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#### **DEBT RESTRUCTURING**

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#### **ABSTRACT**

What difference does it make, and for whom, whether the nonperforming debts of emerging market borrowers are restructured? This paper begins by positing a set of counterfactual conditions under which restructuring would <u>not</u> matter, and then shows how several ways in which the actual world of international lending departs from these conditions give both lenders and borrowers ample reason to care whether nonperforming debts are restructured. One implication of the way in which debt restructuring matters is that restructuring should not be "too" easy. Further, with a greater frequency of defaults, some credit flows to emerging market countries would not be extended in the first place. An important element driving this line of argument is moral hazard, but (unlike in much of the recent literature of emerging market debt problems) what is central here is not the availability of credit from the IMF or other official lenders but the more fundamental moral hazard inherent in all uncollateralized borrower-lender relationships.

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Borrowers sometimes can't pay what they owe, and most borrowers and lenders know this. As a result, debt contracts are usually more complicated, and the considerations that underlie debt arrangements are more subtle, than would be the case if all that mattered were the time value of money. Two specific distinctions are of particular importance for this purpose: Some borrowers don't pay what they owe because they can't, while others can pay but seek not to. And among those borrowers who can't pay what they owe when they owe it, some can pay later but others can't pay ever. What to do when borrowers don't meet their obligations is therefore not merely a matter of set principles but also of information, inference and judgment.

Although these basic truths and the practical questions they raise are relevant to all debt markets, the events of the past few years have especially highlighted their importance in the

context of borrowers in developing economies and in economies in transition from central planning to reliance on private initiative and incentives — "emerging markets," as they are typically called. From the summer of 1997 until well into 1999, a series of countries, first in Asia and then in Latin America experienced debt problems severe enough to be widely regarded as crises, typically in conjunction with currency crises. But even in the setting of economic development, such problems were by no means new in 1997. There is a long history of just this kind of event. The Asian crisis in 1997 was not the first such major problem but merely the first since Mexico in 1994-95.

Placing the questions that arise from debtors' actual or potential nonperformance in the specific setting of emerging markets adds several important dimensions to the basic considerations that are already present when the borrower and the lender are both resident in a country like, say, the United States. To begin, when the source of the saving flow that finances the credit is outside the borrower's country — as is often the case for developing economies, which normally rely heavily on foreign capital inflows — then relative currency values become part of the story. Next, many emerging market countries lack the legal or other institutional frameworks that provide standard and well-understood remedies when problems of borrower nonperformance occur in the industrialized countries. Sometimes the requisite legal institutions exist but enforcement is problematic. Many emerging market countries similarly lack the auditing and accounting practices that facilitate monitoring the financial condition of private borrowers in the industrialized world. Finally, in some emerging market countries the borrowers, although nominally private, are often de facto extensions of the government. Sometimes the borrower whose ability to perform is in question is the government itself.

The issue addressed in this paper is what to do when borrowers in emerging markets can't pay what they owe to foreign lenders. The specific question asked is what difference it makes, and for whom, whether the debts of nonperforming borrowers are restructured. Although the presumption here is that the nonperforming debt is owed abroad, the chain from ultimate lender to ultimate borrower may have several steps, and so the nonperforming debts in question are not necessarily owed to foreign lenders directly. But for purposes of this discussion, the fact that it is foreign saving that ultimately stands behind the credit chain is what matters.

In order to pose meaningfully a question like what difference some action or some process makes, it is ordinarily necessary to specify "compared to what?" In the case of debt restructuring, however, specifying a clear-cut alternative is problematic. The logically most obvious alternative to restructuring a nonperforming debt would be an outright declaration that the borrower will not meet the obligation, now or ever, but such a possibility is of little practical relevance in this setting. In the private sector a declaration of this kind conceptually means bankruptcy, but the absence of functioning bankruptcy institutions and procedures is central to the issue in many emerging markets. Among governments, outright debt repudiation is rare apart from revolutionary changes in regime, and even then many postrevolutionary governments carry their predecessors' unpaid debts for decades and eventually reach a settlement with their creditors.<sup>1</sup>

A further reflection of this difficulty in specifying an alternative, which is relevant to much of the argument developed in this paper, is that while the event of default on a debt contract has a fairly precise technical meaning from a legal standpoint, there is no generally accepted economic definition of default. One that would make sense for many purposes would be to say that default consists of any action by a borrower that results in a reduction in the present value of what was

originally promised to the lenders. (Hence repaying the full amount owed but at a later date would ordinarily constitute default, as would a reduction in the originally stated interest rate or, of course, forgiveness of any part of the stated debt principal.) But default conceived in this way is not very helpful for this paper's analysis either. The question at issue here is what should be done when an emerging market borrower fails to perform as a debt agreement requires, and for practical purposes this situation almost always results in at least some loss of present value to the lenders, whether the debt is restructured or not. The issue here is not whether borrowers should deliver more to lenders, but whether formal debt restructuring is a useful way to proceed once it is clear that a borrower will not perform as the original terms of the obligation specify.

In practice, therefore, the plausible alternative to debt restructuring is hard to pin down precisely. In the reality of actual market practice, there is a large continuum between the poles of formal debt restructuring and formal repudiation. The main conclusion drawn here is that current market practice is at a wrong point on this continuum. Moreover, although the situation of borrower nonperformance considered here almost always results in at least some loss of present value to the lenders, lenders sometimes do but often do not recognize that loss for purposes of accounting, regulatory requirements, and the like. Part of what is wrong about the position of current practice on this continuum between restructuring and repudiation is that lenders recognize such losses too infrequently. In terms of a concept that figures importantly in this analysis, the "fiction" of no loss of value is too much a part of current market practice.

