

Good for the Money: International Finance, State Capacity, and Internal Armed Conflict

Matthew R DiGiuseppe, Department of Political Science, Binghamton University

Colin M Barry, Department of Political Science, Binghamton University

Richard W Frank, Department of Political Science, University of New Orleans

Abstract:

Previous research indicates that a lack of state capacity is a key determinant of internal armed conflict. Scholars identify several internal dimensions of state capacity, but have yet to explore how international finance influences state resources. This is surprising because sovereign lending has increased dramatically in recent decades and plays an increasing role in the functioning of developed and developing governments. In this article, we explore this relationship between a state's integration into global credit markets and its subsequent capacity to promote domestic stability. We argue that international capital increases a state's ability to respond to internal opposition because states with favorable credit terms can expand their resource base beyond domestic constraints to deter, accommodate, or repress opposition while maintaining a level provision of resources to their political base. We examine the influence that both capital access and credit terms have on the risk of civil conflict in 141 countries from 1981-2007. Our empirical results indicate that states with affordable credit access are indeed less likely to experience civil conflict.

Forthcoming in the Journal of Peace Research

Keywords: civil conflict, credit markets, state capacity

Corresponding Author: mdigiuseppe@gmail.com

Introduction

The individual motivations and structural conditions that encourage rebel mobilization are complex and myriad. However, rebel motivations are only one part of the conflict equation. The state's role in the onset of civil conflict has received relatively less attention, inspiring recent scholarly efforts to more closely examine how state capacity—or the lack thereof—contributes to its observance.¹ This entails both the development of more nuanced definitions of the various forms of state capacity (Boulding, 1989) and a more careful understanding of state capacity's theoretical and empirical application (Fjelde & de Soysa, 2009; Hendrix, 2010). In general, the evidence corroborates intuition: stronger states—in terms of the resources available to them—are better able to withstand political challenges and are thereby less likely to devolve into domestic conflict (Fearon & Laitin, 2003).

The extant research on state capacity focuses largely on its internal characteristics like aggregate wealth (Collier & Hoeffler, 1998; Fearon & Laitin, 2003), administrative competency and reach (Herbst, 2004; Fjelde & de Soysa, 2009), and political institutions (Hegre et al., 2001; Gleditsch & Ruggeri, 2010)—as well as its challenges—such as geography (Fearon & Laitin, 2003), natural resources (Fearon, 2005; Thies, 2010), and economic shocks (Miguel, Satyanath & Sergenti, 2004). Certainly, these are crucial components of state capacity that have earned their place in the literature. However, they do not tell the whole story. There remain other factors—in particular, external factors – that also affect a state's ability to defuse potential

1. For a recent overview see Sobek (2010) and the rest of the articles in the May 2010 special issue of *Journal of Peace Research* on state capacity and civil conflict.

threats, and therefore deserve further attention. In this article, we contribute to the civil conflict literature by examining one significant yet overlooked external component of state capacity—international finance.

Sovereign debt and its ability to enhance state strength are not new phenomena. On the contrary, states have long turned to credit as a means of bolstering their stock of resources beyond that provided through domestic extraction alone. Scholars have argued that the ability to borrow large quantities of money was crucial to the rise and fall of major powers going back to the sixteenth century (Rasler & Thompson, 1983). This affinity for external debt results in part from its ability to allow creditworthy states to spend greater amounts of money while maintaining ‘smooth’ tax rates and domestic economic stability (Schultz & Weingast, 2003). Historians have often pointed to the ability of creditworthy states to overcome adversaries with larger tax bases and resource wealth. The British victory during the Napoleonic Wars is a classic example of credit’s value in crisis (Bordo & White, 1991). In recent decades, the amount of international lending has increased dramatically because the modern global economy’s expansion and integration facilitate a significantly freer movement of capital and investment. As a result, the most powerful states are not the only ones to receive major lending—any that have demonstrated that they are, in essence, good for the money can tap into international credit markets (Tomz, 2007; Mosley, 2003). Subsequently, the governments of both developed and developing states have grown to rely on borrowed money to maintain sufficient functionality and stability.

If we define state capacity as the ability to mobilize sufficient resources to address a political threat, it follows that international finance is a potentially important component of state capacity and political stability. We posit that states with access to affordable credit are better

able to suppress dissent because they can increase state capacity by tapping credit markets when it matters most, and are therefore less likely to experience civil conflict. Furthermore, these states do not have to divert domestic resources to achieve this feat. Governments can maintain the preexisting fiscal balance while increasing expenditures to deal with unexpected threats, in effect shielding them from dissent from within their ruling coalition.

This article explores the empirical record to see whether the benefits of credit market access outweigh the costs. We empirically examine the effects that both global credit liquidity and a state's individual credit terms have on civil conflict. Our results suggest that creditworthy states are less likely to experience civil conflict. Further, we find that global availability of credit (often determined by economic conditions in the developed world) can have a serious impact on the global prospect for peace. That is, when creditors restrict lending, states that rely on this money are more likely to succumb to internal conflict.

State Capacity and Civil Conflict

The onset of civil conflict implies not only that there is substantial motivation for organized rebellion, but that there is also adequate opportunity for it (Collier & Hoeffler, 2004; Hegre & Sambanis, 2006). In other words, conflict onset indicates that the state lacks the capacity to effectively deter, or otherwise prevent, a violent challenge to its monopoly over the use of force. Indeed, Fearon & Laitin (2003) attribute armed rebellion to a set of structural conditions that reduce the opportunity costs of insurgency, thereby increasing its likelihood. Specifically, they find that mountainous terrain and low economic development (proxied by gross domestic product per capita, GDPpc) significantly increase the probability of civil war. While rough terrain clearly poses a challenge to the capability of state forces to find and defeat insurgents,

GDPpc is treated as a direct indicator of the financial and administrative resources that can be effectively mobilized for counterinsurgency (Fearon & Laitin, 2003). Essentially, wealthier states can impose higher costs to challenging the status quo.

Although a robust predictor of conflict, GDPpc as a catch-all measure fails to capture more nuanced and multidimensional theoretical conceptions of state capacity. Accordingly, others have sought to refine definitions for and measures of its underlying components (Hendrix, 2010). Boulding (1989: 10) offers a useful framework for considering and organizing these various works by identifying three distinct dimensions of state power: threat power, economic power, and integrative power, or ‘the stick, the carrot, and the hug.’

Threat power represents a state’s capacity to deter potential rebels via the credible threat of forceful retaliation. Military strength and (perhaps more appropriately) the capabilities and reach of the police and intelligence forces are particularly important here (Herbst, 2004). Collier & Hoeffler (1998) similarly argue that economically developed states, which have the resources necessary to exercise administrative might and effective repression,² are more capable of snuffing out and deterring insurgency. Using the relative political capacity (RPC) measure as an indicator of the state’s administrative reach (Organski & Kugler, 1980; Arbetman-Robinowitz & Johnson, 2008), Fjelde & de Soysa (2009) find only weak evidence for its effectiveness after controlling for other dimensions of state capacity. However, recent research suggests that it may, at the very least, serve to buffer against contagion from neighboring conflicts (Braithwaite, 2010).

² In contrast to extreme repression, which may be an indicator of weak state capacity (Mason & Krane, 1989), and potentially intensifies opposition (Wintrobe, 1998; Wood, 2003).

Beyond forcing compliance by threat of violence, the state may buy the loyalty of those who would otherwise find it in their best interest to challenge state power via strategic redistribution of goods and resources in exchange for acquiescence (Boulding, 1989; Bueno de Mesquita et al., 2003). This economic power resides in the financial capacity of the state to confront potential rebel threats with cash and services, and has been found to effectively do so (Fjelde & de Soysa, 2009). Redistribution in the form of unemployment benefits (MacCulloch, 2004) or spending on education (Thyne, 2006), for example, can reduce the public's preference for, and the actual risk of, violent revolt against the state. In short, greater economic capacity allows the state to both alleviate the grievances of the impoverished (Buhaug, 2006) and to still maintain the flow of special benefits to its primary base of support necessary to maintain power.

