freely) available. While this would likely result in some variation, the effects of using Fitch instead of Moody's or S&P's is likely minimal as in most cases the agencies are in agreement, or at least agree on whether an outlook is positive or negative. The Mora study selected seventeen different states, and collected data for those states over a span of ten years. Tracking data for specific states over time allows for an increased sample size, and enables more effective observation of trends in rating. I chose those same seventeen states, and used data over a six-year time span (2004-2009). The goal is not to replace Mora's study, but to improve upon it.

Ferri et al. (1999) used a cardinalization similar to my own. A rating of AAA received a score of 90, a rating of AA received a score of 80, continued down to a rating of C receiving a 10. Anything "in default" (D, RD,) was scored a 0. I did not consider outlook in the cardinalization. Credit outlooks are the most frequently changed aspects in the ratings, therefore using outlook changes from Fitch instead of Moody's or Standard and Poor's would have increased the variation. The best way to fix this problem would be to gather data from all three agencies, unfortunately, that data was not available at this time.

Macroeconomic data was obtained from the World Bank's World Development Indicators index and indexmundi.com, which compiles data from the CIA World

Factbook and other sources. Variables were selected based on the Mora study, with a few notable changes. Variables from her study include gross domestic product per capita (purchasing power parity), real GDP growth, consumer price index inflation, and debt as a percentage of GDP. Variables I did not include from her study were account balance as a percentage of GDP, external debt to exports of goods and services, and current account balance as percentage of GDP. I did include current account balance, but did not calculate it as a percentage of the gross domestic product. The variables excluded were not the most statistically significant found in her study. Also, I added two variables. Descriptive statistics can be found in the following table:

Variables**:**	Minimum	Maximum	Mean	Std Dev
GDP Per Capita PPP	2600	41800	16001.96	19261.30
GDP Volatility	-6.8	11.9	3.88	3.84
Inflation Rate	-.9	30.4	4.66	5.06
Current Account (In billions)	-42.09	426.1	23.47	66.75
Debt GDP	9.5	141.97	52.09	30.75
Gini Coefficient	.26	.57	.39	.08
Globalization	47.43	87.37	67.45	11.82
Note: N=103				

The first of the added variables was the Gini coefficient, the second an economic globalization score from the KOF index produced by the Swiss Federal Institute of Technology in Zurich. I anticipated the usefulness of the Gini coefficient as an independent variable, because states with largely unequal incomes would be unable to effectively use taxation as a means to service their debt. Since the ratings are a supposed metric of ability and willingness of a sovereign's ability to repay their debt, it is only logical that the sovereign needs a source of income to do so, and taxation is one of the most widely tapped sources. Data for the Gini coefficient was taken from the World Bank database, and only data from 2005 was used due to incomplete data availability. Because the Gini coefficient changes very gradually, generalizing the data from one year over the course of the study should not yield any major inaccuracies.

GDP per capita (PPP) was used because the larger a tax base, the greater ability the government has to repay any debt burden. Furthermore, using the purchasing power enables measurement of general standard of living, which can be an indicator of social development and political stability.

GDP volatility is operationalized as the amount of GDP growth (or decline) as a percentage of the previous year. In most developed countries, growth rates are small and stable. Higher growth rates can represent unstable developing economies, and therefore can be a negative indicator of future debt repayment. A 10% growth in GDP one year could be followed the next year by a 5% shrinking of GDP. At the very least, high growth rates and high shrink rates are generally unsustainable over several years. However, generally speaking, rapid growth is better than negative or no growth. A state experiencing growth should therefore have a higher credit rating. Therefore, despite the appeal of both hypotheses, I expect a positive relationship.

Inflation as measured by the consumer price index refers to the average change paid by consumers for a variety of consumer goods and services. High rates of inflation indicate problems in the financial policies of a government, and often result in political instability, as governments must choose whether to pay for expenditures via taxation or increased currency circulation.

Current account balance is a combination of four variables: the total value of exports, the total value of imports, net income abroad, and net current transfers. This data was already calculated within the data set and is presented as current account balance. A surplus does not always indicate a strong economy, nor does a deficit always indicate a weak economy. Generally speaking, however, the closer a country is to having a balance of 0, the better its economy should run. I expect a positive relationship for this variable as well, because all things considered a surplus is usually better than a deficit.