To state the argument more fully, the chief conclusions of this paper's inquiry into what difference debt restructuring makes are as follows:

- (1) The conventional wisdom that in cases of debt-service difficulties rescheduling and other forms of restructuring help to keep new money flowing to the borrowers is correct.
- (2) That said, however, not all nonperforming debts should be restructured. Some frequency of "defaults" (to the extent that default can be considered the alternative to restructuring), arguably greater than that reflected in current practice, is healthy.
- (3) With a greater frequency of default, some credit flows to emerging market countries that would take place in a lower-default-rate regime presumably would not happen. This outcome too is not necessarily bad. Judged from the perspective of why debt markets exist in the first place, the highest aim of borrowing and lending arrangements is <u>not</u> simply to maximize the volume of credit flows.
- (4) Although maximizing economic output and economic development is a plausible objective in choosing borrowing and lending arrangements, avoiding lost output and temporarily interrupted development in every case is not. Real costs consequent on borrowers' nonperformance, costs that accrue to debtors as well as creditors, serve an economic function too. The goal of output growth and economic development, construed broadly over time and space, is plausibly enhanced when specific borrowers at specific times suffer real costs, just as it is when specific lenders at specific times sustain losses.

As the discussion throughout the paper makes clear (if it is not apparent already), an important force driving this argument is the problem of "moral hazard" that arises from the differing incentives of borrowers and lenders.<sup>2</sup> Especially in the context of much of the public debate that has ensued from the emerging markets debt crisis of the past few years, it is worth pointing out explicitly that the moral hazard on which the argument here depends arises from the

ordinary conflict of borrowers' and lenders' interests inherent in any debt transaction, rather than any consequence specifically attributable to the role of the International Monetary Fund or other official lenders. The actual or potential availability of credit from the IMF or other official sources may exacerbate the moral hazard problem that already exists, and hence may make financial problems of the kind many emerging market countries have recently experienced more likely or, when a problem does occur, more severe. That question is a subject for a different paper. But it is wrong as a matter of history to think that there were no such crises in the past before there was an IMF, and it is therefore wrong as a matter of political economy to believe that simply abolishing the IMF, as some of the institution's recent critics have suggested, would be sufficient to prevent such crises in the future.<sup>3</sup> The more fundamental moral hazard issue that constitutes the heart of the analysis here, and the questions that this paper raises about the "no-loss-of-value fiction," would remain in any case.

Section 1 briefly sets the stage for the paper's main line of argument by positing a set of patently counterfactual conditions under which it would <u>not</u> matter whether a nonperforming loan were rescheduled or otherwise restructured. Section 2 shows how several ways in which the actual world of international lending to emerging market borrowers departs from these counterfactual conditions give both lenders and borrowers ample reason to care whether nonperforming debts are restructured. Section 3 shows that one implication of the way in which restructuring matters is that although restructuring is useful to both lenders and borrowers, it nonetheless should not be "too" easy. Section 4 shows how this line of reasoning then leads to the sequence of conclusions stated above: that some nonperforming debts should default, that some credits should not be extended in the first place, and that under some circumstances debt

arrangements should impose real economic costs on defaulting borrowers as well as on the holders of defaulted debt. While no ready metric exists (and this paper doesn't develop one) for saying how far current practice should optimally move in the direction indicated by these conclusions, as a qualitative matter the warranted direction is clear. Section 5 concludes with brief comments on two further issues.

# 1. A Counterfactual Base for Comparison

Often the logically coherent way to understand why something matters is first to posit circumstances in which it wouldn't, and then to focus on differences between those circumstances and actual reality. Four plainly counterfactual assumptions are together sufficient to make both lenders and borrowers indifferent to whether a nonperforming debt is rescheduled or otherwise restructured (although certainly not indifferent to whether the loan becomes nonperforming in the first place, nor to the amount, if any, that the lenders ultimately recover):

- (a) All lending takes the form of marketable securities, which are regularly traded in highly liquid ("thick") markets. Specific borrowers do not have "relationships" with specific lenders.
  - (b) All lenders mark their portfolios of such securities to market daily.
- (c) Each borrower's obligations are consolidated. There is only one debt security outstanding against each borrower.
- (d) Each borrower's debt is a "one-off" transaction for example, the financing of a freestanding, independent project. There is neither the expectation nor the possibility that the borrower will seek further funds in the debt market.

What happens under these conditions when a borrower has difficulty in meeting its obligations? Once information that this has happened, or even merely information suggesting the possibility that this may happen, reaches the market in which the borrower's debt securities trade, current holders of these securities as well as other potential holders will reduce their assessment of what the securities are worth. In the extreme case that there is no prospect that the borrower will ever pay anything on its debt, the market value of the securities will fall to that of the underlying collateral, if any, less any costs of gaining possession of that collateral and liquidating it. In the further extreme case that the collateral has become either unobtainable or worthless, the market value of the securities will be zero. Because no lenders have privileged information bearing on such matters, current holders of the securities have no systematic reason to disagree with other market participants about their worth. The only question facing each lender is whether to hold or sell the securities (or buy more) at whatever new, presumably lower, market price emerges.

Further, regardless of whether a lender sells its position in the borrower's securities or not, the lender will have to take the reduction in value into account on its balance sheet. If the lender is a bank, or some other financial institution facing regulation similar to that applicable to banks, the reduced asset value passes through to its equity in a way that bears on the lender's ability to meet its capital requirements. If the lender is a mutual fund, the reduced valuation is directly reflected in the fund's quoted net asset value. In either case, no action by the lender can avoid or mitigate these consequences.

The borrower's incentive to meet its obligations is to avoid seizure of its collateral, unless the present value of the debt service owed is greater than the value of the collateral, in which case the borrower would prefer to sacrifice the collateral and stop paying altogether. The lenders'

incentive, however, is to receive as much value as possible from the remaining debt obligation under the new circumstances. From the perspective of an <u>individual</u> lender — that is, any one holder of the borrower's debt securities — the present value of the borrower's future payments or the proceeds of seizure and liquidation of the collateral is simply priced into the market value of the securities. By contrast, the lenders <u>collectively</u> retain an interest in steering the outcome toward whatever course of action will give them greater value, and therefore in whatever process enables them best to achieve this end.

