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**Sovereign Debt: Notes on
Theoretical Frameworks and
Policy Analyses**

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Task Force on Debt Restructuring and
Sovereign Bankruptcy

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Bankruptcy is one of the central institutions of capitalism. Without bankruptcy, limited liability firms could not have arisen; and arguably, without limited liability firms, capitalism, at least as we know it, could not have developed.¹ In spite of its importance, the subject has, until recently, received scant attention either from micro-economists or macro-economists.² Arguably, one of the reasons for the dismal performance of IMF policies in the East Asian crises was their failure to take into account adequately the implications of those policies for bankruptcy, and the implications of bankruptcy for both aggregate demand and supply.³ In the context of that crisis, it was argued that more extensive reliance on bankruptcy and standstills would have been more effective than the big bail-outs; indeed, it was only with the “forced” roll-over of Korean loans (equivalent to a standstill) that Korea’s exchange rate stabilized. Such measures might have reduced capital outflows out of the country, and this in turn would have led to a strengthening of the exchange rate.⁴

The Argentine crisis has once again brought to the fore the problems of *sovereign bankruptcy*. Such issues were, of course, very much at the fore of policy discussions earlier, in the 1980 debt crisis⁵ (even though, surprisingly, they got relatively little attention after Russia’s 1998 default).

Attitudes towards bankruptcy have changed markedly over the past century. In the nineteenth century, when individuals could not pay their debts, they were thrown into debtor prisons; and while it was typically difficult, from that locale, for individuals to earn the money with which to repay their debts, the horrific prison conditions did have incentive effects—it did discourage over borrowing and did encourage repayments among those who could—and even induced relatives to bail-out their hapless siblings, children, and cousins.⁶ At the international level, when Mexico or Egypt could not repay its debts, British and French armies moved in; governments were not shy from enforcing the claims of their citizens—or perhaps more accurately, they used such claims as an excuse for their colonial and imperialistic policies.

Today, these practices are generally viewed with disfavor. I know of no serious proposal for the U.S. military to march to Argentina, or Russia, to enforce debt claims, or for the reestablishment of debtor prisons. But the issue of the *appropriate* way to resolve situations where debtors cannot pay what is owed creditors remains subject to controversy. In some circles, one hears discussions such as “countries should adopt a good bankruptcy law,” suggesting that there is a *Pareto Dominant* bankruptcy law, to

¹ Greenwald and Stiglitz [1992].

² Early literature includes Stiglitz [1969, 1972], (other references). Hart... Greenwald and Stiglitz have explored the implications in a series of papers, most notably Greenwald and Stiglitz [1993, 2002] For a recent policy oriented review, see Stiglitz [2000]

³ The IMF, of course, is not alone. It was simply following the practice of older textbooks. Note, for instance, the treatment in Fischer and Dornbush (check)

⁴ Miller and Stiglitz [1999] provide a simple equilibrium theoretical model showing that this is the case.

⁵ See, for instance xxxx . For a review of certain theoretical issues, see Eaton, Gersovitz, and Stiglitz [1986].

⁶ There were, from a historical perspective, perhaps further advantages: the debtors helped populate Australia and some of the American colonies.

which all reasonable people would accede. But the United States has been embroiled in a dispute over bankruptcy law reform for half a decade, with pitched battles between what appear to be creditor and debtor interests. If there were a single bankruptcy code that made all market participants better off, presumably it would be adopted. To be sure, advocates of, say, creditor interests try to convince others that the structures which they propose would make markets work better—and hence make everyone better off.

On the face of it, sovereign bankruptcy is markedly different from private default. In the latter, the creditor can seize assets. For the most part, creditors of countries have limited claim on the country's assets. Yet many of the *economic* issues have their parallels. In this essay, I begin by briefly describing the key economic issues in *private sector* default. In section II, I describe the key differences between private sector debt and sovereign debt. In section III, I analyze the key policy proposals.

I. PRIVATE SECTOR RESTRUCTURINGS

Individuals and firms sometimes borrow more than they can repay. Economic policies are directed at creating *efficient* and *fair* outcomes. Standard economic theory, based on models of perfect information, is only partially helpful; if information were perfect presumably the creditor would have known that the debtor would not be repaying, in which case he would not have lent the money in the first place. Understanding principles of imperfect and asymmetric information (and associated problems of imperfections in competition) are thus essential in the analysis of policy. Simplistic approaches, based on market fundamentalism, get one nowhere.

There are several efficiency issues, which often work against each other:

- a) Efficiency in screening and sorting: The lender should exercise *due diligence* in sorting out good from bad borrowers. The incentive structures should be such as to discourage those who do not have the capability of repaying the loan from borrowing excessively. Associated with the provision of credit are real resource allocations. If credit goes to people who have bad ideas, resources will flow to projects with low returns.
- b) Efficiency in restructuring: *After* bankruptcy, it is important for resources to be redeployed efficiently. Bankruptcy does not destroy resources. The machines that were built still exist. It may have been a mistake to build them in the first place; but given that they were built, the issue is, what should be done with them. In some cases, bankruptcy provides a *signal* that management does not have competence to manage resources well; restructuring needs to be accompanied by new management. In other cases, there needs to be a more fundamental *real restructuring*, that is to say, the organization needs to be liquidated, and the assets redeployed. In still other cases, only the chief financial officer should be replaced; there needs to be a *financial restructuring*.

The most serious problems arise from the delay in resolution, for in this period, there is no clear owner of the firm; and as usual, when there are no clear owners,

there are incentives for asset stripping, and impediments to wealth creation. That is why in more advanced industrial countries, during this interim period, courts appoint trustees; but while such trustees can avoid the worst abuses, it is still the case that delay in restructuring can be very costly.