The KOF score is calculated by constructing two separate indexes. The first index measures actual flows of trade (50%), foreign direct investment, and portfolio investment (all in percentage of GDP). The second index measures trade and import barriers, tariff rates, and taxes on international trade (50%). For a further explanation, see Axel Dreher's "Does Globalization effect Growth? Evidence From a New Index of Globalization." The model used in this research combines those two indexes and uses the composite score, representing economic globalization. My hypothesis is that the more economically globalized a state, the better their credit rating. More trade and investment should indicate a more developed (and stable) economy, and lower trade and import barriers could indicate that the state is not reliant on tariffs to raise money.

The Gini Coefficient represents the stratification of income within a country. The higher the score, the more likely a dual economy exists. A lower score indicates a more equitable division of income. The advantages of using the Gini Coefficient are many. First, it does not consider the overall size of the economy. It functions as a measure of equality strictly within a population. It does not matter how large the population. The coefficient does take into consideration monetarized welfare programs in a country, however one of the main criticisms is that non-monetarized welfare (such as food stamps) is not included. If states use these non-monetarized forms of welfare, their Gini coefficient becomes less useful. However, a good (low) Gini score would indicate a larger economic base from which a government can draw taxes. Taxes are one of the ways governments can raise money in order to pay off a debt. It would stand to reason therefore that the lower a Gini score, the better a state's credit rating.

Variable	**Coefficient**	Std Error	**Z**	P>|Z|
GDP Per Capita PPP	-.000	0	-.74	0.461
GDP Volatility	-.546	.203	-2.68	0.007**
Inflation Rate	-.283	.184	-1.53	0.126
Current Account	-.012	.011	1.07	0.286
Debt GDP	-.269	.069	-3.84	0.000**
Gini	-56.240	23.14	-2.43	0.015*
Globalization	.836	.145	5.76	0.000*
Constant	55.806	10.87	5.13	0.000
Notes	*P<.05	**P<.01	R^2=.774	

The regression analysis uses a time-series cross-section. Pooling state data over time increases the number of cases and the ability to generalize over time and across states. In order to limit the influence of atheoretical period effects, the regression was done with a common autoregression coefficient, instead of a panel or state specific autoregression coefficient.

As table 2 shows, the independent variables account for 77% of the variation in the dependent variable. The four statistically significant variables are GDP volatility, debt as a percentage of GDP, economic globalization, and the Gini coefficient. Neither the significance nor the direction of the results is surprising, except in the case of GDP volatility.

GDP volatility shows the opposite direction of my hypothesis. This is likely indicative of a lack of stability in those states that experienced shrink (half the states in the study, for at least one of the years presented, experienced shrink). Almost all states experienced a near 5% or greater drop in GDP growth at some point. The negative correlation indicates that the bigger the change, the worse the rating. Considering one of the most frequently voiced critiques of the ratings agencies is that they behave in a procyclical manner, this result was especially surprising. One would think the opposite would be true, and that the larger the growth, the higher the rating. That ratings are procyclical cannot be considered a given, and whether they exacerbate the boom and bust cycles should be researched further.

Globalization is the most strongly correlated variable (t=5.76). The more globalized a country, the higher its sovereign debt rating. Globalization has both its detractors and supporters. Specifically, detractors like to point out that globalization leads to: the outsourcing of jobs (and therefore an increase in unemployment), the driving down of wages, and an increase in the stratification of wealth. Globalization tends to make the rich significantly richer, while only marginally improving the lives of the less fortunate. Increased competition is good for those who can survive it. Unskilled laborers, though, frequently cannot. Or at least that's the case in developed states. However, the jobs being outsourced from the developed states usually are going to the underdeveloped and still developing states. Wage rates as well as employment rates generally increase. That is not to say that labor, even in those states that benefit from outsourcing, benefit as much as those in the upper class. They do however benefit more than laborers in the developed states, who must attempt to move vertically in the job market, which requires more education and personal development than many are able to accomplish with the limited resources available to them. Thomas Friedman, a major proponent of globalization (and free trade) acknowledges this as a concern.

