# **Odious Debt**<sup>\*</sup>

Michael Kremer and Seema Jayachandran<sup>1</sup>

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### Abstract

Some sovereign debt, such as that of apartheid South Africa, is incurred without the consent of the people and not for their benefit. We argue that this *odious debt* could be prevented if it were made non-transferable to successor governments. An institution that truthfully announced whether regimes are odious could create an equilibrium in which successor governments suffer no reputational loss from failure to repay odious debt and hence creditors curtail odious lending. Equilibria with odious lending could be eliminated by amending creditor country laws to prevent seizure of assets for non-repayment of odious debt and by restricting foreign aid to countries not repaying odious debt. Shutting down the borrowing capacity of illegitimate regimes is a new form of economic sanction with two advantages over existing sanctions: it helps rather than hurts the population, and it does not create incentives for evasion by third parties. However, an institution empowered to assess regimes might falsely term debt odious if it favored debtors, and if creditors anticipated this, they would not lend to legitimate governments. An institution empowered only to declare that *future* lending to a particular government is odious would have greater incentives to judge truthfully.

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<sup>&</sup>lt;sup>1</sup> Kremer: Department of Economics, Harvard University, 200 Littauer Center, Cambridge, MA 02138; The Brookings Institution; Center for Global Development; and National Bureau of Economic Research. Email: mkremer@fas.harvard.edu. Jayachandran: Department of Economics, Harvard University, 200 Littauer Center, Cambridge, MA 02138. Email: jayachan@fas.harvard.edu.

# 1. Introduction

The campaign for sovereign debt relief is based on two ideas. First, certain countries are too poor to repay their loans. Second, some debts were illegitimate in the first place and thus the country should not be responsible for repaying them. While the first rationale for debt relief has been examined academically, the second has received much less attention.<sup>1</sup>

Following legal scholars, we define *odious debt* as debt incurred without the consent of the people of the country *and* not for their benefit [Sack, 1927; Feilchenfeld, 1931]. Thus, the debts of an autocratic regime that borrows and then loots the funds or uses them to finance repression are odious. Because both conditions must hold for debt to be considered odious under this definition, debts of a regime that loots but rules democratically or of a non-democratic regime that spends in the interests of the people would not be considered odious. Most developing-country debt is probably not odious, but there are several potential examples of odious debt. The apartheid regime in South Africa borrowed from private banks through the 1980's, devoting a large percentage of its budget to finance the military and police and otherwise repress the African majority. South Africa today bears apartheid-era debts. Congo and the Philippines bear billions of dollars of debt incurred by looting dictators (Mobutu Sese Seko and Ferdinand Marcos, respectively). More recently, Franjo Tudjman of Croatia instigated violence against political opponents and looted public funds, and in 1997 the IMF cut off aid that was earmarked for Croatia. Nonetheless, commercial banks lent an additional \$2 billion to the Croatian government before Tudjman's death in 1999 [World Bank, 2001].

By law in most countries, individuals do not have to repay money that others fraudulently borrow in their name. Similarly, a corporation is not liable for contracts that the chief executive officer enters without the authority to bind the firm. The doctrine of odious debt proposes an analogous

<sup>&</sup>lt;sup>1</sup> On the first rationale, Krugman (1989) and Sachs (1989) describe a debt overhang problem caused by negative shocks. On the second rationale, Adams (1991) and Hanlon (2002) argue the case that much developing-country debt is illegitimate, and Ashfaq et al (2002) discuss related legal issues. The philosopher Pogge (2001) proposes that a panel assess the democratic status of governments in order to deter lending to autocratic regimes. We differ from earlier work in discussing the multiple equilibria of the debt market—which are what make assessments potentially efficacious—and the tradeoffs between *ex ante* and *ex post* assessments.

principle: sovereign debt incurred illegitimately by one regime should not be transferable to a successor regime. The doctrine arose after the Spanish-American War when the United States contended that neither the U.S. nor Cuba should be responsible for debt that Cuba's colonial rulers incurred without the consent of the Cuban people or regard for their benefit. The doctrine, however, has gained little momentum within the international law community, in part because of concern that it would provide an excuse for countries to not repay legitimate debt, which would lead creditors to shut down lending.

In this paper we discuss how this concern might be overcome and odious debt might be prevented in the first place. Using a simplified model of the debt market, we show, first, that an international institution that investigated which regimes are odious and made its judgments publicly could reduce odious debt. Second, we argue that by giving countries explicit incentives to repudiate odious debt, creditors' incentives to lend to odious regimes could be eliminated. Third, we show that an institution empowered only to declare *future* lending to a particular government odious would have greater incentives to judge truthfully than one allowed to rule on existing debt.<sup>2</sup>

In practice successor regimes typically do not repudiate debt, even when it likely was incurred under illegitimate circumstances. We model a penalty for default that deters countries from defaulting on even illegitimate debt and has two components, direct sanctions and a reputational cost. Successor regimes seem to have these concerns in mind when they decide to repay illegitimate debts. For example, Anastasio Somoza was reported to have looted \$100 to \$500 million from Nicaragua by the time he was overthrown in 1979. Daniel Ortega, leader of the Sandinista government that succeeded Somoza, told the United Nations General Assembly that his government would repudiate Somoza's debt, but he reconsidered when his Cuban allies advised him that doing so would unwisely alienate Nicaragua from Western capitalist countries.<sup>3</sup> Similarly, the South African government has distanced itself from the popular movement to nullify its apartheid-era debts. For example, its top ministers

<sup>&</sup>lt;sup>2</sup> Kremer and Jayachandran (2002) describe how a similar system could help address the moral hazard problem that the expectation of bailouts from international financial institutions encourages creditors to lend to legitimate but non-creditworthy governments.