But, importantly, under these circumstances lenders do not have an interest in formal restructuring of the debt per se. The borrower's difficulty in meeting the obligation has already resulted in a reduced price of the securities, and each holder of those securities has immediately taken that reduced value on its balance sheet. Although whoever is empowered to act as agent for the lenders will presumably try to persuade the borrower to perform to the greatest extent possible, using the threat of seizing the collateral as its means of compulsion, once the borrower's future performance or failure to pay is taken as given a formal restructuring would change nothing. At the same time, the borrower's only incentive in this regard is to prevent seizure of the collateral. Moreover, because the lenders have no reason to seek a formal restructuring, the borrower's offering to enter into one would not represent a concession of any value. In short, restructuring simply would not matter.

# 2. Why Restructuring Does Matter

None of the four counterfactual conditions listed in Section 1 corresponds to the actual world in which either sovereign or private emerging market borrowers obtain credit. Focusing on

how each of these stated conditions departs from the "real world" makes clear just why restructuring a debt once a borrower has failed to meet its commitments, or even in advance of an actual event of nonperformance, can be important and normally is.

The Role of Banks. Although the bond market now plays a far greater role in funneling credit to emerging market countries than was the case not long ago (though perhaps not any more so than before World War I), it remains true that much of the debt of both public and private borrowers in these countries takes the form of bank loans. Moreover, most borrowers have traditionally attached high priority to staying current on their security obligations. (Among sovereign borrowers, Russia and Ecuador are the only two recent examples of clear nonperformance on the government's bonds, although what would happen to Mexico's dollar-linked Tesobonos was a major question during the 1994-95 crisis.) Hence most of the emerging market debt that has been the focus of attention in discussions of restructuring is in fact owed to banks, and much of that is in the form of loans rather than securities.

One reason this matters is that banks, unlike many lenders in the bond market, can and often do maintain ongoing relationships with particular borrowers. The heart of such relationships is that some lenders have information — perhaps privately disclosed data, perhaps specialized knowledge of a country or its banks or its operating businesses, perhaps person-to-person experience with the individuals responsible for the borrower's affairs — that other lenders do not. The enhanced information content of borrower-lender relationships in turn has value to both sides. From the lender's perspective, more information means less risk. To the borrower, the fact of being perceived by some lender as less risky means a lower cost of credit. In extreme

cases it may mean the difference between having access to credit and finding none available at any price.

Another reason why the role of banks in lending to emerging market borrowers is important is that banks normally face capital requirements. Loss of sufficient asset value can therefore force a bank into a disadvantaged competitive position — for example, having to stop seeking new business, or being forced to raise new capital on unfavorable terms — and large enough losses can even compromise a bank's viability as an independent institution. (The sharpest counterexample is an open-end mutual fund, where losses on holdings of securities mean a lower quoted net asset value but typically trigger no direct consequences to the fund itself.)

It also matters in this context that much of the credit banks extend to emerging market borrowers takes the form of loans rather than marketable securities. The market for such loans is normally thin. When a borrower experiences difficulties, each lender will have its own assessment of the probability of receiving payment and hence its own notion of what its asset is still worth. The banks that maintain a special relationship with a particular borrower may well have a different sense of the value of that borrower's obligations (either higher or lower) than do other lenders. But there is no readily visible, consensus reference-value for the loan's worth comparable to that given by the price of a bond traded in a highly liquid securities market.

Not Marking to Market. For reasons that derive in part from precisely this absence of thick and liquid markets for loan assets, banks do not mark their loan portfolios to market on anything like a daily basis. Hence the decline in asset value consequent on a borrower's actual or likely nonperformance does not immediately or automatically affect banks' balance sheets in a way that would matter for their capital requirements (although risk-related capital requirements

are typically greater for nonperforming loans). If nonperformance has merely become more likely but a loan remains current, normally banks do not reflect this change in their balance sheets at all. Even when a borrower has missed a payment, whether and how soon the lending banks will reduce the stated value of its loan — and by how much — is in the first instance a matter of internal judgment and, beyond that, subject to opinion from the regulators. But neither the banks' internal valuation procedure nor that of bank regulators is likely to track closely the price fluctuation that would take place in liquid security markets in a situation of anticipated or actual borrower nonperformance.

The fact that the lenders are banks and that banks do not immediately mark loans to market (and, moreover, that knowing the market price is problematic anyway) produces one straightforward reason why rescheduling or other formal restructuring can make a difference when a borrower encounters difficulties: Restructuring enhances the lenders' control over the value that they assign to a loan on their balance sheets. This control itself has value. Replacing an old loan with a new one, stretching out payment schedules, adjusting the interest rate and even forgiving missed interest payments (or relegating them to "memo interest") are all ways of maintaining the fiction — for accounting purposes — that a loan is still an asset worth what it was worth before, even though the appropriately risk-adjusted present value of the probable stream of payments to flow from that asset may be diminished.

Such accounting fictions have no direct bearing on the economic value of a lender's business, but they do affect a lender's business if they affect its ability to meet its capital requirements. The ability to maintain the fiction of no loss in value is therefore valuable. Hence lenders have a reason to prefer formal restructuring to either default or mere nonperformance.

And because restructuring has value to lenders but requires the agreement of both parties, lenders in turn have an incentive to induce borrowers to want (or at least agree) to restructure their problem obligations as well.

Multiple Debts. Few borrowers have only one consolidated debt. Most, including most borrowers in emerging markets, owe different amounts to different lenders or groups of lenders. Often these debts are also of different form: some securities, some loans (of which some are collateralized and some are not), some self-liquidating trade credit, and so on. Often the same lenders participate in providing financing to the same borrower, or group of related borrowers, in several different forms. A bank, for example, might own a country's sovereign bonds, extend what amount to uncollateralized loans to the country's government or its banks, and also provide trade credit to operating companies conducting import-export business there.