- c) Efficiency *ex ante*, before default: The awareness of the probability of default can lead to distorted behavior. An owner-manager has an incentive to try to increase its income in the no-bankruptcy state, at the expense of income in the bankruptcy state. The creditor wants the borrower to do everything he can to minimize the risk of default and to ensure that, should there be a default, there is the most income available for creditors. There is a clear conflict of interest between creditors and equity owners, and the nature of the bankruptcy law/contract provisions affects the outcomes.⁷ There are also efficiency issues related to the *timing* of default. The issue is similar to that of when do you call the fire department when there is a fire.⁸ If there is a penalty, there is always an incentive to delay calling the fire department, in the hope that somehow the fire will go out on its own. The stronger the penalties associated with bankruptcy (and therefore the stronger the incentives *not* to go bankrupt) the stronger the incentive to delay going into bankruptcy, beginning the restructuring process; but there can be large costs associated with this delay.
- d) Efficiency in enforcement: If debtors do not repay, then credit markets will not work. If there are large costs of collection, such costs act like a “tax” and dampen the market. As we have noticed, debtor prisons may have, in fact, improved the efficiency in enforcement, lowering private costs of contract enforcement.
- e) Efficiency in risk sharing: Debt contracts typically do a far worse job in risk sharing than equity contracts.⁹ But in the event of bankruptcy, debt contracts can and do help share risk. The design of the bankruptcy provisions affects how well they perform this risk sharing.
- f) Transactional efficiency: Bankruptcy and its resolution are costly, to the parties involved, and, when there are systemic disruptions, to society more broadly. Under some bankruptcy codes, the costs of resolution are higher than under others; under some bankruptcy codes, bankruptcies may occur more frequently, so that more resources may be dissipated in bankruptcy resolution.

Equity issues are more complicated, and often not well understood. At one level, creditors always get compensated for the risks that they bear. If the system is distortionary or inefficient, it may result in interest rates received by creditors being higher than they otherwise would be. So long as there are clear rules, lenders should be essentially indifferent to bankruptcy regimes, since they will get the certainty

⁷ See Stiglitz [1985]

⁸ See Orszag and Stiglitz [2002]

⁹ There are a variety of reasons why, nonetheless, they are employed, having to do with imperfect information (costly state verification, adverse selection, and moral hazard)

equivalent return to what they would have received had they say put their money in a safe asset.

There are two important qualifications to this argument. First, lenders may *exploit* borrowers—that is credit markets are typically far from competitive—and the bankruptcy laws may affect the extent of exploitation.

Second, even in competitive markets there can be distributional consequences; that is, the competitive equilibrium that emerges in markets in which bankruptcy risk is pervasive can be affected by the bankruptcy regime. Assume, for instance, that there is a scarcity of lenders willing to bear large risks, and that for some reason or other mutual funds diversifying bankruptcy risk do not exist. Then a regime that imposes more of the risk on the lender may lead to more than offsetting high interest rates. There is a general equilibrium effect, with the distribution of income changing in favor of the lender. On the other hand, if lenders are risk neutral, so that they charge no risk premium for bearing greater risk, then a regime which imposes more of the risk on the lender shifts the distribution of welfare towards borrowers.

The debate in the United States focused extensively on concerns about exploitation. This was highlighted by teenage children receiving letters in the mail congratulating them on being certified as credit worthy, and granting them a credit card with a \$5000 credit limit. If they should make use of the card—and cannot repay—who should bear the costs? It seems unfair either to make the child or his parents bear these costs.

At different points in time, various of the concerns we have listed may turn out to be paramount. Once bankruptcy has occurred, the focus turns to efficient and quick resolution; but the policies that relate to resolution affect behavior prior to the bankruptcy, and thus the issues cannot really be separated.

Key issues

If there were a single set of rules and procedures with which sometimes conflicting objectives could simultaneously be pursued, bankruptcy law would hardly be a matter of controversy. But it is.

At a theoretical level, there appear to be three major sets of issues:

a) Contracts vs. legal arrangements. Why is there a bankruptcy law at all? Why don't contracts themselves simply specify what will happen in the event of a "breach" of the credit contract. Accordingly, why do we need anything other than standard contract law?

b) Creditor vs. debtor friendly rules. Some rules are believed to be friendlier to the creditor side, others to the debtor. Since, of course, were this the case, as we have already noted, more debtor friendly rules would presumably result in higher lending rates (in a rational expectations equilibrium) Thus, what is at issue are differential impacts on different groups of creditors and debtors. A more debtor friendly regime

forces more screening and sorting; thus, higher risk borrowers are less likely to be subsidized by lower risk borrowers, and such borrowers may well be excluded from the market.

c) Procedural issues. Much of bankruptcy law concerns the procedures by which bankruptcy is resolved.

Problems of transactions costs and market imperfections, especially related to imperfect information, are central to understanding controversies over bankruptcy. In a world with perfect capital markets and perfect information, the assets of a bankrupt firm would be sold to the highest bidder; the bidding would entail bidding simultaneously over separate pieces and the entire organization. The party (parties) willing to pay the most would be those who would make the best use of the resource, and the proceeds would then be distributed among the claimants according to seniority. But in such a world, the firm is always up for restructuring, as existing management is always looking for the best way to deploy the resources, as are alternative management teams.

The literature on corporate governance has explained why the market for managers may be far from perfect. Similar problems, and a few additional ones, arise in forced restructuring. Assume there were two classes of creditors. If the senior creditor were to have the responsibility of restructuring, he would seek to maximize the value of his asset, e.g. by maximizing the probability that the firm earn at least what he is owed; but it would pay little attention to ensuring that it earned more than that, so that there may be little left over for the junior creditor. As a result, it is often proposed that the junior creditor be left initially in control, so long as he can fully pay the claims of the senior creditor. But the same argument implies that he has no incentive to ensure that there is something left over for the equity owners. That is why it is often proposed that the equity owners be left initially in control, so long as they can effectively satisfy the claims of the debtors. But they will typically attempt to do so by providing debtors with equity, warrants or other instruments, which may themselves not be marketable, and accordingly, for which there may be disagreements about the true value. (More generally, equity owners believe that the market has undervalued the firm. The distinction between solvency and liquidity is to a large extent based on a disagreement over the value of the firm; if everyone agreed, then a firm which was solvent would be able to obtain finance, and accordingly it would be liquid.)

As another example, control rights to a firm matter, particularly when there are difficult and contentious decisions to be made that affect different claimants differently. There is no simple way of valuing these control rights; yet different workouts distribute control rights differently. What's more, it is often difficult to define precisely these control rights, e.g. in practice, in some legal systems, a minority shareholder may have no rights, though under other legal systems, he may have substantial rights.

