

Chapter 1

The Puzzle of Cooperation in International Debt

EVERY DAY, LEADERS make promises to foreign governments and nonstate actors. They pledge to repay debts, supply foreign aid, curtail pollution, and limit their military arsenals. Leaders vow to lower barriers to international trade and capital, respect human rights at home, and promote democracy abroad. In principle, these commitments—some formal, some not—regulate how governments behave in world affairs.

Without a world government to enforce commitments, though, why should anyone take foreign leaders at their word? The answer is far from obvious. Some international agreements so clearly serve the interests of participants that defection would be unthinkable. Often, however, cheating would give the transgressor an immediate economic windfall, a military advantage, or a firmer grip on power at home. Moreover, the anarchical nature of world politics makes third-party enforcement of commitments unlikely. In this context, neither scholars nor political leaders can take international promise-keeping for granted.

This book examines one of the oldest and most pervasive types of international promises: debt contracts between sovereign governments and private foreign lenders. For centuries, bondholders and banks have lent money to foreign governments for a variety of objectives, including economic development, military procurement, and domestic consumption. The practice continues to this day. Private bondholders and banks now advance more than \$100 billion per year to foreign governments around the world.¹

International debt contracts raise serious problems of credibility. When a government borrows money on world capital markets, it pledges to repay the principal plus interest and fees according to a schedule in the loan agreement. After creditors disburse the funds, though, the government may be tempted to break its promise by refusing to make full and punctual installments. The government can suspend interest payments, slow the rate of amortization, or—even worse—repudiate the debt, thereby denouncing the obligation as illegitimate.

¹ According to the World Bank (2006, 2:3), disbursements by bondholders and banks to public borrowers in developing countries totaled US\$101 billion in the year 2004 and \$124 billion in 2005.

History abounds with examples of default on international loans. In January 2002 the Argentine administration stopped servicing roughly \$100 billion in foreign bonds, triggering the largest default of all time. Its decision, though unprecedented in magnitude, represents only one entry in a litany of defaults by governments over the past few centuries. In a typical year, approximately 10 percent of governments fail to meet contractual obligations to foreign bondholders and commercial banks, and during systemic crises such as the Great Depression, nearly half the countries in the world have been in arrears on their international debts.²

Considering the inherent problem of credibility in world affairs, and given numerous cases of default throughout history, what gives bondholders and banks the confidence to lend money to foreign governments? Furthermore, why do governments ever repay their debts to private lenders in distant countries? There is, of course, a deep puzzle here—arguably one of the deepest in the study of politics: how does cooperation emerge in a condition of anarchy? The remainder of the book addresses this question in the context of international debt.

The Puzzle

The literature on international relations offers two major perspectives about how credibility and cooperation can be sustained in an anarchical world. The first is *repeat play*, in which leaders cooperate today to ensure good relations in the future. The second is *issue linkage*, the process of connecting behavior in one area to the threat of sanctions in another. Both provide substantial insights into world politics, but neither—without amendment—adequately accounts for historical patterns of behavior in international finance. After noting the strengths and weaknesses of these approaches as applied to international debt, I propose a reputational theory that builds on models of repeat play but modifies them by conjoining two key features: incomplete information and political change. I then show, using three centuries of data from international capital markets, that this reputational theory offers new insight into relations between debtors and creditors.

Repeat Play

One of the most fertile lines of research in international relations concerns the effects of repeat play. Using game theory, political scientists and economists have demonstrated that cooperation can arise from the threat of

² Suter 1990, 1992; Standard & Poor's 2004.

retaliation in ongoing relationships.³ If two parties interact repeatedly with one another, each could retaliate tomorrow in response to uncooperative behavior today. The most severe retaliatory strategy is the grim trigger: “Cross me once and I will never cooperate with you again.” A more forgiving strategy, tit-for-tat, requires players to mimic their opponents by matching each act of cooperation with cooperation and punishing each instance of defection by striking back once. Many other strategies could achieve the same objective of punishing cheaters in the future.

When the threat of retaliation is sufficiently plausible and severe, it can support cooperation even in the absence of third-party enforcement. As Robert Axelrod explains, the future can “cast a shadow back upon the present and thereby affect the current strategic situation.”⁴ Leaders who care enough about the future will calculate that the costs of forgoing cooperation tomorrow outweigh the immediate gains from behaving selfishly today.