The multiplicity of debts would not matter if all of a borrower's obligations were strictly independent of one another. In fact they are not. Cross-default and acceleration clauses give lenders in one transaction the ability to demand full and immediate payment if the borrower defaults on an obligation resulting from a separate transaction. To the extent that borrowers prefer not to have their other debts called — after all, there was a reason to borrow the funds in the first place — under these arrangements borrowers therefore have a reason to prefer formal restructuring to default. Borrowers may likewise have reason to prefer formal restructuring to merely creating an event, such as a missed payment, that would qualify as default even if they were confident that the lender on that particular transaction would not declare a default. What matters in this case is whether the lenders on the borrowers' other transactions would exercise the right to demand payment of their claims. 6

The fact of multiplicity of debts and multiplicity of lenders matters in yet further ways in the emerging markets context because of the connection between a country's foreign borrowing, which is the focus of discussion here, and what happens in its domestic credit markets. In the case of sovereign credits, governments typically borrow both abroad and at home, sometimes via the same securities. Hence nonperformance on obligations to foreign lenders can trigger a collapse of the country's domestic credit market. Moreover, because nonperformance by governments on foreign debt often leads to exchange controls that both block domestic residents' capital mobility and impede debt service payments by private-sector borrowers, the most immediate result is often capital flight — which in turn either worsens the crisis or creates a crisis if there was not one already.

Ongoing Needs. As is already implicit in the preceding discussion, most borrowers' debts do not arise as one-time needs. Borrowers, including in particular borrowers in emerging markets, have an ongoing need for new credit. At the most basic level, the financing needs of either a single firm or an entire country plausibly increase in pace with the scale of economic activity. Economic growth means increased demand for credit. For countries engaged in international trade where transactions are executed in foreign currencies, some of that credit normally comes from abroad. Moreover, because most trade credits are self-liquidating, even financing a stagnant volume of import-export business requires a constant renewal of credit lines. More generally, as was the case for the United States during much of the nineteenth century, most developing countries rely on repeated inflows of foreign capital, over a period measured in decades, to finance investment at rates in excess of their domestic saving.

The question that then arises — and this is the central focus of the argument in much of the remainder of this paper — is whether, in the event of difficulty in servicing some part of a borrower's debt, restructuring that debt affects the borrower's subsequent ability to attract new financing. The most obvious reason why restructuring versus default matters in this context is that lenders may sensibly fear that a borrower that isn't performing on its obligations to other lenders wouldn't perform on an obligation to them either. At the very best, new lenders would see their claims met only on a pro rata basis along with those of previous lenders. Extending new credit would amount to the new lenders' coming to the rescue of the existing lenders. In many circumstances of debtor nonperformance, therefore, resolving the status of outstanding obligations is key to attracting new financing even from a new set of lenders.

As a result, as long as <u>lenders</u> have reason to prefer restructuring over default or mere inaction, <u>borrowers</u> have reason to do so as well. In effect, contract terms such as cross-default and negative pledge clauses are a way for lenders to align borrowers' interests with their own. To the extent that the <u>lenders</u> want to see a nonperforming loan restructured, these terms give the <u>borrowers</u> a reason for seeking a restructuring also. (It is useful to distinguish this line of argument from that made above, based on borrowers' own incentive to maintain knowledge-enhanced relationships with specific lenders. There, borrowers' incentive to restructure derives from the possibility of obtaining further credit from <u>the same</u> lenders. Here the incentive to restructure arises from a potential desire to borrow from <u>other</u> lenders.)

In settings in which well-established bankruptcy procedures prevail, the need for new credit is a well-recognized motivation for how such matters are normally handled. In the United States, for example, a private creditor that has sought protection under the bankruptcy code can

continue in operation by obtaining debtor-in-possession financing, which takes precedence over pre-bankruptcy obligations. But the ability to do so follows only as a consequence of the bankruptcy proceeding, and even then only with authorization from the court, which takes into account (but need not accede to) objections raised by the existing creditors. Such procedures are inoperative or unenforceable in many emerging market countries. Moreover, it is hard to see what the analog to a formal bankruptcy proceeding (and hence to debtor-in-possession financing) would be for sovereign borrowers.

Finally, it is important to acknowledge explicitly that borrowers' nonperformance often takes on a further, inherently political dimension in the context of debts owed by emerging market borrowers to foreign lenders. Given the importance of trade to most countries' economic existence, maintaining orderly international financial relationships has become recognized almost everywhere as a major element of government responsibility, comparable to (albeit not quite on a par with) maintaining public safety, national security, and so on. Hence any situation that threatens a country's ability to obtain ordinary trade credit, for example, is necessarily not just an economic crisis but a political crisis as well, regardless of whether the initial problem has arisen from the government's debts or those of private borrowers. Governments of emerging market countries facing such a crisis therefore have a political incentive to put it behind them, and normalizing relationships with foreign creditors is a key part of doing so. Hence borrowers facing difficulty in servicing their debts have all the more reason to agree to a restructuring if that is what the lenders seek.

## 3. How Easy Should Restructuring Be?

One of the great paradoxes of banking is that repudiating one's debts makes a borrower more creditworthy. The standard explanation is that as long as the borrower has some remaining assets, or even just some prospect of a stream of future income, under the usual me-first rules the bottom tranche of debt is always the least risky. Getting rid of all existing debts gives some new creditor the opportunity to hold what will amount to the first tranche. (The analogy to debtor-in-possession financing, and hence the value of establishing workable bankruptcy standards where this can be done, should be self-evident.)