Boulding's third dimension of state capacity, integrative power, is interpreted by Fjelde & de Soysa (2009: 10) as 'the ability to develop legitimacy and invoke relations of loyalty and trust to secure cooperation of societal actors and groups.' Using contract intensive money (CIM) as a proxy, they find that it too serves to significantly reduce the probability of civil war. Similarly, research finds democracy and political stability—which promote cooperation and trust—associate negatively with conflict (Hegre et al., 2001; Reynal-Querol, 2002), in contrast to political instability which can provide fertile ground for rebellion (Hegre et al., 2001; Gleditsch & Ruggeri, 2010). Institutions that provide for greater economic freedom, and that make a government's commitment to uphold property rights more credible, may have a particularly potent role in fostering societal trust and peaceful development (North & Weingast, 1989; de Soysa & Fjelde, 2010).

Research on these internal dimensions of state capacity points to an important larger pattern: preventing rebellion is more likely when the government can access the resources

necessary to afford these powers. Exploring the other various ways in which a government can acquire such resources should better inform our understanding of how state capacity is strengthened, and civil peace sustained.

Credit and State Capacity

International finance is one transnational component of state capacity that remains largely unexplored. With the evolution of global capital mobility, sovereign lending has become increasingly prevalent, contributing notably to the governing capacity of states in both the developed and developing worlds. Between 1971 and 2009, public sector long-term debt stock in low and middle income states (as defined by the World Bank) has increased 27 fold, while public and private debt flows have similarly increased with more volatility (World Bank, 2010a). The credit made available to governments has increased the stock of resources they can utilize, while at the same time constraining governments to the demands of creditors and increasing their exposure to the volatility of international business cycles (Wibbels, 2006).

Here we explore how these aspects of international finance affect state capacity and civil conflict, beginning with the most direct contribution to state resources that credit access can provide. Clearly, access to foreign capital directly increases a state's economic capacity by providing it with resources that it would not otherwise have at its disposal if it relied solely on domestic revenue sources. According to Fjelde & de Soysa (2009), the ability of the state to 'outspend' potential challengers on public goods significantly reduces the probability of conflict by alleviating some of the economic woes that might otherwise motivate the aggrieved to take up arms against the state. However, many governments do not have the resources on hand with which to adequately fund such public expenditures. As such, the ability of many of these states

to deliver collective goods—and thereby address citizens' grievances—relies a great deal on access to foreign credit.

The central benefit of borrowing, however, may lie in the state's ability to maintain 'smooth' tax rates and consistent provision of other government transfers in the face of unexpected increases in government expenditures, like wars or recessions (Barro, 1979). As Wibbels (2006) demonstrates, social spending in countries without access to the international credit market ebbs and flows with business-market volatility. This kind of inconsistency suggests that such states may lack the capacity to adequately address economic grievances, and might itself enflame these grievances. States with access to credit, by contrast, have much smoother levels of welfare spending and tax burdens over time because they are able to supplement their revenue with borrowed money as needed. This suggests that even when confronted with major exogenous shocks that have been found to increase the risk of civil conflict (Brancati, 2007) a creditworthy government may be better situated to cover the immediate costs of the crisis while maintaining adequate levels of welfare, thereby mitigating the corresponding increase in public grievances that would otherwise occur.

Along similar lines, Schultz & Weingast (2003) argue that one of the reasons liberal democracies are more successful at war is that creditors view them as more reliable debtors, improving their ability to borrow money. Sovereign debt, in other words, allows creditworthy states to cover such massive sudden expenses—like those associated with war—without having to bear the consequences of altering fiscal or monetary policy. Raising taxes, for example, risks discouraging productivity and thereby decreases government tax revenue. Similarly, printing money only serves as a temporary solution with consequences for both domestic revenue collection and trading relationships.

Tax increases, expansionary monetary policy, and the reallocation of domestic spending affect domestic groups unequally, which can intensify domestic political struggles. When leaders are forced to make decisions altering a state's domestic fiscal balance, they are not only more likely to face violent challenges from segments of the society; they are also more likely to face competition from within their ruling coalition. Challengers will likely emerge to seek the support of those worse off due to the reallocation of government resources. States with access to affordable credit, by contrast, can postpone tough fiscal choices and limit the macroeconomic stress caused by alternative fiscal strategies. That is, creditworthy states should be better able to pick up the cost of addressing rebel threats without it significantly affecting the relationship with their base, thereby reducing political and economic constraints and allowing them to effectively contain and suppress the potential threat.

A few cases demonstrate the trade-off between domestic demands and military needs when sources of foreign credit are (and are not) available in countries at high risk of civil conflict. For example, in February 2001 Albanian rebels began fighting Macedonia's government near its Kosovo border. The government responded by augmenting its weak military capabilities, brokered a peace agreement, and it avoided a larger conflict like that experienced by its neighbors (Lund, 2005). Military spending spiked from \$70 million in 2000 to \$235 million in 2001 (SIPRI, 2004). Despite this spike, the government borrowed and maintained a steady provision of social spending that contributed to an economic rebound. After Macedonia's economy shrank by 4.5% due to the low-level conflict, growth reached pre-conflict levels—exceeding 4% two years later (World Bank, 2010b). Nigeria also faced a domestic threat when strikes and riots followed the nullification of a June 1993 presidential election. Like Macedonia, Nigeria's (military) government responded by deficit spending. External debt soared from 97%

of GDP in 1992 to 161% in 1993 while interest on the new debt increased from 2.75% to 7.71% (World Bank, 2010b). Like Macedonia, Nigeria's government managed to avoid the escalation of low-level violence.

More recently, Côte d'Ivoire faced similar unrest when incumbent president Laurent Gbagbo refused to step down after losing a November 2010 presidential election. However, Côte d'Ivoire's history of defaults and external sanctions limited the president's efforts to secure external financing to pay soldiers and government employees. Desperate, Gbagbo ordered his forces to nationalize international bank branches and removed money at gunpoint to pay his soldiers (Preston 2011). Despite an initial coercive advantage, a lack of money eventually ended Gbagbo's presidency when opposition forces ousted him in April 2011.

These examples (and the historical record of major power interstate conflict more broadly) demonstrate an important relationship between international finance and state capacity during violent unrest. They also suggest how foreign credit bolsters more than just the state's economic capacity by also enabling the state to mobilize additional resources towards its coercive capacity without the need to compromise its other powers. However, this relationship is relevant here only if those states at greatest risk of civil war do in fact rely on international financing. In recent decades, creditors have extended the privilege of international borrowing to most of the developing world. As Thomas Friedman (1995: A15) remarked, 'the most important visitor a developing country can have is from Moody's Investor Service.' Furthermore, research shows that military expenditure is closely associated with external debt burdens (Dunne, Perlo-Freeman & Soydan, 2004; Smyth & Narayan, 2009). If states increase their coercive capacity by increasing military expenditure, external debt has the least immediate macroeconomic and political costs relative to other finance strategies. Dunne, Perlo-Freeman & Soydan (2004) also

suggest that if states lack foreign exchange reserves, they will have to borrow in order to secure currency to import arms. There is some qualitative evidence that this foreign debt strategy extends to the external behavior of states. For example, with the aid of international credit Ugandan President Museveni's regime has funded conflict in the former Zaire, using the spoils of war to maintain its creditworthiness, all without sacrificing support among his political base (Reno, 2002; Prunier, 2008).