<sup>&</sup>lt;sup>3</sup> "Somoza Legacy: Plundered Economy" (*Washington Post*, November 30, 1979); "Cuba's Debt Mistakes: A Lesson for Nicaragua" (*Washington Post*, October 5, 1980).

recently denounced a lawsuit seeking reparations from banks that loaned to the apartheid regime because, "we are talking to those very same companies named in the lawsuits about investing in post-apartheid South Africa."<sup>4</sup>

After setting up a model of the debt market, we consider the impact of a hypothetical perfectly truthful institution that assesses whether regimes are odious. By simply announcing its finding, it could create a new equilibrium in which lending to odious regimes is curtailed because successor governments who repudiate odious debt face no loss of reputation. In the absence of enforcement, this equilibrium where odious lending is curtailed is one of multiple equilibria. Equilibria with lending to odious regimes can be eliminated if laws in creditor countries are amended to disallow seizure of assets for non-repayment of odious debt and foreign aid to successor regimes is made contingent on non-repayment of odious debt. For example, the International Monetary Fund (IMF) and World Bank could adopt a policy of not providing assistance to governments who are repaying creditors for illegitimate loans. This would provide governments with incentives to renounce odious debt, so in equilibrium, banks would not issue odious loans in the first place.

Shutting down the borrowing capacity of illegitimate regimes can be viewed as a type of economic sanction that third parties will not have incentives to evade and that will be less likely than trade sanctions to harm the people they were intended to help. For example, when the United Nations imposed trade sanctions against the apartheid government of South Africa in 1985, it also could have declared that it would not consider debt incurred by the apartheid government as a legitimate obligation of the successor government. If banks doubted that successor regimes would repay loans issued after the announcement, they likely would have been unwilling to make such loans.

After considering the impact of a hypothetical institution that truthfully assesses the legitimacy of debt, we discuss potential biases in the adjudication process and ways to minimize their impact. We discuss advantages of empowering the institution to rule only on the legitimacy of future debt. An institution that evaluated existing debt might make false judgments if it favored debtors or creditors.

<sup>&</sup>lt;sup>4</sup> "S. Africa Shuns Apartheid Lawsuits" (Guardian, November 27, 2002).

For example, if it cared about the welfare of the people in poor debtor countries, it might declare legitimate debt odious so the country would not have to repay it. If creditors anticipate that they would not be able to collect on even legitimate loans, they would be wary of lending to any government, and the debt market would shut down. An institution empowered only to declare future loans to a particular government illegitimate would not be subject to this time-consistency problem and would be more likely to judge honestly. A supermajoritarian voting rule to declare a regime odious could safeguard against the possibility that some disfavored governments would falsely be branded as odious, helping ensure that the system constituted an improvement over the status quo.

The remainder of the paper is organized as follows. Sections 2 and 3 present the model and discuss equilibria, showing that an institution that truthfully announces regime type may create an equilibrium with less or no odious debt. Section 4 argues that an institution empowered to declare only future borrowing illegitimate would be more likely to judge honestly. Section 5 concludes.

#### 2. Setup of the Model

To model odious debt, we first lay out a model of sovereign debt in which sovereign debt is supported by a penalty for default that comprises direct sanctions (seizure of assets) and loss of reputation. We treat the reputational penalty in reduced form in the main text and present a microfoundational model in the appendix that is based on Cole and Kehoe's (1996) linked-reputation model in which if a country defaults on debt issued by private foreign banks, it suffers a loss of reputation that extends beyond the debt market.

The model makes several assumptions that simplify the exposition and enable us to derive our main results. We realize that many of them are stark and "stack the cards in our favor." In Section 3.3, after we have augmented the model to examine the impact of an institution that assesses regimes, we discuss the implications of relaxing some specific assumptions.

## 2.1. Players and their objectives

The *government* in period 1 has type  $G_1 \in \{\text{odious, non-odious}\}$  that is exogenously determined at the start of the game (subscripts denote the time period).  $G_1$  is not publicly observed but can be ascertained through an investigation at cost C. In each later period, from t=2 to t= $\infty$ , a new government that is always non-odious comes into power. A non-odious government maximizes the population's discounted income; an odious government maximizes its own. There also are competitive foreign *banks* with infinite lifetime. The *population* of the borrowing country is a passive player; it does not make decisions in the model. It supplies labor inelastically each period, but is too sick to work if it consumes less than w.

All agents have linear utility that is additively separable over time and discount rate  $\beta < 1$ , so  $R=1/\beta$  is the equilibrium gross world interest rate. Agents cannot commit; this includes banks that investigate governments being unable to commit that their judgment  $J_t \in \{\text{odious, non-odious}\}$  about a regime will be truthful.<sup>5</sup>

#### 2.2 Assets, production, and income

The government and population begin with zero liquid assets, but foreign banks have a stock of capital sufficient to cover the country's loan requests. We assume there are some productive assets in the country that an odious regime cannot loot. In particular, we assume that an odious regime cannot indenture the people's future labor. In each period, after the new government is installed, a production process that uses labor is available. It immediately returns A if the population consumes at least  $\underline{w}$  and 0 otherwise. We assume that  $A - \underline{w} \ge R - 1 \ge 0$ . This implies that even an odious government will choose to pay the population a minimum wage of  $\underline{w}$  and use their labor rather than letting them die. It also implies that a looted country will be able to make loan repayments, as will become clear below.

<sup>&</sup>lt;sup>5</sup> We assume that outsiders can tell whether witnesses have been called, evidence has been gathered, etc., but that they cannot observe whether the announced judgment truthfully reflects the findings of the investigation. In other words, the occurrence of an investigation is observable, but the outcome is not.