It is easy to see how this logic could motivate governments to repay and give investors the confidence to lend. Most countries need to borrow not once but repeatedly to meet ongoing demands for economic development, national defense, and domestic consumption. Investors could, therefore, adopt a history-contingent strategy: penalize countries that default by barring them from new loans or by charging higher interest rates in subsequent years. Faced with this retributive strategy, credit-hungry governments would have powerful incentives to honor their debts, and investors could advance money with reasonable assurance of being repaid.⁵

Does existing research support the repeat-play theory? Surprisingly, the answer appears to be no. In their study of sovereign debt since the 1850s, Peter Lindert and Peter Morton conclude that “investors seem to pay little attention to the past repayment record of the borrowing governments. . . . [T]hey do not punish governments with a prior default history, undercutting the belief in a penalty that compels faithful repayment.”⁶ Other scholars, focusing on different time periods, have reached similar conclusions. Cardoso and Dornbusch, Eichengreen and Portes, and Jorgensen and Sachs note, for example, that countries that fell into arrears during the Great Depression did not subsequently receive worse terms of credit than countries that had paid in full.⁷ One major study by Özler finds

³ Early studies of cooperation in repeated games include Friedman 1971 and Taylor 1976. In the 1980s many researchers, including Axelrod (1981, 1984); Keohane (1984); Lipson (1984); Oye (1986); and Snidal (1985) began to apply these arguments to international relations.

⁴ Axelrod 1984, 12.

⁵ Authors have formalized this argument in various ways. The seminal formal model is Eaton and Gersovitz 1981.

⁶ Lindert and Morton 1989, 40.

⁷ Cardoso and Dornbusch 1989; Eichengreen and Portes 1989; Jorgensen and Sachs 1989.

that countries with histories of repayment difficulties were charged higher interest rates during the period 1968–81, but even then the default premiums were remarkably small.⁸ The prevailing interpretation of history, it seems, is that international creditors ignore history!

How have scholars explained investors' apparent inattention to history? Some cite ignorance. Vinod Aggarwal opens his massive study of debt rescheduling by contending that "almost without exception, modern bankers have made mistakes as a result of their unfamiliarity with the turbulent history of international lending. Few lenders in the 1970s, for example, knew that sovereign countries had frequently defaulted on their debt payments in the past."⁹ Others blame irrational exuberance: investors have been drawn into speculative manias and, without systematically weighing the consequences, have lent even to countries with records of default.¹⁰ Whatever the reason, the received wisdom casts serious doubt on the use of history-contingent strategies to enforce debt contracts.

The repeat-play argument seems problematic not only in practice but also in theory. To bar a defaulter from capital markets or force it to pay higher interest rates, an aggrieved creditor would need the cooperation of most—if not all—current and future lenders around the world. Why, though, would profit-seeking bondholders and banks collaborate in punishing a government for defaulting on someone else's loans? The notion of retribution seems especially problematic because, for most of financial history, loans came from tens of thousands of scattered investors who probably could not have coalesced into a punishment cartel. Without extensive cooperation among creditors, the threat of punishment may not be credible. Ironically, the repeat-play argument may solve one credibility problem by creating another.¹¹

We are, therefore, left with a puzzle. If existing research is correct in concluding that creditors ignore history, and if even retribution-minded creditors would face severe problems in organizing collective punishment, why do sovereign governments ever repay their debts? Perhaps even more

⁸ Özler 1993. In a recent study of the period 1880–1913, Flandreau and Zumer (2004, 39) find that past defaults increased yields on government bonds, but the effects were "too small to act as a systematic deterrent."

⁹ Aggarwal 1996, 15.

¹⁰ See, e.g., Chancellor 1999; Marichal 1989.

¹¹ See, e.g., Eaton 1990; Eaton, Gersovitz, and Stiglitz 1986; Glick 1986; Greif, Milgrom, and Weingast 1994; Hellwig 1986; Kletzer 1988; Schultz and Weingast 1998, 2003; and Weingast 1997. Bulow and Rogoff (1989b) advance a related critique: if countries borrow to smooth their consumption, they can default against one creditor and use the proceeds from the loan to purchase a consumption-insurance contract from another lender (the insurer). For responses to the Bulow-Rogoff critique, including discussions of how creditors could tacitly collude to punish defaulters, see Amador 2002; Kletzer and Wright 2000; and Wright 2002.

troublesome, what inspires investors to lend billions of dollars to governments each year, if not the ability to withhold credit in an ongoing lending relationship? A second possibility is issue linkage.