Examples of the working of this paradox are not hard to find. In the United States the surest way for an individual to find his or her mailbox overflowing with new credit card offers is to declare personal bankruptcy. In a context closer to the focus of this discussion, global investors in the early 1990s raced to buy bonds issued by sovereign credits that had just written down the principal on their outstanding debt under the Brady Plan. One of the chief motivations underlying the current proposal for organized forgiveness of the debts of the world's fifty or so poorest countries is the hope that once the existing debt is expunged, lenders will promptly extend new credit.

What makes this behavior paradoxical is the common-sense notion that actions follow a pattern, and so reputation matters. If a borrower has defaulted before, why not again? The answer — at least in principle — is that abandoning debts enhances a debtor's creditworthiness only in circumstances that preclude repetition and therefore circumstances that nullify the adverse reputation effect. In the United States personal (as opposed to corporate) bankruptcy is permitted at most once every seven years. Lenders had reason to assume that countries that had

restructured their debts under the Brady Plan would not seek another such restructuring any time soon. (The Brady Plan also enabled sovereign credits to put up what amounted to collateral by using U.S. Treasury debt, placed in escrow accounts, to secure the principal and near-term interest payments on what then became bonds.) The current call for debt forgiveness for extremely low-income countries similarly assumes that there will be no repetition of this action within the foreseeable future.

What all of these examples have in common is that by participating in a formal debt restructuring, borrowers in effect reduce the value of what they owe but do so in an orderly way, through procedures that, at least in principle — apart from arm twisting by the regulators — have the consent of their creditors. Hence the borrower acquires a reputation for not servicing debts as promised but also, importantly, a reputation for participating in an orderly resolution of the resulting problem. And, as the discussion above makes clear, lenders have reason to value resolving nonperformance problems in this way.

It is hardly surprising, therefore, that once debt service difficulties arise, a borrower's ability to obtain new financing — including merely the renewal of trade credits — depends in part on debt restructuring. The contrast between the ample flow of new money to developing countries under the Brady Plan (which involved both write-down of principal and below-market interest rates, albeit not necessarily both on the same obligations) and the much different experience under the Baker Plan (which mostly involved rescheduling of principal payments) is one example. Another is the contrast between the rapid economic recovery in Mexico after the recession associated with the 1994-95 debt crisis (which involved debt restructuring supported by IMF and U.S. government credits) and Mexico's much slower recovery from the 1982 crisis

(which led to the Baker Plan). Yet another example is the contrast between the rapid recovery now in progress in Korea (which after a crisis in 1997 restructured its large short-term debt, mostly owed by banks at least nominally in the private sector, into government-guaranteed bank credits and then a Eurobond financing) and the sluggish growth in Brazil for some years after that country attempted in 1987 to declare a unilateral debt-payments moratorium. A far more extreme case in point is North Korea, which defaulted on two major loans more than twenty years ago, has since been unable to receive credit from most market sources, and has suffered one of the world's worst economic performances throughout much of this period.

Given that in many situations of nonperformance both borrowers and lenders have a clear interest in rescheduling the problem debt, what seems at first thought much more surprising is that restructuring is not easier to accomplish. The point is especially relevant as securities have come to provide an increasing share of emerging market credits. Bonds issued under New York law require unanimous consent of the holders to amend any of the terms of payment, including the interest rate and the schedule for repayment of principal. The sheer mechanics of notifying hundreds or even thousands of bond holders and obtaining consent from each are daunting enough (and all the more so if the bonds are issued in bearer form), but the unanimous consent requirement also creates an obvious incentive for some lenders to game against the others by withholding their consent. Moreover, New York bond contracts typically include no procedure for establishing collective representation of the holders, so that it is difficult to determine how to go about structuring a proposal with at least some claim of procedural legitimacy to present to holders for their consent. Bond contracts also typically do not include the equal sharing clauses conventionally used in bank loan contracts to help maintain a united position among the lenders

and especially to discourage dissident members of the lender group from initiating litigation on their own. 12

Although these specific contract features make bonds significantly harder to restructure than bank loans, loans as well are not always easy to reschedule or otherwise amend. In the case of loans advanced by large syndicates, banks with only a small participation, which poses no threat to their essential business prospects, have less interest in maintaining the no-loss-of-value fiction. When restructuring involves commitment of new money, these banks often prefer simply to write off their loss and drop out. When a borrower owes money to banks in different countries—as was the case, for example, in the 1997-98 Korean crisis—the fact that lenders in different countries face differing regulation and also differing conditions in their respective home economies can be a significant stumbling block. In the Korean example a key part of the story, which was clear at the time, was that the G-10 central banks were pressuring their countries' commercial banks to agree on a restructuring plan that would prevent a situation of broad-scale default. What would have happened if market forces had been left to function on their own remains (and will remain) an unanswered question.

The contrast between the readily identifiable interest that both borrowers and lenders often have in achieving a restructuring and the prevalence of these systematic impediments to doing so provides the motivation for much of the interest shown in international debt resolution mechanisms during the past few years. At the grand conceptual level, economists and others have offered various proposals for a "new financial architecture," typically centered around the creation of either an international bankruptcy mechanism or an international lender of last resort, or both.<sup>14</sup> At the level of everyday financial practice, bankers have become more adept at handling London

Club negotiations, the bondholder community has begun to make progress in addressing its more complicated representation issue, sovereign borrowers such as Pakistan and Ukraine have shown how to use exchange offers to overcome the impediment posed by the unanimous consent requirement, and other as-yet-untried ideas such as exit consents are receiving widespread attention. Yet all these proposals and actual innovations notwithstanding, debt restructuring in the international arena remains far from easy or straightforward.