Our accounting convention is that income accrues to the government, which then pays other players. The population consumes the first  $\underline{w}$  of income and the government is the residual claimant on other receipts, including the proceeds from borrowing. (In Section 3.3 we discuss the case where the population obtains some of the proceeds from loans made to even an odious government.) A non-odious government will retain no income for its own consumption while an odious government will maximize its consumption.

To generate a productive role for borrowing, we assume there is an investment, which we call *mining*, that returns an amount M > R in period 2 for every unit of capital invested in period 1.<sup>6</sup> The investment fully depreciates after producing output in period 2.

## 2.3 Loan contracts

Banks issue loans only in period 1. The loan contract is as follows. A bank pays an amount  $D \ge 0$  in period 1 and the country repays D(R-1) in all periods  $t\ge 2$ . (The present value of the infinite repayment stream equals D.) The loan amount and the country's repayment  $b_t\ge 0$  in each subsequent period are publicly observable. If the country defaults, it faces a penalty whose present value is  $P = P^r + P^s$ . P<sup>r</sup> is the reputational penalty associated with exclusion from a profitable market in which only those with a good reputation (i.e., a clean record as a debtor) can participate, and its maximum value is  $\overline{P^r}$ . We treat it in reduced form in the main text, but see the appendix for microfoundations. P<sup>s</sup> represents seizure of assets. As a normalization, the maximum total penalty  $\overline{P} = \overline{P^r} + P^s = 1$ .<sup>7</sup>

### 2.4 Timing

The timing is laid out in Figure 1. At the outset of period 1, the government type is realized. The bank can investigate the government type and issue a loan D to the government. The government

<sup>&</sup>lt;sup>6</sup> The main results of the model would not change if we allowed mining in every period.

<sup>&</sup>lt;sup>7</sup> This assumption reduces two degrees of freedom from P<sup>s</sup> and  $\overline{P^r}$  to one. Since we are not interested in the comparative statics as P<sup>s</sup> and  $\overline{P^r}$  change separately, we adopt this restriction for ease of presentation.

can invest. Labor income is realized and the government pays workers a wage  $w_1$ . Workers produce if their wage is greater than or equal to  $w.^8$  Consumption takes place.

In period 2, if the country invested in mining in period 1, output DM is realized. The government pays a transfer X to the population and consumes the remainder. A new (non-odious) government replaces the existing government. Labor income is realized, and the government pays the population a wage  $w_2$  that is consumed immediately. It makes a payment  $b_2$  to the bank. Subsequent periods are identical to period 2 except there is no mining output.

Figure 1: Timing of the Model

- 2. Government and bank write loan contract. [*Ex ante* investigation by institution.]
- 3. Government receives loan and invests in mining.
- 4. Labor income A realized and wage paid to population. Income consumed.

### t=2

1. If investment in mining took place at t=1, amount M realized; government makes transfer X to population; population consumes X and government consumes remainder.

2. New non-odious government formed.

3. Labor income realized and wage paid to population. Income consumed.

4. [*Ex post* investigation by institution.]

5. Government makes loan repayment to bank.

## t>2

2. Labor income A realized. Wages paid to population. Income consumed.

3. Government makes loan repayment to bank.

Note: Bracketed events are not applicable in Section 2 of the paper. The timing of FDI in the model laid out in the appendix is as follows. The contracting of FDI occurs as the last event in period 1 and the penultimate event (immediately before loan repayment) in subsequent periods. The realization of FDI profits, taxation, and potential expropriation is the first event of each period (beginning with t=2).

## 2.5 Equilibria and the status quo of the sovereign debt market

As described more fully in the appendix, the folk theorem implies that there are multiple

equilibria of the reputational cost of default; the extra lending that reputation sustains in an infinitely

<sup>1.</sup> Banks, government, and population formed. [Institution formed.] Government type realized.

<sup>1.</sup> New non-odious government formed.

<sup>&</sup>lt;sup>8</sup> The wage payment and realization of labor income occurs simultaneously, but the wage affects the amount of labor income (because of the efficiency wage assumption). In a discrete-period model, this approximates a more realistic continuous-time process in which an infinitesimal wage payment would precede the realization of labor income. Also note that  $\underline{w}$  can be zero.

repeated game can vary between 0 (repetition of single-stage Nash equilibrium) and a maximum value  $\overline{P^r}$  after which a country would rather default (Nash reversion). If there is no reputational penalty, or P<sup>r</sup>=0, loans of D=P<sup>s</sup> would be issued to all governments. There are also equilibria with indiscriminate lending to all governments in which the loan size satisfies P<sup>s</sup>≤D≤1.

There are a range of other, more exotic equilibria as well. For example, countries could bear no reputational cost for failure to repay loans issued on Mondays, but face penalty  $\overline{P^r}$  for failure to repay loans issued on other days of the week. Under some conditions, there also exists an equilibrium in which countries face no reputational cost for failure to repay odious loans, but face penalty  $\overline{P^r}$  for failure to pay legitimate loans. However, this equilibrium requires an infinite sequence of costly investigations of regime type, and will only exist if the present discounted value of the sequence of investigations is not too large (see the appendix for further discussion). In the absence of some coordination device, this equilibrium seems unlikely to arise, and it certainly does not seem to describe the status quo.