In short, although sovereign debt directly affects a state's economic capacity, it also improves other dimensions of state capacity. Therefore, we argue 1) that international borrowing increases state capacity when it matters most and 2) that those states with access to such resources are more likely to deter, accommodate, or defeat those who pose a challenge to state authority. However, not all states have equal access to credit markets. Credit terms vary from country to country, and those reputed to be bad debtors often have to pay a high price for borrowing. In other words, not all states with access to credit necessarily have easy access, and these less creditworthy states should enjoy fewer of the benefits of credit markets.

Hypothesis 1: As a state's terms of credit increase, its risk of civil conflict onset decreases.

A state's access to affordable credit is determined in large part by its reputation, policies and institutions. However, the global credit supply heavily influences investor decisions to lend. When credit is tight, states with affordable credit under normal circumstances can fail to attract investment because creditors look for shelter in only the safest environments. Emerging markets are particularly vulnerable because they are subject to investor confidence in New York, London,

and other financial centers. Because these investors have relatively little information about the ability and willingness of states to repay their debts, they may rely on crude indicators or proxies, and assess performance in the emerging markets as a whole (Mosley, 2003). Subsequently, credit access is often subject to circumstances independent of a state's internal political and economic situation.

Global market volatility may have devastating effects for developing countries. Under pressure to balance budgets, governments must address major income shocks by either borrowing enough money to make up the difference or tightening their belts. Because developed countries are considered safe investments even during tough times, they can usually rely on the former to maintain smooth spending and tax rates. Other states are not so lucky and may need to cut social spending at the very time it is needed most (Wibbels, 2006). Governments reliant on foreign finance to maintain spending or tax rates at levels not sustainable using domestic resources alone will face difficult and unpopular decisions when lenders become reticent, regardless of their individual reputations as debtors.

As with other forms of non-tax revenue like petroleum or foreign aid, some leaders may even rely on foreign debt to sustain the allegiance of their supporters and keep potential challengers at bay (Nooruddin, 2008). Indeed, evidence suggests that many developing countries' debt spikes in recent decades have been in part motivated by leaders' willingness to incur long-term costs for short-term power (Easterly, 2002; Oatley, 2010). Such regimes should become particularly vulnerable when international credit dries up. Unable to guarantee the private and/or public goods afforded by borrowing, regimes' power and legitimacy may be contested, and instability ensue (Bueno de Mesquita et al., 2003).

The consequences of swings in lender confidence have been well documented. For example, the 1980's Latin American debt crisis wrought prolonged hardship and posed considerable challenges to the region's governments, many of which were still young and developing democracies. In front of the UN General Assembly, Brazilian President Sarney expressed that, 'crushed under the weight of an enormous foreign debt, the countries of the region are living through a scenario of severe difficulties with domestic repercussions resulting in recession, unemployment, inflation, increased poverty and violence,' and Peruvian President Garcia Perez warned that 'paying "usurious" interest rates on the foreign debt would prolong poverty and risk popular rebellion,' (Brooke, 1985: A15). Such warnings were not just empty rhetoric. Austerity measures necessitated by high borrowing rates, weak currency, and, in some cases, participation in IMF structural adjustment programs, produced declining standards of living for many people over many years. Venezuela's implementation of such measures in 1989 induced an 'explosion of violence' in which more than 300 people were killed (Riding, 1989: 1). The Peruvian government faced continued challenges from the Shining Path and concerns about a military coup while dealing with sometimes violent demonstrations by frustrated workers throughout Peru's 'lost decade' (Robinson, 1989: A1).

Conflict also followed the 1998 East Asian financial crisis. Most notably, the crisis' impact on Indonesia's credit terms constrained its capacity, despite Indonesia's sound macroeconomic status before the crisis. Externally imposed fiscal constraints and Suharto's continued effort to provide his supporters with private goods stifled government efforts to contain separatist movements in East Timor and Aceh while also prompting violent protests that left over 1,000 people dead (Haggard, 2000). Such examples suggest that global or regional crises that freeze up lending—even if for only a short time—can potentially have drastic effects

on the growing number of states reliant on that money to maintain stability in response to political and economic challenges.

Hypothesis 2: As global liquidity becomes more constricted, a state's risk of civil conflict increases.

Research Design

Outcome: Civil Conflict Onset

Our outcome variable of interest is civil conflict onset as defined by the Uppsala Conflict Data Program and Peace Research Institute Oslo's Armed Conflict Dataset (ACD), which spans from 1945-2009 (Gleditsch et al., 2002; Harbom & Wallensteen, 2010). The ACD dataset provides greater information on lower-level conflict than other datasets (Sarkees, 2000; Regan, 2002; Fearon & Laitin, 2003) by including all conflicts exceeding 25 battle deaths per year. Onset is defined as an incompatibility between the government and an internal opposition group(s) in which both used armed force resulting in at least 25 battle-related-deaths with a two-year intermittency. Since our dependent variable is dichotomous, we use probit with heteroskedasticity consistent Huber-White robust standard errors clustered by country in Stata 11.2.

Independent Variables

Creditworthiness

The economics literature utilizes several measures of creditworthiness. Unfortunately, the availability and coverage of the more comprehensive indicators fall short of the requirements

of a broad cross-national analysis. As a result, country risk ratings produced by private investment firms are the most frequently used indicator. Generally, these ratings are letter grades of up to 26 values reflecting lending risk. The data collection process is market driven, however, which introduces a systematic bias against states without rating access or that do not justify the resources to rate them. For example, small states can be creditworthy but lack a large enough economy to generate sufficient rating interest. Further, states can be deterred from hiring a rating firm when global credit is tight and investor interest is low. Ratings for developing market debt, therefore, generally start in the mid-1990s. Researchers frequently use bond indices like JP Morgan's Emerging Market Bond Index that measure daily or monthly fluctuations in the cost of lending; however, data availability relies on state issuances of bonds. States may lack bond offerings while maintaining private lending options with banks (Sinclair, 2005). Furthermore, bond indices suffer from the same market driven data collection process as country credit ratings compiled by firms. States unlikely to attract investment in issued bonds are likely to select themselves out of the market.

Creditworthiness: In light of the drawbacks of other measures, we use country credit ratings (II rating) published biyearly in the September and March issues of Institutional Investor magazine (Institutional Investor, various years). These ratings range from zero to 100, 100 representing the most creditworthy of states. States like North Korea and Zimbabwe that are either isolated economically or lack fiscal and monetary discipline are usually ranked in the 4 to 6 range. States that have the lowest risk of default like the USA and Switzerland are ranked in the high 90's. States around the mean rating have intermittent access to financial markets and must pay higher rates on loans from the private sector. Argentina in the 1990's and South Africa in the 1980's are two examples. The ratings reflect the opinion of senior economists and

sovereign-risk analysts at leading global banks and money management and securities firms who are autonomously polled and weighted in concordance with the assets of the expert's firm (D'Ambrosio, 2005). These data cover from 1980 to 2009 and offers a broader sample of countries and greater variance than available alternatives. See Figure I for a graph of average II ratings over time.

It is important to note that investors are likely to interpret internal conflict as increasing the risk of non-payment, raising the specter of endogeneity. However, previous research and all available data indicate that creditors (like researchers) are ill equipped to anticipate the onset of conflict (Gelos, Sahay & Sandleris, 2004). For example, for 62% of the onsets in our dataset, credit ratings increased from the year proceeding to the year of a conflict onset. Nevertheless, we use the average of ratings published in March and September of the previous year to address endogeneity concerns.

[Figure 1 here]

Global Liquidity

As H2 suggests, global economic trends also influence the availability of international credit beyond any endogenous risk of default or non-payment. Accordingly, we include a measure for the global supply of capital and liquidity, the London Interbank Offer Rate (LIBOR) based on a six-month loan in US currency (US Federal Reserve, 2010). This variable measures the price banks must pay on the London Eurocurrency Market. Figure 1 plots the yearly average across the sample period as II rating. When liquidity is low (and LIBOR is high), banks are hesitant to provide loans fearing non-repayment and therefore demand higher interest rates. Although LIBOR directly measures the cost of lending between banks, loans to developing states

have often been pegged to LIBOR with additional interest added to account for the country-specific attributes of a loan (Frieden, 1991). The measure therefore serves as a reliable proxy for global financial liquidity.