Perhaps there is a reason why this is so. As is well known, the conflicting incentives of borrowers and lenders and the asymmetry of information that a borrower and its lenders have about the borrower's financial condition and prospects create a classic moral hazard situation, and hence the need for mechanisms to commit borrowers to meet their obligation. The need for such mechanisms is all the greater when the absence of strong auditing and accounting practices and other forms of transparency make a borrower's condition and prospects especially difficult for outsiders to monitor — as is often the case in emerging markets. Transaction by transaction, therefore, lenders always seek ways of committing borrowers to pay what they owe.

But from a perspective that is broader than just one transaction at a time, it is also useful to lenders to have mechanisms that commit themselves to press the borrower for payment and even to exercise their rights under whatever mechanisms are in place should the borrower fail to perform. Lenders (and, as developed in the discussion below, borrowers too) have an interest that extends over time to future transactions. That continuing interest may sometimes conflict with a lender's interest in simply gaining the greatest value, net of fully allocated expense, from any one transaction. None of this is surprising, and in principle lenders should be able to balance these current and future interests in a purely discretionary way. But there are countless examples

of situations in which just this kind of balancing of current versus ongoing interests is difficult—
in some situations it is impossible— without some form of commitment mechanism to preclude
taking actions that would be optimal on a case-by-case basis yet harmful from a more forwardlooking perspective. 15

In the specific setting of what to do when borrowers fail to meet their obligations, the obvious conflict rises from the inferences that future borrowers, including but not limited to those having difficulties at the moment, draw about the likely consequences of their own subsequent nonperformance. As introductory banking textbooks explain, this is why it sometimes makes sense for a lender to pay more to collect a debt, or to seize and liquidate collateral, than the proceeds are worth. The negative net proceeds of such an action are, in effect, an investment in gaining performance by future borrowers. To repeat: that investment is especially valuable in circumstances where verifying the borrower's condition is problematic. Systematic impediments to debt restructuring represent a mechanism that constrains a lender to be more likely to make that investment.

The fact that loans often have multiple lenders compounds the problem. In addition to the inherent conflict that exists between a single lender's interest in the transaction at hand and in the environment in which future transactions will take place, there is also then a potential conflict among the interests of different lenders. Hence lenders, including those that are already creditors to any particular nonperforming borrower as well as those that are not, face a collective-action problem. Equal sharing clauses (in bank loan contracts) and unanimous consent requirements (in bond contracts) act as mechanisms for solving that collective-action problem among the lenders already participating in a nonperforming credit. Both serve to constrain the lenders as a group

from acting in any one transaction in ways that may dilute borrowers' incentive to perform on future debts. (As the discussion below makes clear, it is of course possible for such constraints to be too tight.) Cross-default and negative pledge clauses act as a mechanism for solving the analogous collective action problem among lenders more broadly, including those that are part of the specific credit in question and those that are not. More generally, conditioning private credits on a country's receiving IMF loans, or even on its merely entering into an IMF agreement, is also a means of solving lenders' collective action problem. In such circumstances the IMF in effect serves as a cartel coordinator for the lenders.

Hence impediments to debt restructuring have their purpose too. But the straightforward implication of this line of argument is that not all nonperforming debts should be restructured, even when it is in the interest of the borrower and also in the (narrowly construed) interest of the lenders to do so. Because the practical alternative to restructuring is hard to specify, whether this means more outright defaults or merely more instances of "muddling on" with debts nonperforming but not in default is ambiguous. But it does mean that failure to restructure a nonperforming debt is not necessarily a failure. And given the role that restructuring normally plays in facilitating the extension of new credit to a nonperforming borrower, it also means that some new loans will probably not be granted. Indeed, the deeper implication is that in a regime in which restructuring is systematically not so "easy," some old credits would not have been extended in the first place.

# 4. Real Counterparts of Financial Flows and Accounting Losses

The place to start in assessing whether a regime in which some specific loans are not made is good or bad is to recall that the purpose of credit flows is normally to fund some kind of real economic activity. Hence debt problems, when they occur, are not merely a financial phenomenon. For every financial loss not fully offset by somebody else's gain, there is somewhere a real economic loss. Since the fundamental rationale for having competitive financial markets to begin with is to support the production and use of real goods and services, what it means to do without any given debt transaction is ultimately a matter of real, rather than financial, outcomes.

Thinking about nonperforming debt problems in this way leads to what can sometimes be an awkward question: When things go sour, where did the money go? In cases of ordinary business debt problems, the answer is sometimes straightforward and sometimes not, but rarely interesting in a general way: a firm's product market is unexpectedly weak, its labor or its suppliers become unexpectedly expensive, its production is disappointingly inefficient, its competitors are surprisingly strong, its new technology fails, and so on. Life in a competitive market economy is full of idiosyncratic reverses. But the focus of interest here, spurred by the problems suffered by one emerging market country after another in just the past few years, is not isolated business failure. The issue is instead systemic debt problems that affect a country's borrowers more generally, often to an extent that ultimately threatens the government's own credit as well. Hence asking where the money went is more interesting, but also more difficult.

An example from outside the emerging markets context can perhaps best illustrate the point. The collapse of the savings and loan (S&L) industry in the United States in the late 1980s

resulted in a direct cost to U.S. taxpayers of \$126 billion. This loss was not just a financial phenomenon. Much of it represented the dissipation of the American economy's resources in constructing office buildings, energy extraction facilities and other tangible investments that in the end the market did not value. Much of the rest represented the transfer of resources to corrupt and self-dealing S&L operators, some of whom ultimately faced criminal sanctions. In retrospect, it would clearly have been better if many of the credits that led to the U.S. S&Ls' demise had never been extended in the first place.