Under the status quo, creditors lend to a government as long as it is creditworthy, and successor governments typically accept responsibility for debt, even if the predecessor regime is regarded as odious. Looting does not seem to be a valid excuse for failure to repay. For example, banks lent to the South African apartheid regime and the Somoza regime in Nicaragua, and the successor governments have not repudiated the debt.<sup>9</sup>

The equilibrium in the model that best describes this status quo is the following. Banks lend D=1, which is the loan size supported by the maximum penalty that a country would face if it defaulted, to both types of period-1 governments, and mining investment occurs. If the government is odious, workers are paid  $w_1=w$  and the government consumes A-w. If the government is non-odious, workers are paid  $w_1=A$ . In period 2, after output is realized, an odious government consumes M, while a non-odious government transfers X=M to the population. After the new government is installed, labor

<sup>&</sup>lt;sup>9</sup> In the few cases where a government has repudiated the debts of previous regimes as illegitimate, such as after the Russian revolution, the new government presumably had few plans to deal with foreigners and had few assets

income A is realized and  $w_2$ =A-(R-1). The loan repayment is  $b_2$ =R-1. In periods t>2, labor income is A,  $b_t$ =R-1, and  $w_t$ =A-(R-1).<sup>10</sup> Off the equilibrium path if  $b_s$ <R-1 for any 2≤s≤t, the penalty P is imposed.

### 3. Impact of an Institution That Truthfully Identifies Odious Regimes

This section argues that a hypothetical institution that truthfully announced regime type could create a new equilibrium in which there is no loss of reputation for repudiating odious debt, and that with some enforcement power it could eliminate other equilibria, effectively creating a new type of economic sanction that overcomes some problematic features of trade sanctions.

## 3.1 Announcements and no reputation loss for repudiation of odious debt

If an institution investigates governments in period 1 (*ex ante*) or period 2 (*ex post*) and announces its judgment  $J_t \in \{\text{odious, non-odious}\}$  where t=1 or 2, an equilibrium will exist in which the reputational penalty is 0 when  $J_t = \text{odious but}$  is its maximum value,  $\overline{P'}$  otherwise. In this equilibrium, banks will limit lending to odious regimes to the level that can be supported by seizure of collateral,  $P^{s,11}$  Here, a country's reputation is not tarnished if it repudiates odious debt, but is tarnished if it defaults on legitimate debt. In the microfoundational model in the appendix, firms stop doing business with a country if the country has behaved badly as a borrower, and repudiating odious debt is not considered bad behavior. Recall that for this type of reputational equilibrium to exist in the absence of the institution, creditors and investors would be required to coordinate on an infinite sequence of costly investigations. For a range of costs of investigation, equilibria in which reputation depends on

overseas subject to creditor countries' legal systems, so it had little to lose by defaulting.

<sup>&</sup>lt;sup>10</sup> In the full model in the appendix, the government also collects and transfers to the population taxes on FDI that we suppress here to simplify the presentation.

<sup>&</sup>lt;sup>11</sup>If the institution accurately judged period-1 regimes *ex post* (in period 2), then banks would conduct their own investigations *ex ante* and not issue odious debt beyond  $P^s$ . The lending bank investigates the regime in all cases at cost C that it passes on to the government. The bank restricts lending to odious governments and lends to non-odious governments. If lending occurs, the institution undertakes an *ex post* investigation and announces the government type truthfully. This equilibrium would have higher investigations costs than *ex ante* investigation

the odiousness of debt will exist only if there is an institution that has incentives to truthfully assess and publicly announce regime type.

# 3.2 Enforcement powers and elimination of odious debt

While public announcements of regime type could potentially shift the equilibrium, there is no guarantee that everyone would coordinate on the new equilibrium without some means of enforcement. Two enforcement mechanisms, though, could eliminate equilibria with lending to odious regimes. First, creditor country law could be changed to prevent seizure of a country's assets for non-repayment of odious debt; this would make P<sup>s</sup>=0 for odious debt. Second, donors could tie their foreign aid to the institution's judgments and withhold foreign aid from countries that are repaying predecessors' odious debt. In other words, donors could refuse to give aid that the country, in effect, will hand over to creditors who issued odious loans. If the foreign aid is valuable enough, the country would have incentives to repudiate odious debt, and banks, anticipating this, will not originate such loans.

### 3.3 Relaxing assumptions

We now discuss the implications of relaxing some of our modeling assumptions (see Kremer and Jayachandran (2002) for further discussion). The starkest assumption we make is that the government is the full residual claimant. More realistically, the population may get some benefit from lending to odious regimes, and if the benefit is large enough, then it may be better off without limits on borrowing. The legal doctrine considers debt odious only if it is not incurred for the "benefit of the people"; under this standard a loan would be odious if the expected looting by the regime exceeded the surplus from borrowing, leaving the population worse off than if the loan had not been made.<sup>12</sup>

We consider the case in which the odious regime stays in power for one period. If a dictator loses power stochastically or simply is in power for longer, banks might issue short-term loans as long

since two investigations per government occur for non-odious governments.

<sup>&</sup>lt;sup>12</sup> Eliminating the ability to borrow also has attractive incentive effects, as discussed in section 3.4, so it may be appropriate to block lending even if less than the full surplus from borrowing would be looted.

as they believed that the dictator would be in power long enough to repay the loans. Even in this case, the dictator is worse off with the policy than without, since the risk that the odious regime will lose power before he can repay even a short-term loan will increase the interest rate he faces. Also, since the interest rate will be set so that in expectation the dictator repays the value of the loan, the dictator can loot only the surplus from borrowing and the population is not saddled with the debt.

It also may be the case that a government is non-odious at first but becomes odious. For example, Mobutu in Zaire became more corrupt over time. In practice regimes could be monitored repeatedly or continuously perhaps in response to complaints, and a regime might be judged nonodious to begin with but odious at a later time. Only loans made after the revised judgment would be considered odious.