If restructuring were simply a zero sum game, so long as the rules were clear, it would make little difference for overall economic efficiency; but it is not a zero sum game, and the rules can, accordingly have large effects on overall economic performance.

Contracts versus legal structures

Bankruptcy essentially entails a financial (and in some cases real) restructuring of the firm, with different assignments of control and income rights. At first blush, as we have noted, one might have thought that this could be done by contract, specifying what happens in the event that the debtor cannot repay a loan. One might still want, within the contract, to have many issues resolved by an arbiter, e.g. the valuation of non-marketed assets. Difficulties arise, however, with respect to implicit contracts, for instance the rights of workers or of suppliers. In some cases, it may not be clear which creditor is senior.

Even when there are explicit contracts, the costs of fully specifying what should happen in every contingency is such that all contracts are “incomplete.” A complete set of contracts would have to specify the amounts of equity and debt (and every other action of the management of the firm) in every state of nature; but that would eliminate the need for management. Managerial discretion (delegation) arises because shareholders and bondholders cannot have all the requisite information. Managerial contracts are traditionally thought of as attempting to align the interests of the agent (the manager) with that of the principal (the shareholder), but in fact, in modern corporations, there are multiple principals (e.g. other suppliers of credit). (For an elaboration of this perspective, see Stiglitz, 1985).

Virtually every action of management can be thought of as impinging on the value of bondholders’ assets. For instance, the issuance of additional bonds, *even junior bonds*, affects managerial incentives (Stiglitz and Weiss, 1981) in ways which can be adverse to the interests of earlier bondholders; on the other hand, in certain contingencies, *not borrowing* can adversely affect their interests, as projects which might be highly profitable will have to be terminated (Stiglitz and Weiss, 1983). The advantage of bank lending is that banks are engaged in constant monitoring; the short leash of short-term borrowing means that if the firm does something that significantly adversely affects creditors’ interests, they can withdraw their credit and demand immediate repayment. (Rey and Stiglitz). Bonds typically impose covenants that address a few of the most serious concerns, but clearly such covenants are no substitute for the close monitoring of banks.

The fact that contracts are incomplete means that when a firm does go bankrupt, there is often ambiguity concerning the treatment, including *priority*, of various claims. For instance, when exchange rates are changing rapidly, at what exchange rate are dollar and domestic claims to be valued? Unless the contract specifies, e.g. that they should be valued on a particular, well-specified date, such as the date of default, there can be major disagreements. When the rupiah fell from 2000 to the dollar to 18,000

to the dollar, it meant that the rupiah value of dollar denominated debt increased nine fold. But one could argue that the “market” exchange rates were not *equilibrium* exchange rates, that the markets were thin, possibly even manipulated, that they did not, accordingly, represent a “fair” or “true” price. Clearly, it makes enormous difference to *all* creditors on how such disputes are resolved. If some dollar-denominated debts are senior, a high valuation may essentially wipe out the chance of junior claimants recovering anything. Rupiah creditors may delay arriving at an agreement, in the hopes that the rupiah will recover value. When dollar creditors are given assets, rather than dollars, to “satisfy” their claims, how are those assets to be valued? How are we to value, in dollars, the expected present discounted value of future profits, when those profits are earned in rupiah?

There is, in some circles, a naïve belief that markets, if left to themselves, will arrive at efficient solutions through a process of bargaining. There is little evidence or theory to support such a conclusion. Indeed, the theory of bargaining with imperfect information shows that there is often recourse to inefficient signals as a way of conveying information that results in a resolution that is more to one’s favor. Strikes are obviously inefficient, in the sense that productive resources are left unused. Yet labor management bargaining often ends in strikes, as one side or the other wishes to convey to others their “toughness” through their willingness to bear losses. (See, e.g. Farrell []). Delay in arriving at a resolution to a bankruptcy dispute can be viewed in a similar way. The delay results in a wastage of resources—typically the value of the firm deteriorates; its access to capital will be hampered; and management/controlling shareholders may have an incentive to strip assets, which court appointed trustees may only partially ameliorate. Yet delay may be more costly to one party than to others, and delay in reaching an agreement may be the only effective way of conveying this information (which affects the nature of the bargaining solution.)

In the case of macro-economic disturbances that lead to systemic bankruptcies (as in East Asia), there are *social* costs to delaying resolution than go well beyond the private costs. Failure to resolve large numbers of such disputes has effects on both aggregate demand and supply, leading to higher levels of aggregate unemployment and the underutilization of human and other resources. The participants in the bargaining do not take these macro-economic consequences (which are effectively externalities) into account in their decisions concerning the speed of resolution.

Much attention has recently been given to the design of contract provisions allowing for “collective action,” that is, for a majority or supermajority of bondholders to *impose* their views of the appropriate resolution on minorities. The discussion has been motivated by scavenger funds, or holdouts, who, under a unanimity rule, can effectively veto any proposed resolution. They attempt to use the veto power to extract for themselves a favorable deal, e.g. full repayment of what is owed (even though they purchased the debt at a discount.) Since the cost of delay to others (including the debtor) can be quite high, they have, in some instances, succeeded.

The above discussion should make clear that even with such clauses, there remain complicated bargaining problems among classes of creditors, and given the different nature of claims (including priorities), there is no similar way of resolving such disputes through majority, or supermajority, voting. (For instance, junior creditors would, in that case, simply vote for bankruptcy resolutions that strip away much of the claim of senior creditors. If the junior creditors were domestic, they might vote that dollar claims of more senior creditors be valued at an exchange rate that leaves more left over for themselves. In the case of the bankruptcy of several Korean conglomerates, domestic creditors, lending to subsidiaries, had collateralized much of their debt, while foreign creditors, lending to the holding company, lent without collateral. The value of *their* claims clearly depended on how domestic creditors were treated, and it is not clear that either fairness or efficiency would be well served by simply letting the majority of claimants, whether that be the domestic or foreign creditors, determine the outcome.)