Turning then to the case at hand, where did the money go in Korea? In Indonesia? In Thailand? In Brazil? The answer is more complex in these cases, not least because of the role of changing currency valuations in what went wrong. Projects that may have looked economically viable at one exchange rate no longer did at another. But even this plain fact is properly part of the story, not an excuse for ducking the issue, and it opens in turn yet further questions: Why were countries' exchange rates supported where they initially were? Given the well-known role of capital flight in initiating most countries' currency crises (not just in this latest round but more generally), were exchange rate policies a thinly disguised mechanism for effecting what amounted to transfer payments? Who ultimately bore the risk arising from the use of unhedged foreign currency obligations to finance investments, the viability of which depended on stable or appreciating currency values? And how did the allocation of that risk-bearing correspond to claims on the potential returns from those investments in the event that currency values had remained stable or appreciated?

Nor are currency fluctuations the entire matter. Whether the investments being financed by these loans made sense on other grounds is surely no less of a question in these countries than

Indeed, the government-business ties and lack of transparency that have received so much discussion ever since the Asian crisis began (with the Thai currency crisis) in 1997 suggest that the economic viability of such investments in many emerging market countries may be even more subject to question than in the industrial world. Either way, however, the questions at issue are about real uses of an economy's resources — importantly, resources that could have been deployed for other purposes — not merely about financial losses. Moreover, leaving aside what led to the financial losses and real resource costs behind the 1997-99 crisis, questions like these are pertinent to future resource uses, and hence future debt transactions, as well.

Thinking about the matter in this way makes clear that simply maximizing the flow of credit to any borrower or group of borrowers, whether in an emerging market country or not, is not what competitive financial markets exist to do. The economic function of these markets is to transfer resources from ultimate savers to ultimate investors, but not irrespective of the real economic use of the resources that the ultimate investors intend, and certainly not irrespective of the alternative intended use between one would-be ultimate investor and another. The role of competitive financial markets is to discriminate in just this way. Transaction by transaction, lenders do this every day.

But there is also a systemic aspect of this process that arises from the underlying presumptions that both borrowers and lenders carry into their transaction-by-transaction dealings. These include presumptions about whether and under what circumstances borrowers really are supposed to meet their obligations, and what course lenders will take when they don't. To the extent that any competitive situation has elements of a zero-sum game, borrowers and lenders

would each naturally prefer that these presumptions be different — more in their own favor, and less to the other side's. Because financial markets make possible real economic activity that could not otherwise take place, however, dealings between borrowers and lenders are not merely zerosum. Some ways of handling a specific transaction make <u>both</u> parties better off. Similarly, some sets of underlying presumptions make both parties better off over time.

The heart of the argument about debt restructuring advanced here is that underlying presumptions that potentially make both borrowers and lenders better off on an ongoing basis are sometimes in conflict with the actions that are potentially to their mutual advantage when any one transaction is viewed in isolation. Creating mechanisms that preserve or even enhance those presumptions, even at the cost of foregoing mutually beneficial actions in some specific transactions, is therefore potentially valuable. Impediments to debt restructuring constitute such a mechanism. That these impediments sometimes impose costs in the context of specific nonperforming debts that are not restructured, and that those costs are sometimes borne by both borrowers and lenders, is certainly true. That as a result some credits are not extended in the first place is not only true, it is precisely the point. It is what makes lenders — and, on reflection, borrowers too — better off.

All this is not to say that restructuring nonperforming debts should be either impossible or maximally difficult. Even the soundest risks, as seen ex ante, sometimes turn out badly ex post. (If not, they wouldn't be true risks.) Borrowers do meet with adverse circumstances that they could not have foreseen, or that genuinely seemed improbable. Events happen that are beyond their control. Some borrowers that can't pay on time will be able to pay later. The point is not that restructuring should be as difficult as possible, but rather that it should not be as easy as

possible — arguably, not so easy as is currently the case. The losses sustained by lenders when debts default, and the real costs suffered by borrowers when they cannot obtain new credit, are bad per se. They are worth accepting only as part of a regime governing borrower-lender dealings that justifies itself over time by effectively fostering economic production and economic development. But that regime is not one in which all nonperforming debts are always restructured.

A useful analogy, again from a different context, is the classic prescription for lender-of-last-resort actions in the face of a systemic bank run — namely, to lend on good credit to solvent institutions.<sup>17</sup> This simple maxim rests on the presumption that individual banks are responsible for their solvency (picking good credits is what banks are supposed to do) but not for their liquidity when the banking system as a whole is impaired (maintaining liquid liabilities against illiquid assets is also what banks are supposed to do). A strict prohibition against lender-of-last-resort actions would prevent a central bank from rescuing banks that are threatened not only for reasons not of their own making but, indeed, for reasons that arise as a consequence of carrying out their economic function as intended. Under such a regime banks would be unable to provide liquidity transformation. But a regime of always rescuing every bank not only destroys banks' incentive to serve their function of allocating resources to good credits. Because of the interaction of limited liability and the competitive market in which banks raise their own capital, such a regime discourages them from serving this function.

The bank-run analogy is not fully apt here for several reasons. Especially in the context of nonperforming borrowers in emerging markets, sorting out insolvency from illiquidity is not straightforward. For sovereign credits, apart from truly extreme cases it is not clear what

insolvency would mean. The familiar chain of borrowing, in which a country's banks act as conduits for channeling foreign-source credit to the country's operating companies, while the government often in effect acts as a similar conduit (or provides implicit guarantees) for the banks, further compounds the problem. But the basic idea remains valid nonetheless: What to do when a borrower fails to perform on its obligations is a matter of information, inference, and judgment. A regime in which restructuring is either impossibly difficult or routinely easy prevents that process from working.