Finally, in the model the period-1 government has zero initial assets, but governments often start with some debt, so an additional issue is whether all borrowing should be blocked or whether the regime should be allowed to roll over existing loans but blocked from incurring new loans. Consider the case of an odious government that inherits debt d and owes a repayment of d(R-1). If the odious regime had intended to borrow but is unable to do so under the new system, it cannot be made worse off than when it expropriates d(R-1) by reneging on its debt repayment obligations. This suggests that the international community may as well allow an odious government to roll over the interest due on old debt. Though the regime would continue to loot d(R-1) rather than repay creditors, rollover would be less disruptive to the financial system than outright default. The people of the country are not made worse off since they would be expected to repay the legitimate debt and interest that the last non-odious government bequeathed even if the odious regime did default.

### 3.4 Limiting debt as an economic sanction

Limiting an odious regime's ability to borrow can be viewed as a new form of economic sanction—a "loan embargo". Like trade sanctions, limiting borrowing may create incentives for dictators to curtail abuses or even deter potential dictators from seizing power. However, while third

parties have incentives to break trade sanctions, would-be issuers of odious debt have the incentive to abide by a loan embargo. The key difference is that banks cannot break this sanction unilaterally since they rely on others to enforce the reputational punishment. A few creditors and investors who are willing to lend to and invest in a country that has repudiated odious debt would eliminate any incentive for the country to repay the debt. In contrast, trade sanctions are eviscerated by one or a few defectors even if there are a large number of abiders.

Moreover, while trade sanctions are often thought to impoverish the population, a loan embargo is more likely to make the population of a country better off. Trade sanctions reduce the population's income as long as their share of the proceeds from trade is positive. Cutting off lending to looting regimes, in contrast, reduces the income of the population only if their share of the proceeds from the loan exceeds the net present value of the loan repayment.

More countries engage in foreign trade than in sovereign borrowing, so limits on borrowing could only be applied as a sanction in certain cases. Nonetheless, in these cases it could have a significant impact. For example, if major players in the international community had publicly declared Tudjman's regime in Croatia odious at the time of the IMF freeze in 1997, creditors might not have granted him the subsequent \$2 billion in loans and the Croatian people would not bear the debt today.

#### 4. Potential Biases and Truth-telling

The previous section examined the effect of a hypothetical perfectly truthful institution. We now address the important concern that the institution may have biases, and we consider when it nonetheless will announce truthfully. Section 4.1 shows that an institution that can rule on existing debt odious might make false rulings if it asymmetrically values the welfare of debtor countries and creditors, and that this time-consistency problem can be solved if the institution is empowered to declare odious only future loans. Section 4.2 discusses the impact of biases in favor of or against particular governments.

### 4.1 Preferences of the institution toward debtor countries and creditors

There is clearly room for discretion in assessing whether loans to a particular regime are odious. Governments lie on a continuum in the extent to which they do or do not have the consent of the people and do or do not spend for their benefit. Someone could argue that Mexican debt incurred during the era of PRI domination, or debts incurred in the U.S. before the passage of the Voting Rights Act of 1965, qualify as odious debt.

An institution that valued the welfare of people in poor countries more than the interest of creditors might declare existing legitimate debt odious as a way to redistribute resources from creditors to the debtor country. This creates a time-consistency problem, since sovereign lending would dry up if creditors anticipated that even legitimate loans would be branded odious. An institution with the opposite bias of favoring banks over debtor nations might also make false rulings; in this case it might fail to lift a country's odious debt burden in order to help the creditors.

An institution empowered only to declare future debt illegitimate, that is, to identify regimes as odious *ex ante*, will be less subject to bias from placing asymmetric weights on debtor and creditor welfare. To see this, suppose the institution, or more precisely, its decisive voter, puts weights  $\lambda^p$ ,  $\lambda^b \ge 0$  on the welfare of the population and banks, respectively, but that it also has a concern for the truth, reflecting either intrinsic honesty or a concern for reputation. The institution maximizes

$$U_t^i = \mathbf{1}(J_t = G_1) + \lambda^p U^p + \lambda^b U^b ,$$

where  $\mathbf{1}(J_t = G_1)$  is an indicator function that is 1 if the judgment is truthful, and U<sup>p</sup> and U<sup>b</sup> are the utility of the population and of the creditors of banks, respectively. The institution faces incentive problems *ex post*; if it favors creditors or debtor countries it might make untruthful judgments. Suppose the institution learns that the government is odious. If it favors the bank, falsely announcing the government is non-odious will shift the debt burden from the bank to the population. The institution tells the truth if  $1/R \ge \lambda^b - \lambda^p$ . Similarly, if the institution learns that the government is non-odious, it could help the population and hurt the bank by lying and freeing the country of its debt. The institution

will tell the truth if  $1/R \ge \lambda^p - \lambda^b$ . Combining these two cases, the institution will report honestly *ex post* if it does not favor the population over banks too much or vice versa, or if  $|\lambda^b - \lambda^p| \le \frac{1}{R}$ .

Next consider whether an institution empowered only to brand future debt illegitimate will tell the truth. First, suppose the government is non-odious. If the institution falsely declares that the government is odious, no lending will occur. Creditors make zero profit *ex ante* whether or not lending occurs, so the institution's preference for creditors does not affect its judgment, but the population is strictly worse off by (M-R)/R, the foregone surplus from investment. Thus, the institution will tell the truth regardless of the magnitudes of  $\lambda^{p}$  and  $\lambda^{b}$ . Second, suppose the government is odious. Again, a bank makes zero profit whether or not lending occurs. However, the population loses 1 if the institution lies and allows the odious regime to borrow. Thus, the institution always will prefer to tell the truth.

To recap, if the institution displays sufficient favoritism for either the population of a debtor country or its creditor, it will make false judgments *ex post* when liability for the loan is a zero-sum game between the creditor and borrower. In contrast, *ex ante* judgments are immune to this problem since a false judgment cannot help a zero-profit creditor but always hurts the population.