Issue Linkage

In a complex and interdependent world, countries and nonstate actors can enforce agreements by linking issues, that is, by threatening to retaliate in one area of world affairs if foreigners behave selfishly in another.¹² Actors might, for example, sever economic relations with countries that violate arms control agreements or apply military pressure against parties that fail to respect human rights. Provided the links between issues are credible, leaders will think twice before crossing foreigners, since the gain from cheating on one issue may be outweighed by the loss of cooperation on another.

This insight, so central to international relations theory, may explain how debt contracts have been enforced for centuries. On their own or with help from their home government, banks and bondholders could impose nonfinancial penalties on countries that default. Charles Lipson usefully refers to this kind of retaliation as an “extrinsic” sanction because it involves punishment on an issue distinct from the one that sparked the dispute.¹³ In contrast, the repeat-play strategy of withholding access to capital is an “intrinsic” sanction because creditors strike back in the same issue area in which the borrower cheated in the first place.

Creditors could impose various extrinsic sanctions on defaulters. One option is military intervention. The idea of using arms to extract repayment may seem odd today, but many scholars believe this mode of enforcement prevailed until the early twentieth century. Martha Finnemore, for example, writes that militarized debt collection was “accepted practice” in the nineteenth century and fell from favor only after the Second Hague Peace Conference in 1907.¹⁴ Some academics judge that military pressure was commonly used to collect debts.¹⁵ Others think creditors applied police powers selectively, sending gunboats to compel debtors in only a few colorful cases.¹⁶ Ultimately, though, the prospect of military

¹² The concept of issue linkage has a long intellectual history. See, e.g., Keohane and Nye 1977; Tollison and Willett 1979; Haas 1980; Stein 1980; Keohane 1984; Axelrod and Keohane 1985; Oye 1985; Snidal 1985; McGinnis 1986; Martin 1992; Keohane and Martin 1995; Lohmann 1997; Aggarwal 1998; and Davis 2003, 2004.

¹³ Lipson 1981, 630.

¹⁴ Finnemore 2003, 24.

¹⁵ See, e.g., Mitchener and Weidenmier 2005b, 2.

¹⁶ See, e.g., Mauro, Sussman, and Yafeh 2006, chap. 7; Mosley 2003, 268–71.

force should have mattered more than the frequency. According to economists Paul De Grauwe and Michele Fratianni, the *mere threat* of gunboats influenced the behavior of nineteenth-century borrowers.¹⁷

References to gunboat diplomacy appear not only in scholarly writings, but also in the modern financial press. During the debt crisis of the 1980s, for example, the *Wall Street Journal* ran the following front-page headline: “Theodore Roosevelt Knew How to Collect on Defaulted Loans—He Would Send in the Marines to Protect U.S. Bankers from Deadbeat Nations.” The *Journal* contrasted the modern era of peaceful debt renegotiation with a previous age, in which “governments employed soldiers rather than accountants and lawyers to resolve international financial problems.”¹⁸ To the extent that this characterization is accurate, military force kept debtors honest for at least part of world history.

A second type of extrinsic sanction involves commerce rather than military cruisers. In many models of sovereign debt, lenders motivate the borrower to repay by establishing a tactical link between finance and trade.¹⁹ If a government defaults, private creditors retaliate not by denying access to future loans but by disrupting commercial relations. Creditors seize goods that belong to the debtor, withhold short-term credit for imports and exports, or (with the help of their home government) impose an embargo on commercial relations with the defaulting state. Confronted with cross-issue retribution of this type, governments may find it worthwhile to repay.

As Philip Lane points out, “The imposition of trade sanctions on the offending country” is “the classic punishment . . . in the sovereign debt literature.”²⁰ It is easy to see why. Countries gain significantly from international trade, due to the principle of comparative advantage. The prospect of losing trade could, therefore, dissuade debtors from cheating on loans. Moreover, the age of gunboat diplomacy may have passed, but trade sanctions remain a potential weapon in the arsenal of creditors. Linkages between debt and trade could, therefore, explain repayment not only before World War I, but also in more modern times.

Empirical research on the topic has just begun, however, and the available evidence is contradictory. In two recent studies, Andrew Rose shows

¹⁷ De Grauwe and Fratianni 1984, 158.

¹⁸ *Wall Street Journal*, January 12, 1984, 1.

¹⁹ This argument appears in the seminal work of Gersovitz (1983) and Bulow and Rogoff (1989a) and in more recent papers by Aizenman (1989, 1991); Boot and Kanatas (1995); Diwan (1990); Egli (1997); Fafchamps (1996); Fernández and Özler (1989); Gibson and Sundaresan (2005); Klimenko (2002); Marin and Schnitzer (2003); Rose (2005); and Rose and Spiegel (2004), among many others.