> Those American low-skilled workers doing fungible jobs—jobs that can easily be moved to China—will have a problem. There is no denying this. Their wages are certain to be depressed. In order to maintain or improve their living standards, they will have to move vertically, not horizontally. They will have to upgrade their education and upgrade their knowledge skills so that they can occupy one of the new jobs sure to be created in the much expanded United States – China market. (Friedman 2006, 266)

A state's debt as a percentage of its GDP has a strong negative correlation. This was not surprising. In Mora's study, the budget balance variable was insignificant and held a positive correlation. I suspected however that since the majority of the states in the study were running deficits instead of surpluses, that the correlation would be more significant and would also be negative. The more debt states have, the less likely they are to pay off future debts, much like a consumer using one credit card to pay off another. Eventually, new debt reaches unsustainable levels and the country defaults.

As predicted, the Gini coefficient was shown to have a significant negative relationship. A population with a larger, more equitable income distribution is more likely to contribute to a fertile economy. The more funds a government can raise through taxation, the easier it will be to pay off any debt. Furthermore, a higher percentage of people with disposable income keeps an economy growing and unemployment down. Conversely, having income concentrated in a small portion of the population leads to a dual economy.

Conclusion

In conclusion, ratings agencies are important standard setters in the global economy. They play a vital role in state development, which makes it all the more frustrating that they are not completely transparent in how they derive their respective ratings. In truth, revealing their formulas could cost them their competitive advantage, and from a corporate standpoint it is entirely not justifiable to release that kind of data. However, if regulators are going to continue to require the use of ratings agencies, then regulators should push for some greater transparency. Incorporating useful information providers like the ratings agencies into the Basel accords is not a bad thing, but the lack of regulation of the agencies presents problems. The responsibility of banks to rely on agencies should not continue to increase until agencies are held to higher levels of political and economic accountability. Ratings agencies must endeavor to more accurately predict short-term potential crises in addition to their stated purpose of rating long-term ability to repay a loan or “rating through the cycle.”

Future research should further explain variations in rating by adding more independent variables. For example, a variable measuring political stability and/or political gridlock would improve the model. An effort should be made towards compiling the other agencies' historical ratings and including the ratings outlook in the model. Doing so would greatly improve the quality of the dependent variable. This model has only been applied to developing countries. It would be interesting to apply the model to developed states (France, the US, and Germany) to see if it continues to account for so much of the variation in ratings.

Appendix 1

Data by Country:

Country	Year	Fitch Cardinal	GDP per Capita (PPP)	GDP Volatility	Inflation Rate	Current Acct Billions	Debt %GDP	Gini (2005)	Globalization
Argentina	2004	0	12400	8.3	6.1	5.47	135.90	0.492	62.23
Argentina	2005	0	13700	9.2	9.6	5.45	125.80	0.492	60.33
Argentina	2006	0	15200	8.5	9.8	8.05	85.50	0.492	60.17
Argentina	2007	0	13100	8.7	9.2	7.44	76.40	0.492	60.17
Argentina	2008	0	14200	6.8	8.6	7.59	67.70	0.492	59.85
Argentina	2009	50	13900	0.9	7.7	11.29	58.10	0.492	58.94
Australia	2004	90	30700	3.5	2.3	-38.30	12.90	0.315	81.13
Australia	2005	90	31600	2.7	2.7	-42.09	11.70	0.315	80.78
Australia	2006	90	33300	2.7	3.8	41.62	10.70	0.315	81.56
Australia	2007	90	37300	4.3	2.3	56.78	9.80	0.315	82.05
Australia	2008	90	38100	2.3	4.4	-41.88	9.50	0.315	80.29
Australia	2009	90	39900	1.2	1.8	41.33	11.60	0.315	81.60

Country	Year	Fitch Cardinal	GDP per Capita (PPP)	GDP Volatility	Inflation Rate	Current Acct Billions	Debt %GDP	Gini (2005)	Globalization
Brazil	2004	60	8100	5.1	7.6	8.00	74.70	0.574	58.65
Brazil	2005	60	8300	2.3	6.9	14.19	70.60	0.574	59.04
Brazil	2006	60	8800	3.7	3	13.50	55.75	0.574	58.80
Brazil	2007	60	9500	5.4	3.6	1.71	57.39	0.574	59.70
Brazil	2008	70	10200	5.1	5.7	-28.19	56.64	0.574	58.72
Brazil	2009	70	10100	-0.2	4.9	24.30	61.02	0.574	59.36
China	2004	80	5600	9.1	4.1	30.32	19.20	0.424	58.39
China	2005	80	6800	9.1	1.8	160.80	18.50	0.424	60.53
China	2006	80	7700	10.2	1.5	179.10	17.60	0.424	59.43
China	2007	80	5400	11.9	4.8	371.80	16.20	0.424	60.54
China	2008	80	6000	9	5.9	426.10	19.60	0.424	59.35
China	2009	80	6700	9.1	-0.7	297.10	17.00	0.424	59.37