#### 4.2 Biases of the institution toward governments

We next consider institutional preferences in favor of or against the period-1 and period-2 government. The institution places weights  $\lambda^{g1}$  and  $\lambda^{g2}$  on the utility of the period-1 and period-2 governments that can take on positive and negative values. If the institution judges *ex ante* (t=1) the relevant term is that toward the period-1 government, and if it judges *ex post*, the relevant term is toward the period-2 government.

These biases should be thought of as applying to a particular government. A positive value of  $\lambda^{gt}$  may arise if a government is an ally or an important trading partner of an institution member's home country or could threaten retaliation. For example, it is unlikely an institution would blacklist Saudi Arabia or China, regardless of any misdeeds. The value of  $\lambda^{gt}$  might be negative if the institution

opposes a particular government for ideological reasons. For example, the U.S. might wish to block loans to the current government of Iran, independent of whether the regime satisfies the definition of odiousness.

These preferences could potentially lead to false rulings whether judgments are made *ex post* or *ex ante*. First, consider the case in which the institution assesses loans *ex post*. If the borrowing regime was odious, but the institution dislikes the successor regime, it might announce that the regime was non-odious to hurt the successor regime. Similarly, if the borrowing regime was non-odious, but the institution favors the current regime, it might issue a ruling of "odious" to free the country from its debts. Thus, if rulings are made *ex post*, false negatives are induced by preferences against successor regimes, and false positives are induced by preferences in favor of successor regime. Second, consider the case in which the institution assesses regimes *ex ante*. Here, a preference for the current regime might induce a false negative; an odious regime is allowed to borrow. A preference against the regime could lead the institution to deem the regime odious to block its borrowing.

Figure 2 summarizes the effect of different biases on truth-telling. If the institution favors the population sufficiently more than banks or vice versa, a truthful investigation will be feasible *ex ante* but not *ex post*, while preferences for or against governments do not provide reasons to generally prefer either *ex ante* or *ex post* rulings.

·		<u>.</u>		
Bias	<i>Ex ante</i>	Ex post		
Pro-population	Truth-telling	False positives		
Pro-bank	Truth-telling	False negatives		
Pro-regime	False negatives	False positives		
Anti-regime	False positives	False negatives		

Figure	2.	Potential	False	Rulings	Caused	hv	<b>Biases</b>
riguit	4.	1 ottinuar	raise	Runngs	Causeu	vy	Diases

Note: False positive = falsely judging a non-odious government as odious False negative = falsely judging an odious government as non-odious On net, an *ex ante* investigation looks superior, and we now focus on *ex ante* assessments and how to prevent false judgments due to preferences for or against governments. The two types of false judgments are not equally worrisome if it is important to not do worse than the status quo of indiscriminate lending. A false judgment in favor of a particular odious regime would move the outcome closer to the status quo. However, dishonest judgments due to bias against particular nonodious governments could yield outcomes worse than the status quo. To avoid such outcomes, the institution needs to be prevented from applying the odious label falsely to a regime it disfavored (e.g. for foreign policy reasons), thus depriving the country of beneficial loans. If the voting rule of the institution required a supermajority among the members to judge a regime odious, the decisive voter would be less biased against the government than under a simple majority rule. Some illegitimate, selfserving regimes would continue to receive loans under this rule, but it would be an improvement on the status quo if even one such regime were denied loans.

### 5. Concluding Remarks

The international community sometimes imposes economic sanctions on governments that are non-democratic and abuse their people. In this paper we have examined the impact of adding another type of sanction to the repertoire. Preventing illegitimate regimes from borrowing to enrich their leaders is a self-enforcing sanction, since banks would have little incentive to lend to an odious regime if successor regimes could refuse to repay without hurting their reputation. This sanction also helps rather than hurts their population, since they would not be saddled with illegitimate debt that was not spent for their benefit.

An institution that simply announced regime type could potentially deter lending to odious governments, such as that of apartheid South Africa. Equilibria with lending to governments deemed odious could be eliminated by withholding foreign aid if a successor does not repudiate debt declared odious and amending laws in creditor countries to block seizure of assets for odious debt. Favoritism towards debtor countries or creditors could be addressed by empowering the institution only to rule on

the legitimacy of future loans. To prevent false rulings due to institutional bias against particular regimes, rules could constrain the institution to err on the side of assessing regimes as non-odious. Though some undesirable lending would still occur with such an institution, any deterrence of odious debt would be an improvement over the status quo.

Creditors could be better off under a system in which the "rules of the game" are known in advance. Currently, there is a movement to nullify some debt on the grounds of odiousness, but it is hard for creditors to anticipate which loans will be considered odious in the future. If odiousness were declared in advance, banks would avoid lending in the first place and suffer some foregone benefits, but they would not risk large losses if a successful *ex post* campaign nullifies some of their outstanding loans. Accordingly, interest rates could fall for legitimate governments.

An obviously important question is what institution would assess odiousness. An international court is one possibility. Decisions also could be made by the UN Security Council, which might be more appealing to the United States and other major powers who would have veto power. The Security Council currently imposes trade sanctions; imposing limits on lending seems like a closely related activity. It is also conceivable that the U.S. carries sufficient weight in the international system to implement such a system on its own. For example, a U.S. court could rule on the odiousness of debt; U.S. law could be amended to disallow seizure of a foreign government's assets when the government repudiates odious debt; and the U.S. could announce that it would not provide foreign aid to countries that were repaying odious debt and would not support IMF or World Bank aid to such countries.