²⁰ Lane 2004, 2.

that trade declines after countries reschedule their debts at the expense of creditors, and that countries receive more loans from large trading partners than from small ones.²¹ Both findings are broadly consistent with the trade sanctions hypothesis. On the other hand, Martinez and Sandleris and Mitchener and Weidenmier find no evidence that debtor-creditor trade falls in response to default, and William English demonstrates that many U.S. states repaid their foreign debts during the nineteenth century, even though they were immune to trade sanctions from Britain.²²

The trade sanctions hypothesis also suffers from the same theoretical weakness as the repeat-play argument. To exclude a defaulter from international trade, each lender would need help from many foreign actors. Countries and firms that trade with the defaulter—and ones that potentially could do so—would need to collude, even if they were not party to the original loan. Without collusion, the defaulter could minimize its punishment by increasing ties with other buyers and sellers, or by transshipping its products through other states. Trade sanctions, like credit embargoes, raise daunting problems of collective action.

Once again, we are left with a puzzle. Military coercion may have contributed to debt repayment during the 1800s (a theme I reexamine later in the book), but it cannot explain lending and repayment today. The trade sanctions hypothesis, in contrast, has greater explanatory potential across countries and over time and is “widely accepted” among economic theorists.²³ Nevertheless, it is not obvious that traders worldwide would unite against a defaulter, and evidence about the hypothesized link between debt and trade remains limited and mixed. At this point, we cannot confidently say why countries repay their foreign debts or what gives private investors the assurance to lend.

Toward a Reputation-Based Solution

This book argues that we can make progress toward understanding the behavior of debtors and creditors by developing a dynamic theory of reputation—one that combines repeat play with uncertainty and political change. Building on classical theories of repeated interaction, I relax the

²¹ Rose 2005; Rose and Spiegel 2004. See also Weidenmier 2005 on trade sanctions and Southern Confederacy debt.

²² Martinez and Sandleris 2006; Mitchener and Weidenmier 2005b; English 1996. See also Wright 2004b for a discussion of the strengths and limitations of the evidence in Rose and Spiegel 2004.

²³ Rose 2005, 190.

standard assumption of complete information about the preferences of foreign governments and allow preferences to change over time. These two innovations transform the standard repeat-play theory into a dynamic model of reputation in which investors continually update their beliefs about the type of government they are confronting. The evolving beliefs of investors, which constitute the borrower's reputation in foreign eyes, are fundamental to both lending and repayment. I discuss incomplete information and political change below, incorporate them into a theory of reputation in chapter 2, and test the theory's explanatory power in the remainder of the book.

Models of repeat play in international debt typically involve complete information about the preferences of players. In their seminal paper, Jonathan Eaton and Mark Gersovitz assume that lenders "know all relevant characteristics of individual borrowers," including the fact that governments "are inherently dishonest."²⁴ When dealing with governments in a complete-information setting, investors enforce cooperation by threatening to apply the grim trigger: a country that defaults will experience a permanent financial boycott. Many other modelers adopt the same assumption that investors fully understand the preferences of the borrower.²⁵

These complete-information models contain a reputational element; creditors condition their lending decisions on whether the borrower repaid in the past. However, the concept of reputation in these models is limited in ways that have important theoretical and empirical implications. Under conditions of complete information, creditors already know the type of debtor they are confronting. There is no opportunity to develop beliefs—and therefore no opportunity to learn—about resolve, competence, and other attributes that could be relevant to repayment. I define the reputation of an actor as the impression others hold about its preferences and abilities. Complete-information models leave no room for changes in impressions, and therefore remove the possibility of updating or learning.

²⁴ Eaton and Gersovitz 1981, 290.

²⁵ Some repeat-play models allow the income of the sovereign to fluctuate randomly in response to exogenous shocks, such as natural disasters and changes in commodity prices. Neither investors nor politicians know exactly when disaster will strike, nor can they anticipate when the sovereign will face better conditions.

Nevertheless, actors are presumed to know in advance the probability and magnitude of all shocks that could affect the sovereign. Consequently, investors have nothing to learn about the sovereign's vulnerability to external shocks, much less its resolve and competence in the face of circumstances beyond its control. Reputation-based approaches are distinctive, since they allow investors to update their beliefs about determination, competence, and other features of the debtor that could influence the likelihood of repayment.