Country	Year	Fitch Cardinal	GDP per Capita (PPP)	GDP Volatility	Inflation Rate	Current Acct Billions	Debt %GDP	Gini (2005)	Globalization
Greece	2004	80	21300	3.7	2.9	-8.00	128.08	0.342	80.60
Greece	2005	80	22300	3.7	3.5	-17.86	134.47	0.342	80.02
Greece	2006	80	24000	4.2	3.3	21.37	128.06	0.342	80.87
Greece	2007	80	30600	4	2.9	44.40	125.28	0.342	82.33
Greece	2008	80	32000	2.9	4.1	51.53	126.72	0.342	82.47
Greece	2009	70	31000	-2	1.2	34.43	141.97	0.342	81.30
Hungary	2004	80	14900	3.9	7	-7.94	66.25	0.318	84.63
Hungary	2005	70	16300	4.1	3.6	-7.96	68.91	0.318	85.29
Hungary	2006	70	17600	3.9	3.7	8.39	70.54	0.318	86.57
Hungary	2007	70	19300	1.3	8	8.02	70.74	0.318	86.91
Hungary	2008	70	19800	0.6	6.1	12.98	74.06	0.318	86.91
Hungary	2009	70	18600	-6.3	4.2	0.44	83.24	0.318	87.38

Country	Year	Fitch Cardinal	GDP per Capita (PPP)	GDP Volatility	Inflation Rate	Current Acct Billions	Debt %GDP	Gini (2005)	Globalization
Iceland	2004	90	31900	1.8	4	-0.57	50.37	0.257	73.00
Iceland	2005	90	35700	5.6	4	-2.61	39.41	0.257	72.71
Iceland	2006	90	38000	2.6	6.8	2.93	44.36	0.257	72.83
Iceland	2007	80	40400	3.8	5.1	3.19	42.95	0.257	73.07
Iceland	2008	80	41800	0.3	12.7	1.78	82.82	0.257	77.49
Iceland	2009	70	39400	-6.8	12	0.44	104.85	0.257	72.96
India	2004	60	3100	6.2	4.2	4.90	61.51	0.333	47.43
India	2005	60	3400	8.4	4.2	-12.95	61.21	0.333	49.41
India	2006	70	3800	9.2	5.3	26.40	59.12	0.333	50.93
India	2007	70	2600	9	6.4	12.11	56.49	0.333	52.02
India	2008	70	2900	7.4	8.3	37.51	55.80	0.333	51.98
India	2009	70	3200	7.4	10.9	26.63	53.05	0.333	51.88

Country	Year	Fitch Cardinal	GDP per Capita (PPP)	GDP Volatility	Inflation Rate	Current Acct Billions	Debt %GDP	Gini (2005)	Globalization
Indonesia	2004	50	3500	4.9	6.1	7.34	56.60	0.34	54.48
Indonesia	2005	60	3600	5.6	10.5	2.02	47.34	0.34	56.75
Indonesia	2006	60	3900	5.5	13.2	1.64	39.00	0.34	57.48
Indonesia	2007	60	3600	6.3	6.3	11.01	35.17	0.34	57.18
Indonesia	2008	60	3900	6.1	9.9	0.60	33.07	0.34	56.45
Indonesia	2009	60	4000	4.5	4.8	10.75	28.39	0.34	56.26
Korea	2004	80	19200	4.6	3.6	26.78	20.70	0.306	61.09
Korea	2005	80	22600	4	2.8	16.56	23.80	0.306	60.12
Korea	2006	80	24500	4.8	2.2	2.00	27.65	0.306	61.05
Korea	2007	80	25000	5	2.5	5.95	30.06	0.306	63.03
Korea	2008	80	27600	2.2	4.7	6.35	29.65	0.306	62.83
Korea	2009	80	28100	0.2	2.8	42.67	32.55	0.306	62.39