Control Variables

The interrelationship between creditworthiness and other domestic characteristics require special attention to control variable choice. We further address these possible inter-relationships below.

Historical evidence consistently suggests that democratic institutions are a requirement for credit. North & Weingast (1989) argue that democratic states in seventeenth-century Europe were able to credibly commit to uphold property rights while non-democracies were not. In effect, those with a stake in repayment could use the democratic process to punish defaulters. As a result, democratic states were able to beneficially use credit and increase their wealth faster than non-democracies. If this remains the case, our argument about creditworthiness would serve only as an intervening variable between democracy, wealth, and civil war. However, the logic and evidence for the ‘democratic advantage’ fails to resonate in the modern era. For example, Tomz (2007) demonstrates that a country’s reputation for repaying loans has been the key determinant of credit terms since the late nineteenth century. Using both empirical analysis and credit rater interviews Biglaiser & DeRouen (2007) show that regime type (and other political factors) has little effect on the credit ratings of Latin America’s emerging markets. Similarly, regime type has little effect on developing countries’ interest rates (Saiegh, 2005). Contrary to expectations, democratic pressures have actually led leaders to default because interest payments prevented the provision of public services. For example, in 2002 Argentina’s government refused to pay their interest payments following rioting over economic policies (The

Economist, 2002). There is evidence that political stability and leadership tenure are associated with access and higher ratings respectively (Gelos, Sahay & Sandleris, 2004; Archer, Biglaiser & DeRouen, 2007); however, it is also clear that new regimes almost always repay the debts of the previous regime (Tomz, 2007).

In our models we include both Polity and Polity squared to control for the effects of regime type (Gurr, Jagers & Moore, 1989; Marshall, Gurr & Jagers, 2010). Previous research indicates that anocracies, those states with both democratic and authoritarian characteristics, and the transition in and out of that category are associated with a higher risk of civil conflict (Hegre et al., 2001; Regan & Bell, 2010; for a critique of these findings see Vreeland, 2008). Previous research also demonstrates a close relationship between debt burdens, a significant predictor of credit risk, and regime type (Oatley, 2010). However, it is not clear that this relationship applies to investor perceptions of credit risk. For example, in an analysis of 50 developing countries' ratings issued by Moody's and S&P, Archer, Biglaiser & DeRouen (2007) find that regime type exerts no significant effects on a state's credit risk. In our data, Polity exhibits no clear relationship with our credit rating. For example, states coded -5 for Polity average a 27 II rating, while states coded 5 for Polity have an average credit rating of 21. Figure 2 plots the average II rating over the range of Polity, and to our eyes there is no systematic relationship.

[Figure 2 here]

The relationship between wealth and economic growth poses a similar problem. High income and growth rates reduce debt burdens as a percentage of national income and should therefore lower a state's risk of default (Cantor & Packer, 1996). Per capita gross domestic product (GDPpc) and GDP growth are also significant predictors of civil conflict in most analyses and are often used to proxy state capacity and economic development (Fearon & Laitin,

2003; Collier & Hoeffler, 2004).³ Potentially, a credit rating can serve as a proxy for economic development and therefore provides little added value for our understanding of state capacity and civil conflict. The Institutional Investor credit rating and natural log of per capita income correlate at .79. Figure 3 illustrates the relationship between a state's average credit rating and GDPpc from 1980 through 2009. The labels in Figure 3 shaded in gray represent states that experience no conflict onset in our sample, while labels in black represent those that do. While there is a visible relationship, there is also a substantial amount of variation left unexplained, which we address further below.

[Figure 3 here]

While income and growth influence investor perception of credit risk, many other factors have an equal or greater influence on a creditor's willingness to lend. Evidence indicates that specific economic indicators and economic institutions—beyond aggregate levels of wealth—predict credit access and terms. Trade openness, debt levels, inflation, balance of payments, global forces, and general macroeconomic factors are associated with variation in credit ratings, access, and the probability of default (Gelos, Sahay & Sandleris, 2004; Archer, Biglaiser & DeRouen Jr., 2007; Reinhart & Rogoff, 2009). However, the association is not determinant because each indicator is salient on a case-by-case basis. The only measure consistently predicting creditworthiness is a previous default (Archer, Biglaiser & DeRouen Jr., 2007).

As mentioned above, credit and civil conflict are related to the degree to which a state is connected to the outside world. Isolated states like North Korea are likely to have the lowest credit terms and so need to generate governing capacity from other sources. Furthermore, trade

³ We use the World Bank's (2010b) coding of GDP per capita adjusting for purchasing price parity.

openness is generally associated with government policies favored by global creditors. Trading states must maintain a minimum threshold of credible institutions to attract international firms, such as an independent central bank or pegged currency. Further, previous research suggests trade openness is associated with a decreased risk of civil war (Bussmann & Schneider, 2007). We utilize the standard metric— national imports plus exports over GDP (World Bank, 2010b)—as our trade openness control.

Previous research also indicates that a state's ethnic composition consistently influences civil risk (Hegre & Sambanis, 2006). We include an ethnic fractionalization index (ELF) to control for the possible effects of ethnic diversity (Fearon & Laitin, 2003). Previous findings also indicate that population size (World Bank, 2010b) is positively related to the risk of civil conflict as states require additional resources to monitor a large population (Hegre & Sambanis, 2006). Lastly, our analysis controls for time by including the time since the last civil conflict (peace years) and existing conflict incidence. Civil conflicts frequently reoccur, which makes it more likely that a state with a recent civil conflict will experience an onset than a state that has been peaceful for an extended period. As recent conflicts are likely to have a greater weight on the propensity of conflict onset, we follow Raknerud & Hegre (1997) and Hegre et al. (2001) by utilizing a decay function of peace years.⁴ Conflict incidence (Harbom & Wallensteen, 2010) captures ongoing conflict, which controls for the decreased likelihood of a new conflict when one is ongoing. All independent variables are lagged one year to control for potential endogeneity. Table 1 presents summary statistics and variables' expected effects.

[Table I here]

⁴ The decay function is specified as $2^{-(\text{peace years}/2)}$.

In all, our choice of independent variables results in the loss of 28 of the 141 ACD conflict onsets during our timeframe because of missing data. This potentially introduces bias in to our sample. However, creditors are unlikely to view these states as creditworthy, and their exclusion therefore would bias our results against our hypotheses.⁵

Results and Discussion

Table II presents the results of four probit models. Model 1 demonstrates that the *Institutional Investor* credit rating exerts a negative and significant effect on the probability of civil conflict. This result supports our first hypothesis and holds in subsequent models. As a state's credit rating increases, a country's risk of conflict decreases. As discussed above, a country's access to affordable credit is dependent not only on country specific characteristics but also on the global capital supply. As available capital decreases, lenders increase the price of lending. Therefore, Model 2 adds LIBOR, our global liquidity measure. Higher LIBOR values (indicating greater borrowing costs) are significantly associated with a higher conflict risk all else being equal, and the effect of creditworthiness is robust to the inclusion of LIBOR.