Even within a class, there may be genuine differences of interests, and particular interests can purchase bonds to advance their interests. This can be true even with collective action clauses. Assume, for instance, that a simple majority was required. Assume, moreover, that there were two classes of creditors, and that there was a single owner of a junior class, while ownership of the more senior class was widely dispersed. The junior class creditor might find it profitable to buy a majority of the debt of the senior class, and then vote in support of treatments that would decrease the value of those claims (e.g. if the debt was dollar denominated, then it might vote to “accept” a high exchange rate.) The junior creditor would gain more in his “junior” claims than he loses on his senior claims. Effectively, he is depriving the “minority” senior bondholders of their property rights. Worse still, the senior creditors, recognizing this, will be willing to sell their bonds to the junior creditor at a low value.¹⁰ In effect, the junior creditors can manage a “takeover” of the senior creditors. Clearly, requiring a supermajority makes this more difficult. But the larger the supermajority, the easier it is for a scavenger to try to extract favorable treatment. Indeed, with a large supermajority, the junior creditors could purchase a small share and bloc any agreement that was not consistent with their *broader* interests.

Of course, even the debtor can make use of these mechanisms. It can, in effect, buy back half the bonds, and from that position, deprive the remaining bondholders of their interests. To be sure, covenants are designed to ensure that this not be done, so the debtor may not be able to do so himself; but “allies” of the debtor may do so.

The fact that there is a widespread belief that market participants should be encouraged (through a variety of incentives) to have such collective action clauses is evidence that even those who believe in market based solutions do not have confidence that the market will arrive at efficient contract provisions. But if the market cannot, ex ante, arrive at efficient contract provisions, why should one expect it, ex post, to arrive at efficient *resolutions* of disputes?

¹⁰ The analogy with the free rider problem in takeovers should be clear. See Grossman and Hart [], or Stiglitz [1972].

Later, we shall explain why the problems of contract design for sovereign debt are likely even more severe than for private debt. For now, we note only one reason that contracts are not likely to be “efficient.” In credit markets, debtors try to convey information to potential lenders about their credit worthiness. Signaling is costly (see Spence 1973), and in general, signaling equilibrium are inefficient (see Greenwald and Stiglitz, 1986). One of the ways in which borrowers may attempt to signal that they are more credit worthy (less likely to default) is to agree to severe penalties in the event of default. By standardizing bankruptcy provisions through a uniform bankruptcy code, one avoids this costly signaling process (in effect, one *legislates* a pooling equilibrium rather than the *separating* equilibrium which would emerge in the market)¹¹

The same kind of argument helps explain why *standard* contracts may persist, even when such contracts are badly designed. Proposing an alternative to a standard contract may serve as a signal, which may be taken adversely; and in any case, if market participants believe that, by and large, contract terms represent a “zero sum” game, with gains to one party coming largely at the expense of others, then others may interpret a proposal for a new contract as reflecting *inside information*; given the inside information, the new contract will redistribute income to the proposer from the other party—which has the immediate implication that the other parties should resist the change. (Stiglitz, 1992). In this perspective, then, it may take public intervention to help move the economy from an inefficient contractual equilibrium; on the other hand, if the government is seen as having been captured by special interest groups (e.g. by creditor interests), then others will infer that the reason for the movement is to enhance their welfare at the expense of, say, debtor interests. Only if the government can make a persuasive argument that such a reform represents a Pareto improvement will the reform be easily accepted.

Standardization of contracts through the law not only solves the signaling problem, but also solves a complex coordination problem. With a pure contract approach, each creditor, as he writes his credit contract, would have to look at all other contracts to make sure that there is no contract provision in some other contract in contradiction to a provision in his contract with respect to what should be done in the event of a default. Transactions costs could be enormous.

An approach that entails a more active role for government (judiciary) can, furthermore, resolve some of the inefficiencies and inequities noted above. It could, for instance, enforce a more rapid resolution than would take place in a pure market based approach. In East Asia, for instance, Korea and Malaysia, where government took an active role, were far more effective in resolving their problems than was Thailand, which took a more market-based approach. Indeed, in the first three years after the crisis, only a handful of cases were resolved in Thailand.¹²

¹¹ See Clay, Greenwald, and Stiglitz.

¹² There is, admittedly, some controversy about the reason for the slow pace.

Macro-economic consequences of bankruptcy

The economic and legal analysis of bankruptcy has largely focused on *micro-economics*, but in the situations which are of concern in crises, where there is *systemic* bankruptcy, involving large fractions of the productive capacity of the economy, one cannot ignore the macro-economic consequences, both on aggregate demand and aggregate supply. Elsewhere I have argued that in such situations, there is a need for a Super Chapter 11 for an expedited resolution.¹³ (When there is a macro-economic disturbance, the inferences that can be made concerning whether the problems facing a firm reflect on bad management practices are markedly different than when there is an isolated bankruptcy; moreover, while it is relatively easy to replace a single manager, the challenge of replacing management in 50% of the firms of a country obviously is an order of magnitude greater. Even the problem of trusteeship—ensuring that the assets are not stripped during the resolution process—is much more difficult when a significant fraction of the firms in an economy are facing distress.)

¹³ See also Miller and Stiglitz [1999]

II. DIFFERENCES BETWEEN SOVEREIGN BANKRUPTCY AND PRIVATE BANKRUPTCY

This conference focuses on sovereign bankruptcy. I have written at length concerning private bankruptcy because the issues there are better developed, though controversies remain – and both the theories and controversies provide insights into issues of sovereign bankruptcy.

We first need to identify critical differences between sovereign and private bankruptcy. The most important difference concerns *contract enforcement*: the powers of the state are used to enforce contracts (including debt contracts and the provisions of bankruptcy law). Who is to *enforce* the commitments of a sovereign? As we noted earlier, in the nineteenth century, governments of creditor countries enforced contracts, through the threat of—and actual use—of the military. That is no longer possible.

While there is some recourse to recovery through litigation, the extent of such recovery is limited, largely to assets that are held abroad. Worry about such litigation is, however, a deterrent to default.

For the most part, sovereign debt contracts are meant to be self-enforcing: the consequences of not repaying—in particular, the cut off of access to future credit—should be sufficiently severe that countries find it worthwhile to repay.

Whether a country does repay depends on whether credit will in fact be cut off in the event of a default (and if so, for how long) and the consequences of such a cut-off.