The most likely way that the institutional structure would take shape is that the international community, led by a few influential countries, would apply the loan embargo for a specific case and then the precedent would evolve into a general policy. The policy need not be adopted wholesale and in the abstract. For example, the U.S. recently pressured the ratings agency Moody's to withdraw its favorable credit rating of Iran. Iran planned to issue sovereign bonds, with European banks as the target bondholders, and the U.S. wished to limit Iran's ability to borrow as part of its economic sanctions

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program.<sup>13</sup> However, eliminating the Moody's rating is unlikely to compel European banks to fall in line with the U.S. position. Suppose, though, that the hardliners in the Iranian government launched a coup and there was international consensus that the Iranian government was neither representative of the people nor intending to spend in the people's interests. The UN Security Council could issue a declaration that Iran was odious and its bonds were unenforceable. The permanent members could vow to back foreign aid to a successor Iranian government that repudiated the bonds. Would-be bondholders would almost certainly fall in line with this sanction.

<sup>&</sup>lt;sup>13</sup>"Moody's, Citing U.S. Concern, Cancels Ratings on Iran Debt" (New York Times, June 4, 2002).

### **Appendix: Microfoundations for Reputational Penalty**

As microfoundations for the reputational penalty P<sup>r</sup> used in the main text, here we lay out a model in which a country repays loans to protect its reputation. We follow Cole and Kehoe [1996] who suggest that *linked* reputations make the sovereign debt market operable.<sup>14</sup> In their model, default on loans tarnishes a country's general reputation and leads to its exclusion from other valuable markets. Following this approach, we assume that firms' willingness to do business with the country may depend on the country's past behavior as a borrower, and the desire to attract firms gives a country the incentive to repay its sovereign debt.<sup>15</sup> We then show that this can generate a reputational penalty for loan default in which there is no reputational loss for repudiation of odious debt and hence odious debt is curtailed. However, we show that in the absence of an institution that has incentives to make truthful public announcements about which governments are odious, this equilibrium requires a costly infinite sequence of investigations of the period-1 regime, rendering it implausible. A creditor or investor doing business with a country has incentives to be untruthful when it assesses a regime unless future firms conduct follow-up investigations to verify the assessment.

#### Microfoundational model

In each period, a new technology is invented overseas, and a short-lived foreign firm can use this technology to build a factory in the country at cost F that then produces output Y in the next period. We assume Y≥RF>0, so it is efficient to build the factory. Once the factory produces output, the government of the country can extract revenues  $\tau \leq Y$  through taxes, labor regulations, price regulations, public utility charges, etc.<sup>16</sup> If the country can commit, it will offer  $\tau$ =Y-RF, and the firm will build a factory. In a one-shot game without commitment, the government extracts  $\tau$ =Y and the

<sup>&</sup>lt;sup>14</sup> Bulow and Rogoff [1989] show that exclusion from the credit market will not deter a country from defaulting if it has access to a savings technology.

<sup>&</sup>lt;sup>15</sup> Cole and Kehoe [1996] instead link the labor market to the debt market; a government in default cannot hire workers since it cannot be trusted to pay them *ex post*. Also, we assume infinite periods, while Cole and Kehoe assume finite periods and an honest type that always repays loans.

<sup>&</sup>lt;sup>16</sup> It has coercive power to do so.

firm does not invest in the first place.<sup>17</sup>

Next we consider an infinitely repeated version of this game when the country and firms cannot commit. The 'country' is a series of short-lived governments who represent a population that lives for all periods t=1,2... In each period t the government promises to extract taxes  $\tau_{t+1}$ , and a firm chooses whether to build a factory. It receives Y, is taxed  $\tau_t$ , and then is replaced by a new firm. The history of taxes  $\tau_t = \tau_2, \tau_3..., \tau_t$  is publicly observable. There may be many equilibria in the infinitely repeated game, and we now derive sufficient conditions for the existence of a first-best reputational equilibrium in which FDI occurs and in every period  $\tau_t$ =Y-RF.

Consider the following 'trigger' or 'Nash reversion' strategies: The government offers  $\tau_{t+1}=Y$ -RF in all periods and always follows through.<sup>18</sup> The firm invests in period 1. Thereafter firms invest if and only if  $\tau_s \leq Y$ -RF for all s. We now consider when these strategies are incentive compatible. Firms (weakly) prefer to accept the contract since Y- $\tau \geq RF$ . Also, it is not a profitable deviation for a firm to build a factory for a country that has extracted extra taxes in the past. Since future firms deny the country FDI regardless of whether it cheats a second time, the country will indeed cheat again and the firm that deviated would earn negative profits.<sup>19</sup> The government (which is non-odious since t>1) compares the one-period gain from deviating to the future losses from its tarnished reputation: if it sets  $\tau_t > Y$ -RF, it will have no access to FDI in future periods. The government will not renege if RF, the extra amount it can extract by cheating, is less than or equal to the present discounted value of the future benefits of taxes foreign investment, or

<sup>&</sup>lt;sup>17</sup> We assume that the firm cannot sell the project to the country, because it can also construct a fake factory at cost ε that produces no output. Under this assumption, a firm would have the incentive to build a fake factory after receiving F from the country. The factory type is not verifiable so the country cannot prosecute the firm. <sup>18</sup> The same government contracts with a foreign firm and then taxes it and has the opportunity to expropriate it. For some types of FDI, odious regimes could and would expropriate all the profits. Firms whose FDI can be stolen presumably ascertain odiousness and do not cooperate with odious regimes in period 1. However, odious regimes probably get some non-stealable FDI, and some non-odious regimes do not get FDI if there are no opportunities or the government is expected to expropriate to enrich the people. Thus, whether a country receives FDI is not a fully informative signal of odiousness that could be used in the debt market.