Model 3 controls for oil producers who might have significantly different borrowing capacities (despite the fact that these variables are correlated at -0.04). Oil exports have two possible effects on the onset of civil conflict. One hypothesis states that oil revenue reduces the incentive for rulers to penetrate society and develop institutions that would increase a state's capacity to co-opt and coerce citizens (de Soysa, 2002; Ross, 2006). Alternatively, oil production revenue potentially increases the capacity of state via fiscal independence and the ability to leverage oil wealth to borrow from international investors (Nooruddin, 2008). Each argument

⁵ In an effort to promote transparency, we list the missing onsets in the web appendix.

has implications for the relationship between creditworthiness and conflict onset. We control for oil production with a dummy variable (indicating whether a country's oil exports are greater than 30% of GDP; Fearon & Laitin, 2003) which is not statistically significant while the statistical significance of our two central independent variables persist.

[Table II here]

Of greater substantive interest is how conflict risk changes as a state's credit rating and global liquidity change. Figure 4 plots the relationship between creditworthiness and predicted probability of civil conflict holding global liquidity at one standard deviation above the mean (roughly the 1989 rate) and all other variables at their means or modes. As you can see, the conflict risk dramatically decreases over the lower half of credit rating values.

[Figure 4 and Table III here]

Turning to point predictions generated using Model 3's coefficients and displayed in Table III, the probability of onset one standard deviation below the mean (15.6, roughly Haiti in 2007) is 89% greater than the probability of country which sits at the mean credit rating (42, roughly that of Indonesia in 2007).⁶ By contrast, a state one standard deviation above the mean (66.9, roughly Mexico in 2007) is 72% less likely to experience conflict than states with a mean credit rating. Lastly, states with the highest credit rating (e.g. the US in 1981) are 92% less likely to experience an onset compared to the lowest rated states. Clearly, while the overall risk of civil war in our sample is small (about 3%), creditworthiness has a significant substantive effect. The point predictions from Model 3 for global liquidity tell a similar story. A move in LIBOR from the mean to one standard deviation below the mean decreases the risk of onset by

⁶ Estimated in Stata 11.2 using Clarify (Tomz, Wittenberg & King, 2003).

21%. From one standard deviation below to a standard deviation above the mean increases the probability of conflict by 58%. The largest one year increase in LIBOR in our sample occurs between 1980 and 1981. 1980's LIBOR rate of 13.88, already well over one standard deviation over the sample mean (5.99) increased in 1981 by 2.76. A change of this magnitude increases conflict risk by 24.6%. In a slightly more unrealistic scenario, a shift from the minimum to the maximum increases the risk of conflict by 187%.

Liquidity's significance is not only important within the context of individual creditworthiness. Other studies have found limited evidence that global economic forces have significant short-term positive effects on the onset of civil conflict (Barbieri & Reuveny, 2005; Bussmann & Schneider, 2007). However, these studies focused on the motivations of rebel groups. The results here indicate that global economic forces might influence the onset of civil war through state capacity rather than grievance.

Several control variables' lack of significance (namely GDPpc and Polity) is inconsistent with previous findings and therefore stands out as a possible concern. Potentially, multicollinearity between credit rating and national income is washing out GDPpc's effect. However, post-estimation diagnostics suggest that multicollinearity is not an issue.⁷ Beyond a correlation between independent variables, it is also possible that a causal relationship between credit rating and state wealth influences our estimates. To allay these concerns we replaced credit rating with the residuals of a model predicting credit rating—using potentially intervening variables: income per capita, GDP growth, trade openness, and regime type—as predictors. If the

⁷ We ran multicollinearity tests on all our models. The average VIF score for GDPpc was 3.97, for II rating was 3.79, and Polity was 1.50. Average model VIF was 2.67. In no instance was an individual model or variable VIF > 10. Thus in no instance was multicollinearity higher than the commonly accepted threshold.

residuals are significant in the expected direction, we can have greater confidence that the part of creditworthiness not explained by the potentially intervening variables has the expected effect. Model 4 demonstrates that the residuals do in fact retain a significant and negative effect on the probability of conflict—indicating that the part of credit rating not caused by other variables in the model reduces the probability of conflict onset.

What does this mean substantively? We think it might have important potential implications for our understanding of the relationship between economic development and civil conflict. Previous studies find GDPpc to be a robust conflict predictor, but it fails to achieve statistical significance in our analysis and it does not drive creditworthiness's effect. This raises important questions about what GDPpc is proxying and its theoretical importance once other related (and more nuanced) measures are included. Economic development is a complex concept, and it is often interpreted to support orthogonal arguments in the conflict literature. Frequently, it is used to proxy a government's resources (Fearon & Latin, 2003). It is no surprise then that the inclusion of more nuanced concepts and empirical measures that capture the constraints imposed on state's resources diminishes GDPpc's statistical power. We do not claim that development has no influence the onset of civil conflict. However, our results suggest that thinking about the specific constraints imposed on a state's available resources is an important and fruitful avenue of research.

[Table IV here]

Table IV presents models controlling for several other popular measurements for state capacity used by Fjelde & de Soysa (2009). They include CIM, relative political capacity (RPC) and government expenditure as a % of GDP. CIM measures the security of property rights and contract enforcement—an indicator of integrative capacity (Clauge et al.,1999). RPC measures

the actual taxes extracted by governments relative to the potential tax extraction of a country of similar economic makeup. It therefore serves as an indicator of a state's societal reach and ability to collect revenues (Arbetman-Rabinowitz & Johnson, 2008). Government expenditure as a % of GDP (IMF 2010) captures a government's wealth compared to other areas of economic activity. Governments controlling larger amounts are thought to have greater capacity. Each alternative measure of state capacity fails to reach significance in Models 5-7, while credit rating remains negative and significant in a one-tailed test at the .05 level.

In sum, our results indicate that both creditworthiness and global liquidity have significant and robust effects in the hypothesized direction. This enables us to reject the null hypothesis in favor of H1 and H2.

Robustness checks

We also ran a number of different model specifications as robustness checks not presented here due to space considerations.⁸ Our independent variables' substantive effects on civil conflict persist under a wide number of alternative specifications. We first addressed the possibility of a spurious relationship given the strong correlation (.79) between creditworthiness and GDPpc by running models with alternate measures of development. For example, we substituted per capita energy consumption (correlated with credit rating at .52) for GDPpc. We also ran models using alternative constructions of the conflict onset variable, which increase the years of peace that must pass before a new conflict onset is coded. Creditworthiness remains significant after five and eight but not 20 years of peace. This is unsurprising due to the loss of variation (75 out of 156 onsets) in the dependent variable when we require 20 years of prior peace. In an additional

⁸ These results are reported in the web appendix.

attempt to control for possible bias due to the small number of onsets, we ran a rare events logit model (King & Zeng, 2001), and our credit and liquidity findings remain significant.

Conclusion

In this article, we explore an international dimension of state capacity and test several ways in which international capital markets affect internal conflict. Our results provide preliminary evidence that international finance is an important and distinct aspect of state capacity worthy of further study. Previous research suggests that the internal dimensions of state capacity are relevant to the outbreak of civil conflict while implicitly holding any international effects to zero. This article relaxes this assumption and finds that changing international economic circumstances are also important. As lending privileges previously bestowed to stable industrialized democracies are extended to developing states, the outcome tends to be stabilizing. Understanding the circumstances under which international capital is beneficial to developing governments can help both scholars and policymakers prevent potential destabilizing effects. Beyond international finance's effect on state capacity, further exploration of sovereign borrowing can help scholars understand how globalization affects internal conflict from a state perspective—rather than that of the citizenry (Barbieri & Reuveny, 2007; Bussmann & Schneider, 2007).

Our results consistently suggest that favorable credit terms decrease the probability of internal conflict onset. This finding has two implications. First, favorable credit terms give states additional resources to avoid civil conflict. Without these resources states are at a greater risk of experiencing civil conflict. Second, global credit availability—driven by economic conditions in the developed world—has serious consequences for violence in the developing

world. Our theoretical argument suggests that the inability to borrow funds (despite a perception of creditworthiness) can increase the risk of violence between a government and its citizens. Of course, this has to be balanced against the hazards of taking out too much credit as the 1980's Latin American debt crisis and the heavily indebted poor countries initiative demonstrate. In this article we focus on creditworthiness and global liquidity. The next step is to look at how different amounts of credit states actually tap into affects state capacity.