Threat of loss of access to capital in the long term

Both theory and evidence suggest that the threat of a cutoff of credit has probably been exaggerated. Markets are forward looking. Capital asks not what was the return in the past, but what will the return be in the future. The lower indebtedness from renegeing on debt mean that the government's fiscal deficit is lower; its financial position is improved.

In addition, there are second and third round effects that further improve the fiscal position of the country, making foreign creditors more likely to lend. As the government tries to service its debt, interest rates tend to rise; even if the government has a primary surplus, it must borrow to finance the serving of the debt. The number of the firms that are forced into bankruptcy is lowered, both because of the lower interest rates and because of the improved overall economic performance of the economy that can follow a discharge of debt and using the funds previously used to serve the debt to finance expansionary fiscal policy. As the economy strengthens, government tax revenues are increased—again improving the fiscal position of the

government. Moreover, to the extent that the government gets involved in restructuring, the amount of restructuring required will be less, and again the fiscal burden will be lowered. And because there are fewer defaults, the supply side of the economy is stronger (with less adverse effect both on the corporate and financial sector.) All of this means that the government's financial position is stronger going forward, making it more (not less) likely that creditors will be willing to provide finance.

There is a counter-argument, that the country will obtain a *reputation* for defaulting, but there is some question about the appropriateness of such reputation models to the situation on hand. Reputation models make most sense when past behavior conveys information about an otherwise hard to observe characteristic of an individual, from which one can infer likely future behavior.¹⁴ The factors influencing repayment, in this case, are easy to observe; and little if any additional information is conveyed, particularly since the decision to default is a political decision, and the political context can change dramatically in the space of a few years.

Empirically, there is little evidence¹⁵ in support of the position that a default leads to an extended period of exclusion from the market.¹⁶ Russia returned to the market within two years of its default, which was admittedly a “messy one” involving no prior consultation with creditors, and on that accord roundly condemned. Korea, which forced a rollover, somewhat more gracefully than Russia (creditors were given a choice of either rolling over the loans or not getting repaid, and recognizing them as in default. While in terms of cash flow, the two alternatives look little different, many firms would prefer not to have to recognize the loss, so that the alternative of roll-overs looks more attractive.)

The argument that markets will punish any defaulters ignores the central distinction between competitive markets and monopolies. There may be a public interest among creditors in providing conditions that will ensure that debtors repay, but such an environment is a public good, and it is not in the interests of any small creditor to bear the cost of providing that environment.

Under certain circumstances, it is conceivable that creditors might be able to act collusively; that is, creditors engage in a large number of cooperative activities, involving, for instance, sharing information; it is conceivable that the creditors could exclude from the “club” any creditor who did not go along with sanctions imposed on a defaulter. However, it is not clear that such coercive actions by the creditors collectively would withstand anti-trust scrutiny, nor is it clear that the value of the cooperation is sufficiently great to induce many firms who might otherwise find it

¹⁴ There are two broad categories of models which go under the rubric of reputation. The first, to which I am referring here, are concerned with *signaling* or *sorting* in models of asymmetric information. In the second, the concern is with *incentives* in models of repeated interaction. See, e.g. Shapiro [1983], Shapiro-Stiglitz [1984], or Stiglitz [1984].

¹⁵ The example usually cited is “the lost decade” e.g. Brazil in the 1980s when banks stopped lending.

¹⁶ **see if one can find empirical studies, references**

profitable to lend from doing so. Thus, in practice, it is apparent that the threat of credit being cutting off appears not to be effective.

Of course, it makes sense for an institution which is charged with trying to make credit markets work more effectively (and particularly from the perspective of the creditors themselves) to try to convince borrowers that should they default, or engage in a standstill, they would have to face a high price for this bad behavior, including the cut off of credit. The fact that many countries act as if they seem to believe this message suggests that the threat is taken seriously (and it may make sense for a risk averse politician, since *if* the IMF were correct, there might be serious long term downside risks.)

The Cost of lack of access to credit

Assume, for the moment, that a default would lead to an extended period of lack of access to credit. What are the costs, and how do those costs compare with the benefits?

The standard argument has been that access to credit is important both to facilitate more rapid growth (a *secular* need for capital) and to stabilize the economy (a *cyclical* need for capital.) In economies facing a crisis, the two reinforce each other: it is at such time that the country particularly needs capital.

A closer look at the experience of most developing countries, though, cast doubt on these traditional arguments, at least as they relate to short term capital flows. Over the long run, capital flows have been pro-cyclical, not counter cyclical; banks and others lend to those who do not need money, and withdraw money in times of crisis. That is presumably one of the reasons that capital market liberalization is associated with a higher macro-economic instability but not necessarily higher growth.

Most countries facing a crisis thus are unlikely to see capital inflows, should they behave well and repay existing debt; it is only that the magnitude of capital outflows might be reduced from what they would be if the government both reneged on its debt and did not put into place some controls or taxes on outflows.

These arguments are reinforced by the general theory of credit rationing, especially as developed in the context of sovereign debt (Eaton and Gersovitz [], Eaton, Gersovitz and Stiglitz [198]. That theory is based on the theory of self-enforcing contracts, in which debtors assess the benefits and costs of defaulting: the larger the magnitude of existing debt, the greater the benefit from defaulting. There is a critical level D^* (which may be a function of the state of nature) such that if D rises above that critical level, it pays to default. That means that if a country's debt exceeds D^* , it will not have access to further credit in any case. (This argument applies to long-term debt as well as short.)

The value of access to credit in the long run, to finance long-term growth, depends on the situation of the country. For the countries of East Asia, where savings rates are sufficiently high that they have difficulty investing available domestic resources well, there is little benefit to increased access to foreign credit. For poorer African countries, capital is often in short supply. But even that, portfolio capital (especially access to short term lending) may be of limited benefit. Foreign direct investment brings with it access to markets, technology, entrepreneurship, as well as capital. The allegation that countries will not be able to obtain foreign direct investment if they impose capital controls or renege on their debts is far from persuasive; China has been the most successful country in the world in recruiting FDI, and yet still has not liberalized its capital markets; and Malaysia continued to obtain foreign investment after it imposed capital controls.¹⁷ Russia's investment after its crisis (including renegeing on its debt) has been more robust than before—partly for the reasons suggested earlier, that it led to overall better macro-performance, making the country a more attractive place to invest.