Researchers justify the complete-information assumption in three ways. Some say it “accurately reflects reality” because creditors know with high precision the preferences and abilities of debtors they face.²⁶ For these researchers, the notion of incomplete information about the debtor is fairly “implausible.”²⁷ Others contend that models of incomplete information are “not necessary” to account for relations between debtors and creditors.²⁸ In the interest of parsimony they delete what they judge superfluous. Still others believe the use of incomplete information is “unlikely to yield empirically testable models,” whereas complete-information approaches can be evaluated with evidence.²⁹

Vinod Aggarwal advances many of these arguments in *Debt Games*, the leading study in political science of international debt rescheduling. Aggarwal develops a “situational theory of bargaining” that identifies domestic and international constraints actors face in the wake of a default. His theory assumes that “each player knows both players’ payoffs and the rules of the game.” According to Aggarwal, this “assumption of complete information not only provides a more tractable model, but also more accurately reflects reality.” Models of incomplete information, in contrast, would be “unwieldy” for empirical work.³⁰

The concerns are understandable but, I believe, misplaced. As we will see, the assumption of incomplete information is not only plausible but also useful to explain defaults, settlements, risk premiums, seasoning effects, and other patterns in international debt markets through the centuries. Moreover, the battery of empirical tests in this book demonstrates that researchers can in fact use evidence to evaluate reputational theories with incomplete information. We have learned much from models of repeat play with complete information. Now we can deepen our understanding of debtor-creditor relations and broaden the range of predictable phenomena by placing incomplete information at the center of the analysis.

My reputational theory leaves room not only for incomplete information but also for political change. The workhorse models in economics and political science, such as the iterated prisoner’s dilemma, treat preferences as static. Players have identical incentives (they repeat a game with unchanging payoffs) round after round. The assumption of constant preferences is appropriate for some kinds of actors. In the realm of international debt, for example, it makes sense to characterize private creditors

²⁶ Aggarwal 1996, 544.

²⁷ Buitter 1988, 613.

²⁸ Kletzer and Wright 2000, 635.

²⁹ Kletzer 1988, 602.

³⁰ Aggarwal 1996, 55, 70, 544.

as having consistent preferences for profit. But it is less realistic and, I argue, less useful to view government preferences as immutable.

The Argentine default of January 2002 provides a case in point. Analysis reveals that the Argentine default occurred in response to *changing* domestic preferences about the value of compliance.³¹ Notwithstanding the complexities of international finance, most Argentine citizens had strong opinions about whether the debt should be repaid and let those opinions guide their votes. In 1999 a majority opposed default and turned against presidential candidate Eduardo Duhalde when he called for a suspension of debt payments. The eventual winner of the 1999 presidential election, Fernando de la Rúa, had campaigned on a platform of honoring the debt. By 2001, however, the policy of repayment became increasingly unpopular. When mass opinion tipped in favor of default, citizens handed de la Rúa a devastating defeat in congressional elections, drove him to resign the presidency, and replaced him with a new leader who declared a moratorium on debt payments as his first public act. By ruling out such swings in public opinion and government ideology, static-preference models of reputation fail to explain the largest default in financial history.

The more general lesson is that political change, either at the highest levels of government or within the populace, can cause government preferences about debt to shift. Diverse domestic opinions make these changes possible. Political leaders, parties, and citizens are not uniformly in favor of debt servicing, nor are they uniformly opposed. Opinion tends to be divided, especially in developing countries during times of crisis, because debt repayment creates economic winners and losers.³² Recent research shows that elites and masses understand the distributional effects of debt repayment and use them as a basis for policy preferences.³³ Domestic changes—revolutions, coups d'état, institutional reforms, elections, and shifts in the prodebt and antidebt coalitions—could, therefore, alter government preferences about repayment. These insights can be usefully integrated into theories of reputation.

In the remainder of this book, I develop and test a theory of reputation in international relations, with particular application to financial relations between sovereign borrowers and foreign lenders. The theory, which incorporates both incomplete information and political change, explains why investors lend and governments repay. Beyond that, it generates a wide range of testable implications about the *dynamics* of debtor-creditor relations. The theory predicts how investors treat first-time borrowers, and how risk premiums evolve as borrowers become more seasoned. It

³¹ Tomz 2005a.

³² Frieden 1988, 1989b, 1991.

³³ Tomz 2005b.

explains how debtors ascend or descend the reputational ladder due to the interaction between their behavior and the historical context, and then clarifies how changes in reputation affect access to capital. A theory of reputation that includes uncertainty and political change helps explain why countries with favorable reputations sometimes default, and why nations with histories of noncompliance suddenly settle with foreign creditors. Still more fundamentally, the theory contributes to a deeper understanding of cooperation under anarchy.