Country	Year	Fitch Cardinal	GDP per Capita (PPP)	GDP Volatility	Inflation Rate	Current Acct Billions	Debt %GDP	Gini (2005)	Globalization
Malaysia	2004	80	9700	7.1	1.3	11.81	45.70	0.46	76.79
Malaysia	2005	80	12000	5.2	3	14.06	43.77	0.46	76.34
Malaysia	2006	80	12900	5.9	3.8	17.86	42.17	0.46	77.28
Malaysia	2007	80	14500	6.3	4.6	28.93	41.54	0.46	77.55
Malaysia	2008	80	15200	4.6	5.4	34.58	41.27	0.46	77.16
Malaysia	2009	80	13800	-1.7	0.6	34.08	53.30	0.46	77.43
Mexico	2004	70	9600	4.1	5.4	-4.11	45.60	0.481	57.14
Mexico	2005	70	10000	3	4	-5.71	41.40	0.481	59.32
Mexico	2006	70	10700	4.8	3.4	0.40	39.80	0.481	58.54
Mexico	2007	70	12400	3.2	4	5.53	38.40	0.481	58.85
Mexico	2008	70	14200	1.3	5.1	15.72	37.80	0.481	58.71
Mexico	2009	70	13200	-6.5	3.6	10.12	43.00	0.481	59.96

Country	Year	Fitch Cardinal	GDP per Capita (PPP)	GDP Volatility	Inflation Rate	Current Acct Billions	Debt %GDP	Gini (2005)	Globalization
New Zealand	2004	90	23200	4.8	2.4	-3.65	44.59	0.335	78.74
New Zealand	2005	90	25300	2.3	3	-9.69	44.82	0.335	78.49
New Zealand	2006	90	26200	1.5	3.8	7.94	43.80	0.335	79.23
New Zealand	2007	90	27200	3.1	2.4	10.23	37.87	0.335	79.16
New Zealand	2008	90	28000	0.2	4	11.30	17.40	0.335	79.33
New Zealand	2009	90	27300	-1.7	2.1	3.69	20.30	0.335	78.31
Philippines	2004	60	5000	5.9	5.5	3.60	73.94	0.44	59.59
Philippines	2005	60	4700	4.8	7.6	2.35	69.70	0.44	59.14
Philippines	2006	60	5000	5.4	6.2	4.90	62.80	0.44	58.87
Philippines	2007	60	3200	7.3	2.8	6.35	55.40	0.44	58.09
Philippines	2008	60	3300	3.8	9.3	4.23	47.80	0.44	56.50
Philippines	2009	60	3300	1.1	3.2	8.55	48.70	0.44	56.70

Country	Year	Fitch Cardinal	GDP per Capita (PPP)	GDP Volatility	Inflation Rate	Current Acct Billions	Debt %GDP	Gini (2005)	Globalization
Portugal	2004	90	17900	1.1	2.1	-8.12	67.61	0.385	86.30
Portugal	2005	90	19000	0.4	2.3	-17.10	70.57	0.385	85.72
Portugal	2006	90	19800	1.3	2.5	16.75	69.61	0.385	86.42
Portugal	2007	90	21800	1.8	2.4	21.75	67.51	0.385	87.29
Portugal	2008	90	22200	-0.1	2.6	29.60	72.46	0.385	86.98
Portugal	2009	90	22500	-2.6	-0.8	23.95	83.93	0.385	86.73
Thailand	2004	70	8100	6.1	2.8	6.74	26.14	0.423	60.39
Thailand	2005	70	8600	4.5	4.5	-3.69	27.33	0.423	61.26
Thailand	2006	70	9200	4.8	5.1	0.90	26.11	0.423	62.43
Thailand	2007	70	8000	4.8	2.2	14.92	24.48	0.423	62.72
Thailand	2008	70	8400	2.6	5.5	1.05	24.00	0.423	62.37
Thailand	2009	70	8100	-2.2	-0.9	20.26	28.61	0.423	64.15

Country	Year	Fitch Cardinal	GDP per Capita (PPP)	GDP Volatility	Inflation Rate	Current Acct Billions	Debt %GDP	Gini (2005)	Globalization
Venezuela	2004	50	5800	16.8	22.4	14.59	49.30	0.447	56.96
Venezuela	2005	60	6400	9.3	16	25.36	42.90	0.447	57.14
Venezuela	2006	60	7200	10.3	15.8	31.82	33.70	0.447	56.09
Venezuela	2007	60	12800	8.4	18.7	20.00	28.60	0.447	54.45
Venezuela	2008	50	13500	4.8	30.4	39.20	30.90	0.447	53.12
Venezuela	2009	50	13000	-3.3	27.1	8.56	24.60	0.447	50.90

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