Moreover, if the theories of credit constraints described earlier is correct, it means that a country with a high debt overhang is not going to be able to get more access to credit in any case. Only with a reduction of the debt can inflows be resumed.

The origins of excess debt problems

Given the seeming limits on debt, a natural question arises, how is it that countries end up with excessive debts. Why doesn't the market stop lending before the problem arises?

The answer is simple: The critical level of debt depends on the “state of nature,” a variety of variables that determine the prospects of the country. We write this as $D^*(\theta)$, where θ is the state of nature. Moreover, the value of the debt (in terms of domestic currency) is itself a random variable, when part of the debt is denominated in foreign exchange (like dollars), since the exchange rate is random. Lending today is based on judgments concerning future prospects of the firm. The country may be viewed, today, as far below its debt limit. But suddenly, its exchange rate may deteriorate, interest rates may rise, and its GDP may fall, leading to an increase in the (domestic) value of its debt and a lowering of the country's debt capacity. The country then finds itself with excess debt. (Of course, lenders knew that there was some *probability* that this might occur. But this was more than offset by the high returns in other contingencies.)

¹⁷ FDI throughout the world declined after the global financial crisis, and Malaysia's experience reflected this global trend. Neighboring Thailand, for a period, was able to recruit foreign investors to buy up its existing assets in the fire sales; and these fire sales probably diverted some investment from Malaysia. But there was little Greenfield investment.

Collateral and economic reorganization

In the case of private bankruptcy, when debtors cannot repay, creditors can be viewed as seizing the assets, reorganizing them in ways which maximize value, paying themselves off what is owed, and returning the remaining money to the equity owners. But clearly, creditors cannot seize a country; and it isn't clear what assets really belong to the government in the first place. Moreover, it is difficult to assess the value of other claimants (and their priority). If standard practice from private bankruptcy were followed, then wage claims would be treated as a priority class. But what about pension claims, which can be viewed as a form of deferred wages?

More recently, countries have proposed collateralizing particular assets, like oil revenues, so that in the event of default, a creditor could seize the asset. But so long as the asset remains within the jurisdiction of the country, the country can take measures that renationalize the asset (though such measures may be increasingly circumscribed by the terms of a variety of trade and other agreements.) Still, such collateralized assets will remain a small fraction of sovereign debt, and in the rest of this paper, we will ignore such collateralized claims.

Incentive issues

Most of the concerns in the design of bankruptcy regimes apply in the context of sovereign debt, though each of the issues takes on special forms. For instance, the issue of ex post efficiency is not so much one of restructuring finance and control to ensure the efficient utilization of assets as it is that debt burden and constraints imposed as part of debt restructuring be such as to promote full employment and growth of the economy.

Countries with heavy debt burdens may find it difficult financing counter cyclical fiscal policies, and in situations where monetary policies and exchange rate adjustment have limited effectiveness or long lags, fiscal stimulation may be particularly important. Some countries have primary surpluses, but large deficits, reflecting the heavy burden of debt payments; and when much of the debt payments go abroad, the deficits, even when large, have no stimulatory effect (except through the indirect effects of the foreign transfers on the exchange rate.)

There are also difficult issues concerning the timing of default. When there are large costs of default (e.g. a stigma¹⁸) there will be a tendency to delay; there is an *option*

¹⁸ The earlier discussion suggested that the costs may be far less than is widely believed. Nonetheless, for those in office, default is typically viewed as a *failure*, and they may bear significant costs, e.g. removal from office. There may be large disparities between the costs to society and the costs borne by political actors, consistent with the theory of *escalating commitments*.

value associated with delay—there is some chance that the economy will recover—and so delay may occur even though *on average* such delay is costly.¹⁹

In private markets, one of the key issues concerning *ex ante* efficiency is that, as the likelihood of default increases, so do incentives for asset stripping, and more broadly increasing expected income of the “owner”/controller at the expense of creditors. While legal strictures may limit patently fraudulent transfers, there are a variety of more subtle ways by which such redistributions/transfers of income/wealth can occur. In the case of sovereign debt, the concern is more with costly actions taken to avoid default, e.g. excessively stringent fiscal and monetary policies, sometimes with large long run costs, or selling off state assets at fire sale prices.

Ironically, critics of many countries facing the threat of bankruptcy suggest that there are precisely the opposite biases; countries are reluctant to undertake the “painful” measures that are required. The increased debt that results from not cutting back expenditures enough effectively weakens the claims of pre-existing creditors, and weakens the incentives to avoid a default.

Whether there will be a bias towards excessive leniency or excess stringency depends to a large extent on the costs of default; with large costs of default, especially to those in power, there will be a tendency for excessive stringency.

It should be noted, however, that perspectives on whether there is a bias towards excessive leniency or excessive stringency depends on *whose interests* are being focused upon. *There may be large conflicts of interest.* Policies that enhance the ability of the country to repay its debt need not maximize the welfare of the debtor country. For instance, a policy which stresses the quick build up of dollar reserves may facilitate the country’s repaying back dollar debts, but that policy may lead to high levels of unemployment, as imports are restricted and as the supply price of exports is lowered through a cutback in the demand for non-tradables. (To be sure, arguments are put forward that a failure to repay loans will have serious adverse effects on the economy’s growth both in the short run and the long, and that this effect is dominant; but there is little empirical support for this particular lexicographic ordering of policies. On the contrary, one can argue that strengthening the domestic economy will, over the medium term, most enhance the ability of the country to repay its loans, and accordingly, policies which focus on strengthening the economies short run output should predominate.²⁰)

Related, perspectives on whether there is a bias towards excessive leniency or stringency depends on views of the appropriate economic model. If one believes that

¹⁹ Orszag and Stiglitz [2001] have analyzed this in the context of “when to call the fire department.” The greater the penalties imposed when the fire department is called, the longer the delay. Thus, tough IMF conditionality is itself part of the *cause* of delay. More broadly, policies taken *after* bankruptcy have an effect on *when* bankruptcy will be declared.