<sup>&</sup>lt;sup>19</sup> If firms were long-lived, then there is no equilibrium with denial of FDI to expropriators. After a government deviation, a firm would deviate and offer amnesty: it will build now and will continue to build as long as the country never extracts excessively again.

(A1) 
$$RF \leq \frac{Y - RF}{R - 1}$$

(We assume that the government does not cheat if indifferent.) If this condition is satisfied, the reputational equilibrium sustaining optimal FDI (i.e., same as if there were full commitment) is feasible. We assume that condition (A1) holds.

We now link the FDI market to the sovereign debt market. Consider strategies as above except that firms also require of loan payments that  $b_{s} \ge D(R-1)$  in order to build factories. That is, a country that missed a loan repayment is denied access to FDI. By the folk theorem, if the previous strategies (basic Nash reversion) are an equilibrium, the modified strategies (linked Nash reversion) are an equilibrium. If the period-t government is able to contract with a foreign firm, it earns tax revenues Y-RF in the next period. Thus, at the loan repayment phase of a period, the cost of default is the foregone infinite steady stream of FDI tax revenues whose present value is  $\frac{Y - RF}{R-1}$ , as before. However, in

period 2, its incentive to default is now RF + RD, as it both extracts all revenue from the FDI firm and defaults on its bank loan, which has a present value RD. The requirement that the costs of cheating are less than or equal to the benefits of cheating give us the following:

(A2) 
$$D \le \frac{Y - R^2 F}{R(R-1)} \equiv \overline{P^r} \cdot$$

 $\overline{P^r}$  is the value of the reputational penalty in this equilibrium.<sup>20</sup>

# Main results

Next, we derive some results under the reputation-as-penalty view that were mentioned in the main text. Recall that C is the cost of the investigation, and M is the output returned in the next period for a capital investment of amount 1.

 $<sup>^{20}</sup>$  In the extensions with investigations, the period-2 loan repayment includes the cost of any *ex ante* bank investigation, and the payment to a firm that investigated is higher by C.

One important result is that in the absence of the institution, if and only if  $C \le \frac{(M-R)(R-1)}{R^2}$ ,

there exists an equilibrium in which odious governments can borrow only up to P<sup>s</sup> and an infinite sequence of investigations occur. In this equilibrium firms invest as long a country has always met its loan payments and not extracted extra taxes from firms; and if a country has failed to make loan repayments, the firm investigates and still invests if it finds that  $G_1$ =odious. That is, a country's reputation is tarnished if it refuses to pay non-odious debt, but remains intact if it refuses to pay odious debt. Each firm investigates odiousness itself. Thus, for t  $\geq 2$ ,

$$P_t^r = \begin{cases} 0 & \text{if } J_t^f = Odious \\ \frac{Y - R^2 F}{R(R-1)} \equiv \overline{P^r} & \text{if } J_t^f = Non - odious \end{cases}$$

Anticipating that debt might be repudiated without penalty, depending on G<sub>1</sub>, banks investigate *ex ante* and choose whether to lend based on the results of the investigation.<sup>21</sup> If  $J_1 = Non-odious$ , there are loans of size D=1 and repayments are made each period as above. However, if  $J_1 = Odious$ , the loan size is P<sup>s</sup>. For P<sup>s</sup>=0, there is no lending to odious governments. The equilibrium exists if investment remains profitable when the country must bear the cost  $\frac{CR}{R-1}$  for the infinite sequence of

investigations, or if  $C \leq \frac{(M-R)(R-1)}{R^2}$ .

A second result is that there is no equilibrium with a finite number of investigations in which odious regimes can borrow less than non-odious regimes. Consider, toward contradiction, a hypothetical equilibrium with truthful announcements in which a bank investigates *ex ante* in period 1 and in each of a finite number of subsequent periods a firm repeats the investigation and conditions whether it will build a factory on its finding. The last firm would always want to announce odious if the country had defaulted on debt, since then it would not have to withhold from building a factory as punishment. Anticipating this, earlier firms would always announce odious, too, since later firms would

<sup>&</sup>lt;sup>21</sup> Investigation costs are paid upfront by the investigator. Banks recoup the cost from the country in period 2. In later periods, the country asks the firm to investigate and in return agrees to lower the amount of taxes by C. Only governments that know that the previous regime was odious will make such an offer. When a bank investigation

not contradict them; the government could default and still expect firms to build factories; and the loan market equilibrium would unravel. It is not incentive compatible for the last investigating firm to deny FDI to a non-odious defaulter, so later non-investigating firms would not be able to trust previous firms' announcements.

Another result is that if the institution investigates and makes announcements but there are no enforcement policies, there exists an equilibrium in which odious governments can borrow up to P<sup>s</sup> only. In an equilibrium in which the institution investigates every regime *ex ante* and truthfully announces the government's type, there is less lending to odious governments if reputation value is conditioned on the institution's public announcement such that non-repayment of loans is penalized in the FDI market if  $J_1$  =Non-odious but not if  $J_1$  =Odious, or

$$P^{r} = \begin{cases} 0 & \text{if } J_{1} = Odious \\ \frac{Y - R^{2}F}{R(R-1)} \equiv \overline{P^{r}} & \text{if } J_{1} = Non - odious \end{cases}$$

This equilibrium is always incentive compatible for banks. A country whose previous government was declared odious would have no incentive to repay a loan whose size is larger than  $P^s$  since it punishment would be smaller than its gain from non-repayment. Anticipating this, a bank strictly prefers to deny the government loans of  $D>P^s$  in period 1. This equilibrium with curtailed odious debt that relies on an investigation by an institution is much less costly (and is more likely to exist) than one that relies on investigations by banks and firms since it requires one rather than infinitely many investigations.

# occurs, b<sub>2</sub><D(R-1)+C is considered loan default.

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