Lastly, further research is necessary to more completely capture the extent of the relationship (and potential interactive effects) between both access to international credit and favorable credit terms and civil conflict outbreak. The conditional effect of creditworthiness on economic shocks as it pertains to civil conflict is also of interest. As our theoretical argument suggests, the effect of creditworthiness should be most dramatic when states lack resources to offset grievance generated by shocks to a domestic economy.

Data Replication

The data and do-file used in this study can be downloaded from <http://www.prio.no/jpr/datasets>.

Acknowledgements

The authors would like to thank Michael A. Allen, K. Chad Clay, David H. Clark, Patrick Regan, Harvey Starr, members of the Binghamton World Politics Workshop, the editor, and the anonymous reviewers for their comments.

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Biographical Notes

MATTHEW R. DIGIUSEPPE, b. 1982, PhD in Political Science (Binghamton University, Expected 2012).

COLIN M. BARRY, b. 1986, PhD in Political Science (Binghamton University, Expected 2013).

RICHARD W. FRANK, b. 1971, PhD in Political Science (Binghamton University, 2009), Assistant Professor, University of New Orleans (2009-).

Table I. Summary statistics, 1981-2007

Variable	Mean	SD	Min	Max	Predicted Effect	Source
<i>Civil War Onset</i>	0.03	0.18	0	1		Harbom & Wallensteen (2010)
<i>II Rating</i>	41.96	25.55	4.05	98.40	-	<u>Institutional Investor</u>
<i>LIBOR</i>	6.0	3.22	1.16	16.64	+	US Federal Reserve (2010)
<i>ln(Population)</i>	16.37	1.44	12.83	21.0	+	World Bank (2010b)
<i>ELF</i>	0.47	0.27	0.004	1	+	Fearon & Laitin (2003)
<i>ln(GDPpc)</i>	8.33	1.29	4.77	10.89	-	World Bank (2010b)
<i>Growth</i>	3.46	5.57	-51.03	106.28	-	World Bank (2010b)
<i>Trade Openness</i>	0.72	2.0	0.03	54.85	-	World Bank (2010b)
<i>Polity</i>	2.96	7.04	-10	10	-	Marshall, Gurr & Jaggers (2010)
<i>Polity²</i>	58.22	33.96	0	100	-	Marshall, Gurr & Jaggers (2010)
<i>Mountains</i>	15.68	18.76	0	82.20	+	Fearon & Laitin (2003)
<i>Oil Production</i>	0.18	0.39	0	1	+	Fearon & Laitin (2003)
<i>Peace Decay</i>	0.27	0.38	0	1	+	Authors' calculations
<i>Conflict Incidence</i>	0.19	0.39	0	1	-	Harbom & Wallensteen (2010)
<i>Contract Intensive Money</i>	0.18	0.13	0.02	0.99	-	Clauge et al. (1999)
<i>Relative Political Capacity</i>	0.98	0.50	0.02	6.95	-	Arbetman-Rabinowitz & Johnson (2008)
<i>Government Expenditure</i>	102.49	11.22	56.55	219.69	-	IMF (2010)

Table II. Probit estimates of conflict onset, 1981-2007

	<u>Model 1</u>		<u>Model 2</u>		<u>Model 3</u>		<u>Model 4</u>	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
<i>II Rating</i>	-0.008	(0.004)**	-0.011	(0.004)***	-0.009	(0.004)**		
<i>Residuals</i>							-0.011	(0.004)***
<i>Global Liquidity</i>			0.033	(0.016)**	0.030	(0.017)*	0.020	(0.016)
<i>Oil Production</i>					0.229	(0.156)		
<i>ln(Population)</i>	0.231	(0.049)***	0.251	(0.051)***	0.239	(0.050)***	0.200	(0.048)***
<i>ELF</i>	1.022	(0.241)***	1.056	(0.245)***	0.964	(0.241)***	1.056	(0.245)***
<i>ln(GDPpc)</i>	0.064	(0.076)	0.108	(0.074)	0.045	(0.080)	-0.048	(0.054)
<i>GDP Growth</i>	0.011	(0.008)	0.012	(0.008)	0.012	(0.008)	0.010	(0.008)
<i>Trade Openness</i>	-0.015	(0.017)	-0.008	(0.015)	-0.010	(0.015)	-0.022	(0.014)
<i>Polity</i>	0.003	(0.011)	0.006	(0.011)	0.011	(0.012)	0.004	(0.011)
<i>Polity²</i>	-0.001	(0.002)	-0.001	(0.002)	-0.001	(0.002)	-0.003	(0.002)
<i>% Mountainous</i>	0.001	(0.003)	0.000	(0.003)	0.001	(0.003)	0.000	(0.003)
<i>Peace Decay</i>	0.658	(0.264)**	0.512	(0.282)*	0.482	(0.278)*	0.512	(0.282)*
<i>Conflict Incidence</i>	-0.475	(0.237)**	-0.376	(0.247)	-0.354	(0.244)	-0.376	(0.247)
<i>Constant</i>	-6.613	(1.048)***	-7.390	(1.095)***	-6.759	(1.090)***	-5.535	(0.915)***
Observations	2,851		2,851		2,847		2,851	
Countries	142		142		141		142	
Log-likelihood	-356.73		-354.87		-353.46		-354.87	
Chi-Square	69.7		80.8		85.3		80.8	

Robust standard errors in parentheses clustered by country; All independent variables lagged one year; \ln = natural logarithm; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ two-tailed test.

Table III. Probability of civil conflict onset

	<i>II Credit Rating</i>		<i>Global Liquidity</i>	
	<u>Pr</u> (Onset)	Δ <u>Pr</u> (Onset)	<u>Pr</u> (Onset)	Δ <u>Pr</u> (Onset)
All Variables at				
Means/Modes	.028		.042	
1 S.D. Below	.053	89.3%	.033	-21.4%
1 S.D. Above	.015	-71.7%	.052	57.6%
Δ Min-Max	0.069→0.007	-90.2%	0.03→0.086	186.6%

Table IV. Probit estimates of conflict onset, 1981-2007

	<i>Model 5</i>		<i>Model 6</i>		<i>Model 7</i>	
	Coef	SE	Coef	SE	Coef	SE
<i>CIM</i>	0.190	(0.508)				
<i>RPC</i>			0.081	(0.107)		
<i>Gvt. Expenditure</i>					-0.004	(0.006)
<i>II Rating</i>	-0.007	(0.004)*	-0.009	(0.004)**	-0.008	(0.004)**
<i>Global Liquidity</i>	0.042	(0.022)*	0.031	(0.017)*	0.029	(0.017)*
<i>ln(Population)</i>	0.251	(0.052)***	0.242	(0.058)***	0.252	(0.049)***
<i>ELF</i>	1.156	(0.277)***	0.976	(0.268)***	0.933	(0.246)***
<i>ln(GDPpc)</i>	0.023	(0.087)	0.058	(0.092)	-0.004	(0.089)
<i>GDP Growth</i>	0.016	(0.006)***	0.011	(0.009)	0.011	(0.009)
<i>Trade Openness</i>	-0.002	(0.011)	-0.007	(0.012)	0.011	(0.028)
<i>Polity</i>	0.021	(0.014)	0.015	(0.013)	0.017	(0.013)
<i>Polity²</i>	-0.001	(0.002)	-0.002	(0.002)	-0.001	(0.002)
<i>% Mountainous</i>	0.001	(0.003)	0.000	(0.003)	0.001	(0.003)
<i>Oil Production</i>	0.278	(0.188)	0.231	(0.164)	0.344	(0.158)**
<i>Peace Decay</i>	0.391	(0.370)	0.453	(0.320)	0.562	(0.278)**
<i>Conflict Incidence</i>	-0.271	(0.295)	-0.294	(0.275)	-0.433	(0.241)*
<i>Constant</i>	-7.307	(1.288)***	-7.018	(1.336)***	-6.225	(1.316)***
Observations	1,975		2,326		2,711	
Countries	124		109		136	
Log-likelihood	-230.55		-289.99		-329.07	
Chi-Square	71.40		63.5		89.64	

Robust standard errors in parentheses clustered by country; All independent variables lagged one year; *ln* = natural logarithm; *** p<0.01, ** p<0.05, * p<0.1 two-tailed test.