²⁰ Such views are consistent with the unit root literature, which suggests that policies that lead to an increase in output today will have permanent effects. See

the worse thing for performance of an economy in both the short run and the long is a deficit, then failure to address the deficit will inevitably be viewed as a hidden form of asset stripping: the country today is able to enjoy a higher living standard (than it could if it limited itself to living within its means), at the expense of creditors, who, when default occurs, will have to share the assets among themselves. On the contrary, if one believes that deficit spending in a situation of deficient aggregate demand leads to increases in GDP that are a multiple of the deficit, and if a substantial part of that deficit is spent on investment goods, then deficit actually enhances the ability of the economy to repay what is owed creditors.

We noted in our discussion of private bankruptcy the importance of disagreements about the consequences of alternative actions. Bankruptcy would be a relatively simple matter in the presence of perfect (or symmetric) information. It is disagreements about the values of assets and the consequences of actions that make the resolution of bankruptcy both important and difficult. The same thing is true for sovereign bankruptcy. A central issue then is *whose judgment will be given deference*.

In the case of chapter 11 bankruptcies, when debtors propose a reorganization plan, the judgment of debtors is given considerable weight. Creditors can object that they are being unfairly treated, and the court must evaluate these claims. I shall argue that similar issues arise in the context of sovereign bankruptcy.

Contract design and broader incentive issues

Earlier, we noted that in private markets, there were not incentives for the design of efficient contract provisions. The problem in sovereign debt markets is even greater, because of what may be termed political economy problems. The current government benefits from lower interest rates that may be obtained by provisions that are excessively favorable to creditors; the costs of such provisions will be borne by later administrations. This exacerbates the *signaling* problem noted in private markets; there at least the same party bears the cost that receives the benefit from the costly signal. (Note that signals need not be *socially* efficient; particularly when the benefits of socially inefficient signals are received by parties that are different from those that bear the costs.)

Agency problems also arise on the part of creditors. Those who promoted excessive lending to Latin America in the 70s did not bear the full costs of their mistakes; shareholders of the lending institutions did, but those who were responsible for the lending often went unpunished; indeed, their aggressiveness was sometimes rewarded. Since everyone else was lending to Latin America as well, how could they be blamed? Intermediaries who make money by bond issuance have every incentive to insert bond provisions that keep interest rates low; the more that is borrowed, the more their profits.

The greater difficulty in debt workouts today, compared to the era of bank finance, is not just due to the greater dispersion of ownership, but to the difference in incentives for a resolution. Banks have an incentive for *rollovers*, to avoid recognizing losses, because the regulatory costs of such recognition (in terms of reserves) can be high. On the other hand, some bondholders gain from the recognition of losses (through tax write-offs), and the asymmetric treatment of capital gains and losses may, under some circumstances, make volatility even desirable.

Competition in legal structures

Given that there are different views about what an appropriate legal structure should be, one suggestion is that there be *competition* among legal structures, with an agreement on mutual recognition; that is, if debt contracts of a country are written under the laws of a particular jurisdiction, then claimants may only seek redress under that jurisdiction. (This does not fully resolve what happens when there are multiple contracts, written under different jurisdictions.)

The notion is that just as competitive processes lead to efficient contracts, *given* a legal structure, competition among legal structures will lead to efficient legal structures. But the problems noted earlier (e.g. concerning signaling) imply that such competition will not in general result in efficiency; debtors may choose an excessively “tough” (on debtors) jurisdiction to signal that they are unlikely to go bankrupt, even if the legal structure is economically inefficient.

III A MORE EQUITABLE AND EFFICIENT SDRM

There is now broad recognition of a need for a better sovereign debt resolution mechanism (SDRM), one which not only provides for a speedier resolution with less uncertainty, but one which is more attentive to the interests of the debtor countries. Chapters 9 and 11 of America's bankruptcy code provide some of the ingredients.

- The sovereign will initiate the debt resolution, and it will be encouraged to do so at an early stage, by ensuring that the resolution process pays due attention to its concerns.²¹
- At the initiation of the debt resolution, there will be a stay on litigation
- New lending, especially for short-term trade purposes, will be treated as senior to existing debt.
- The country will need to consider the imposition of temporary exchange controls and/or exit taxes to stabilize capital flows.
- The sovereign will, within a short period of time, after discussions with different creditors, propose a restructuring (which may include rescheduling, and debt write downs). It should detail those aspects of an economic plan that might affect the value of any contingent assets, and the basis of its claim that raising taxes or cutting expenditures would either not enhance its ability to repay or would impose undue costs.
- Those who believe that the proposed restructuring treats them adversely may submit counterproposals. Such objections and counterproposals should provide a methodology for assessing the magnitude of the effective debt write-down and an evaluation of the seniority of different creditor claims. A question that should be addressed is whether the past amount received is at all relevant in determining fair division.
- Claims that the country could reasonably meet its debt obligations by raising taxes or by cutting expenditures without undue adverse effects would be substantiated by economic models and political analysis.
- The bankruptcy court would rule on the alternative resolution proposals, giving deference to the proposal of the sovereign and its legitimate concerns to maintain the economic strength of the economy in the short run and the long, and recognizing the claims not only of foreign and domestic bondholders but also of other claimants, including pensioners and workers.

In a sense, such a proposal recognizes that *if market mechanisms work* even reasonably well, then a sovereign would not have an incentive to declare bankruptcy when it need not, because of the “punishment” of capital markets. There is no reason to augment that punishment by further measures. Indeed, the political consequences of a bankruptcy should be sufficiently great so that there is little need for concern about a “moral hazard” problem. If anything, as we have noted, countries tend to postpone bankruptcy.

²¹ As we noted, large penalties, including the implosion of excessively contractionary monetary and fiscal policies, serve as a deterrent to entering into the resolution process.

Moreover, since markets would have fully compensated creditors for the risks they bore in the form of higher ex ante interest rates, there is, as we have noted, little need to be concerned with equitable treatment of creditors, so long as there are clear rules.

There may be a concern that such a debtor friendly regime may lead to higher interest rates and thus impede the flow of capital to developing countries—thereby impeding growth. On the contrary, there is an equally strong argument that by focusing on the growth of the debtor countries, this bankruptcy regime will promote economic growth. Moreover, a more debtor friendly bankruptcy regime will result in closer scrutiny on the part of borrowers by lenders; some borrowers may lose—those who are less credit worthy—but other borrowers will gain; and the incentives that result from closer scrutiny may themselves contribute to economic growth.