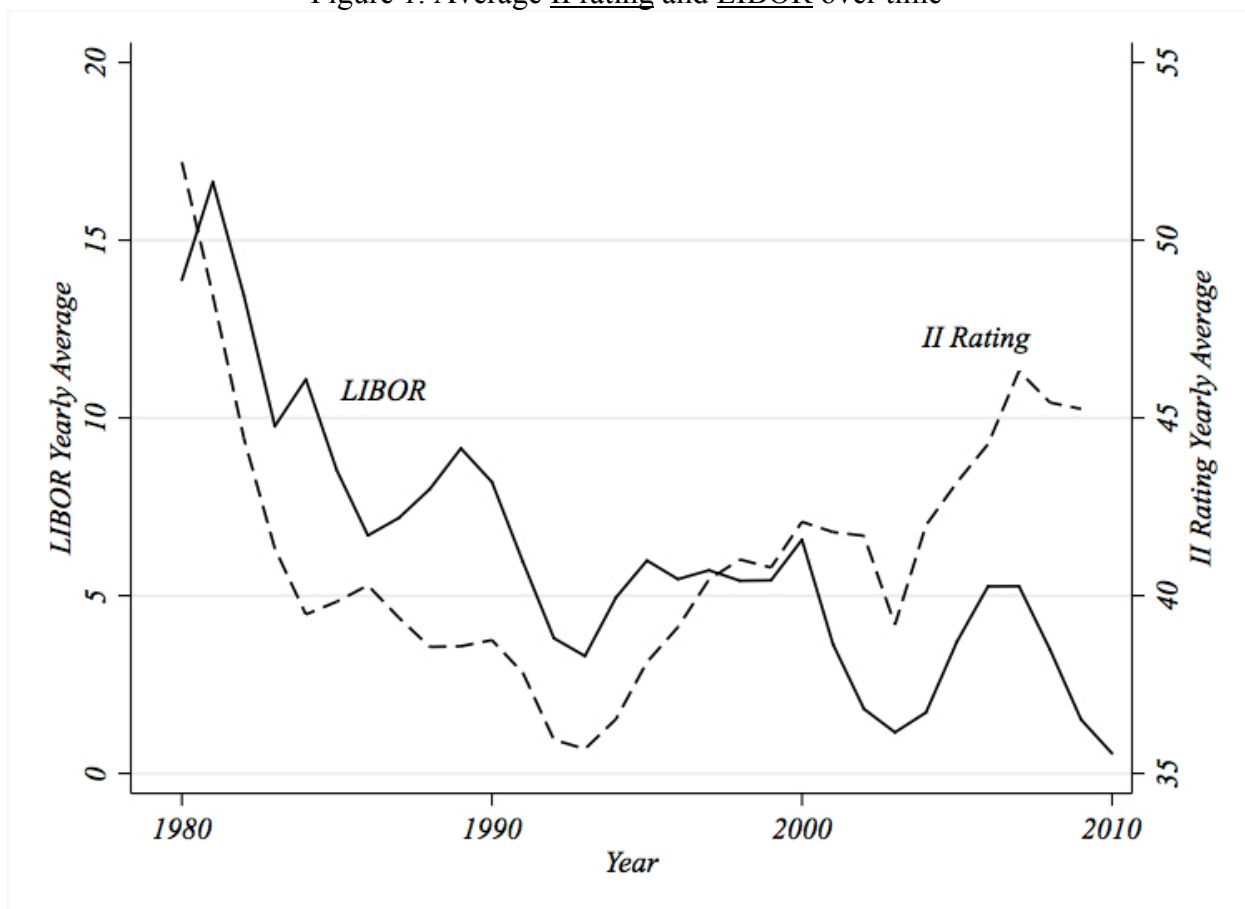
Figure 1. Average II rating and LIBOR over time