Global Political Economic, legitimacy, and a new bankruptcy regime

Any reform of the global bankruptcy regime must begin from the premise that there are conflicts of interest, not only between debtors and creditors, but also among creditors, and even among those within the creditor market (e.g. between intermediaries who may gain from the restructuring process and others), and that these conflicts of interests may change over time. Countries with large amounts of outstanding debt may well oppose collective action clauses, both because the cost of converting from existing contracts to new contracts will likely be largely borne by them, but also because if markets charge higher interest rates for such bonds, they will be facing possibly substantial increases in interest costs.

One of the arguments for bankruptcy reform is that it leads to better incentives on the part of lenders; these incentives, however, will not be at work in the case of pre-existing debt. To be sure, if such collective action clauses really do lower the cost of debt resolution, and the lower cost of debt resolution does not exacerbate default-moral hazard problems, then the benefits of adding these clauses could be substantial, and lenders (who have already committed funds) could be willing to pay both the costs of restructuring and lower the interest rates charged. If the initiative for restructuring bond agreements comes from lenders and is accompanied by a lower interest rate, then there may not be the adverse “signal” associated with such clauses.

However, if all lenders do not judge the gains to be substantial, there will still be a classic free rider problem in the exchange of bonds. Lenders will exchange only if they receive more wealth with the new bonds than with the old. But, in a voluntary exchange that would mean that the debtor would be compensating the creditor. If debtors are rational they will only participate if they can offset the higher costs. In a voluntary exchange ‘carrots and sticks’ from the IMF will only

work if the net benefit to the country is positive. Sticks alone could have a negative effect since the IMF has the most leverage over those countries that are most in need of IMF funding. If debtors and lenders recognize this, then participating in the exchange could signal that a country is in need of IMF assistance, and the incentive to participate on the part of the debtor will fall farther.

Even within borrowing countries, interests differ. As we have noted, a government which has access to the market today may wish to obtain as much as it can at as low an interest rate as it can, paying little attention to the consequences ten years later, or in any case, minimizing the risks. Those who bear the brunt of the crisis may have a different attitude.

It should be clear, however, that whatever proposal is put forward, there will be winners and losers, both relative to the status quo and relative to other possible reforms.

The objective of reform is not to maximize income of creditors, or even to maximize the flow of funds from the developed to the less developed countries, but rather to maximize the growth and stability within the developing countries. (This may not be a goal shared by all participants in the discussion.) Any reform—and any bankruptcy process—must be seen to be fair and equitable to the interests of debtors as well as creditors, both to those who bear the benefits from increased borrowing and those who bear the costs in the event of a crisis.

At the current time, there is no international institution that has both the legitimacy and expertise to oversee an international bankruptcy process. The IMF, as a major creditor, cannot be viewed as impartial. But even apart from that, both in the distribution of voting rights and in country representation, it is not well situated to take on a central role, even with respect to the issue of “asset preservation.” The interests of other legitimate claimants (workers and the elderly within the country) would be viewed as being compromised. Any reform that is seen as giving more power to the IMF may well be seen as creating even greater imbalance in an international financial architecture that is already imbalanced.

As contracts increasingly involve participants in many jurisdictions, there is increasingly a need for better resolution of disputes that cross boundaries, including those involving bankruptcy. Eventually, some kind of International Bankruptcy Organization will need to be created. I believe that it would be desirable to begin outlining the principles which would guide such debt resolutions, by discussions centered not just around the G-7 and the creditor countries, but in which the debtor countries have a central place.

A short run solution

In the short run, there are three measures that are both practicable and could make a difference:

- A recognition of the importance of the imposition of capital controls/exit taxes in the event of crises that are likely to lead to sovereign bankruptcy
- An agreement on “mutual recognition” of the bankruptcy laws of each other and procedures to resolve jurisdictional conflicts. If a bankruptcy procedure is going forward under the laws of one jurisdiction, it should not be possible for a claimant to appeal to a more friendly court in another jurisdiction, e.g. to attach assets.
- An international bankruptcy evaluation/mediation service, which would help evaluate the consequences of different proposed resolutions on different parties, both different categories of creditors, the government, and the economy.

In the absence of an agreement on what the *law* should be, independent information about the impacts from a disinterested third party could be of enormous value in constructing what may be viewed by all parties as a fair solution. It should be clear that such evaluations would not be without controversy, and it would be important that alternative perspectives be provided. For instance, information that a class of creditors received 25% interest (presumably in part because of the fear of bankruptcy) for five years *before* default occurred—and therefore more than recovered his principal—might or might not be considered relevant in deciding on whether a more substantial write down in his debt was fair (in comparison, say, to a creditor who lent money a few years earlier, before the change in country’s economic circumstances, and had received only 6% interest.)

Of particular relevance would be the impact on the debtor country. Just as workers are viewed as *senior* claimants on a company’s assets, those within the country can be viewed as having legitimate, and sometimes senior, claims on the sovereign. It is important to know how such claims may be affected by any proposed resolution. We should recognize that there are, among economists, major differences about the appropriate economic models, and therefore there will be disagreements. The prevalent models among the academic/forecasting community involves Keynesian style models in which decreases in aggregate demand, resulting from reductions say in government expenditures, have multiplier effects on aggregate output in periods of deficient aggregate demand, and lead to increased unemployment. But there are those who, even in periods of seeming large underutilization of a nation’s resources, focus on aggregate supply, and others who put the primary emphasis on changes in “confidence,” arguing that, presumably through channels like investment and consumption, such changes have a first order effect on output, and link such changes in confidence to the size of the deficit.

The credibility of such an international service would depend on its openness and transparency, and the balance with which it presents perspectives that are supportive to the various sides in dispute. I believe it would be possible, with a limited allocation of resources, to create such a service. Though it would not address all the problems associated with the resolution of bankruptcy, it could help facilitate the resolution; and it would be far preferable to a legal structure that is unbalanced or lacks broad legitimacy. Attaining such a legal structure may be difficult to achieve in the short run.