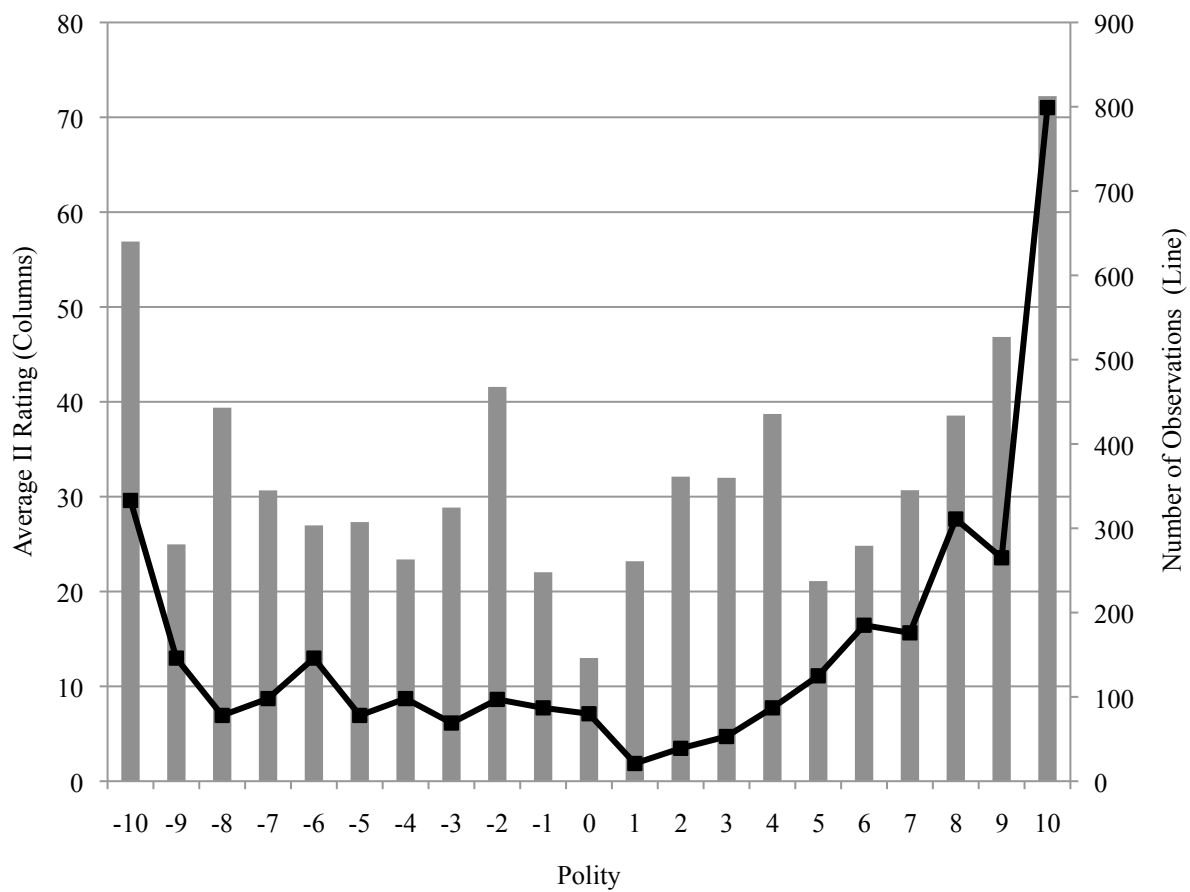
Figure 2. Polity and II Rating

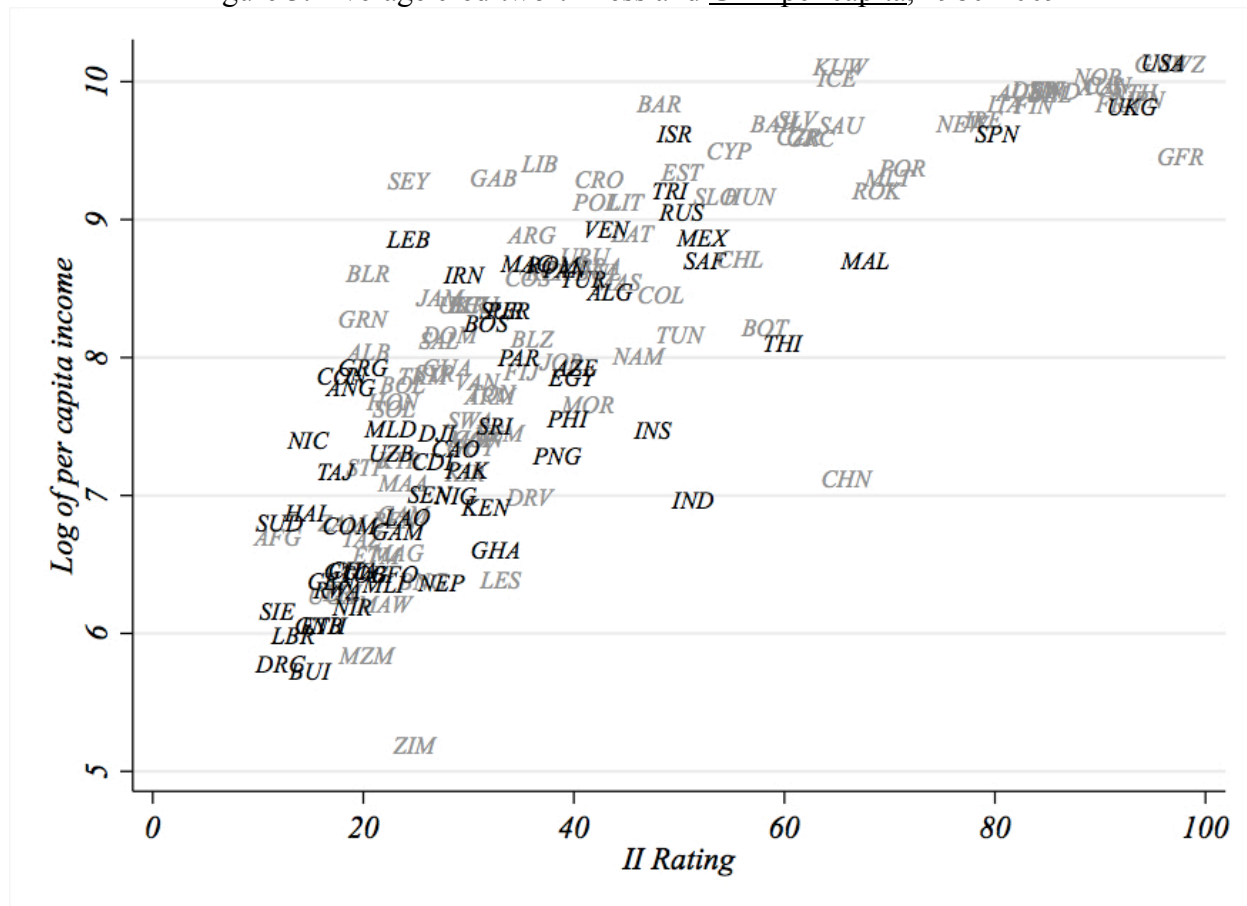
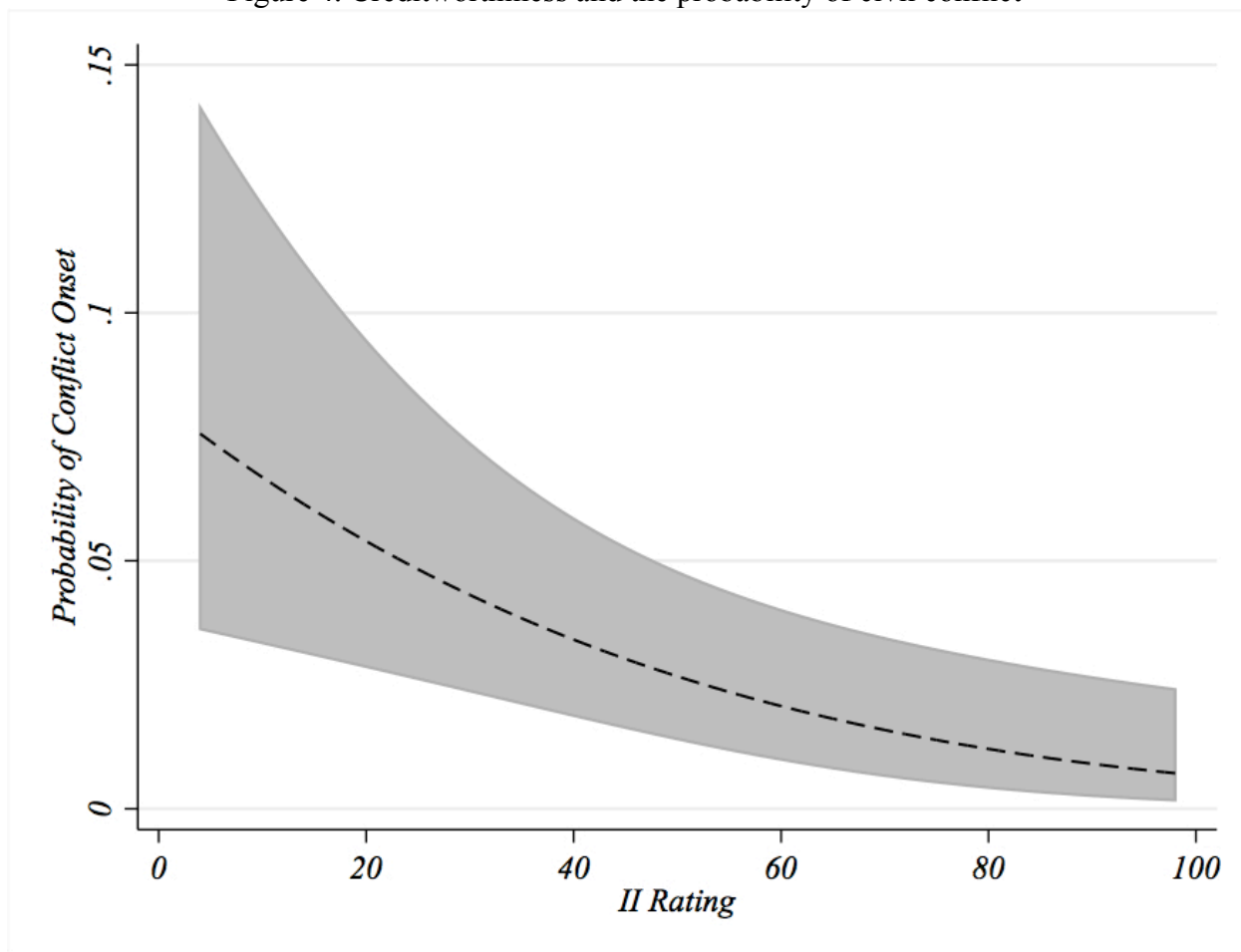
Figure 3. Average creditworthiness and GDP per capita, 1980-2009

Figure 4. Creditworthiness and the probability of civil conflict



95% confidence interval in grey.