# 5. Concluding Thoughts: Restructuring Without Rules, and the Role of Official

## Lending

There is no need to restate here the main conclusions of this line of thinking, which are already summarized at the beginning of the paper. Instead, two final considerations particular to the context of emerging markets are worth noting. First, in the legal setting of many emerging market countries, lenders themselves have to assume a broader range of responsibilities. For purposes of comparison, in a standard corporate bankruptcy proceeding in the United States, the lenders propose changes in debt terms, in the borrower's corporate structure and in other aspects of the borrower's business, and the borrower either agrees or faces liquidation. But these negotiations take place within the framework of rules that specify majority voting within each class of credits, "cramdown" conditions under which one class of creditors can force another to go along, and ultimately the threat of liquidation — all with a judge to determine whether the relevant tests have been met. Any proposed changes in the borrower's corporate structure likewise stand against the background of the U.S. laws applicable to corporate governance. By

contrast, when bankruptcy and corporate governance institutions are inadequate, or when lenders either can't or simply don't force their use, lenders potentially negotiate with borrowers over a much broader range of issues and in a more free-form way.

The point is relevant because some of the debtor nonperformance in the Asian crisis appeared to reflect problems of financial and corporate structure as much as or more than underlying business risk. Any firm is necessarily subject to some volatility in its cash flows, and some firms far more so than others. Some firms' cash flows are also exposed to volatility from foreign currency fluctuations, some to volatility from fluctuations in the price of some particular raw commodity, and so on. A balance sheet that is entirely appropriate for one firm may therefore be highly inappropriate for others. The purpose of any firm's borrowing is to facilitate its nonfinancial operations, but the wrong balance sheet structure can instead place the firm's nonfinancial operations, and potentially the firm itself, at undue risk.

This is the point at which debt restructuring comes into contact with more general balance sheet restructuring, and ultimately with corporate restructuring in the broader sense of combining, separating, or even terminating existing business operations. To a far greater extent than in the industrial world, in the emerging markets context all this is in the province of firms' creditors. It is so because denying new financing is often the only potential sanction capable of effecting change.

Second, unlike most private borrowers, governments in emerging markets have another source of credit to which they can turn: other governments on a bilateral basis, as well as the IMF and the World Bank. Hence official lending potentially plays a key role in questions of sovereign credit debt restructuring. Because the borrowing governments in these cases are often conduits

for their countries' private-sector borrowers, however, official lending is also in effect available more broadly.

The role of official lending complicates the argument advanced in this paper in several ways. As much recent discussion has emphasized, the potential availability of official lending can reduce the disincentives for borrowers to fail to meet their obligations. At the same time, official lenders normally exhibit even greater commitment to the no-loss-in-value fiction than do banks, and far more so than among bond investors. (Another way to put this point is in terms of the fiction that lending and direct assistance are conceptually distinct.) The same argument developed above, to the effect that lenders' reluctance to recognize loss of value is a factor empowering borrowers, applies here as well. It is therefore somewhat surprising that the possibility of official lenders' recording losses — including losses on loans by the IMF and the World Bank — has not bulked larger in discussions of the many issues that the latest emerging markets crisis has raised. But it is important to recognize that the availability of credit from the IMF and other official lenders is certainly not the only source of moral hazard in emerging market debt transactions, and the argument advanced in this paper implies that it is not even the most fundamental source.

The central focus of the argument presented here is instead debt restructuring entered into by emerging market borrowers and their private-sector lenders. No one should doubt that, in cases of actual or threatened nonperformance, restructuring helps to restore the orderly flow of new credit. Nor should anyone doubt that, on a transaction-by-transaction basis, doing so not only avoids losses to lenders but also prevents a wide range of real economic costs to nonperforming borrowers. What makes the question of debt restructuring more subtle is that the presumptions that underlie debt transactions more generally also depend on restructuring practices. A world in

which nonperforming debts are not easily and automatically restructured is therefore a world in which some credits will not be extended. But that may well be to the benefit of not only the lenders but borrowers as well.

### References

- Bagehot, Walter. 1873. Lombard Street. London: William Cloves and Sons.
- Barro, Robert J., and David B. Gordon. 1983. "Rules, Discretion, and Reputation in a Model of Monetary Policy." <u>Journal of Monetary Policy</u> 12 (July), 101-121.
- Buchheit, Lee C. 1998a. "Changing Bond Documentation The Sharing Clause." <u>International Financial Law Review</u> 17 (July), 17-19.
- Buchheit, Lee C. 1998b. "Majority Action Clauses May Help Resolve Debt Crises." <u>International Financial Law Review</u> 17 (August), 13-14.
- Buchheit, Lee C. 1998c. "The Collective Representation Clause." <u>International Financial Law Review</u> 17 (September), 9-11.
- Council on Foreign Relations. 1999. Report of the Commission on the Future International Financial Architecture. New York: Council on Foreign Relations Press.
- De Long, J. Bradford. 1999. "Financial Crises in the 1890 and the 1990s: Must History Repeat?" Brookings Papers on Economic Activity (No.2), 253-294.
- Dooley, Michael P. 2000. "Can Output Losses Following International Financial Crises Be Avoided? Mimeo: National Bureau of Economic Research.
- Eaton, Jonathan, and Mark Gersovitz. 1981. "Debt with Potential Repudiation: Theory and Estimation." Review of Economic Studies 48 (April), 289-309.
- Eichengreen, Barry. 1999. <u>Toward a New Financial Architecture: A Practical Post-Asia Agenda</u>
  Washington: Institute for International Economics.
- Eichengreen, Barry, and Ashoka Mody. 2000. "Would Collective Action Clauses Raise Borrowing Costs?" Mimeo: National Bureau of Economic Research.
- Eichengreen, Barry, and Richard Portes. 1995. <u>Crisis, What Crisis?</u> <u>Orderly Workouts for Sovereign Debtors</u>. London: Centre for Economic Policy Research.
- Folkerts-Landau, David, and Carl-Johan Lundgren. 1998. <u>Toward a Framework for Financial Stability</u>. Washington: International Monetary Fund.

- Goldstein, Morris. 1998. <u>The Asian Financial Crises: Causes Cures and Systemic Implications</u>. Washington: Institute for International Economics
- Kydland, Finn E., and Edward C. Prescott. 1977. "Rules Rather than Discretion: The Inconsistency of Optimal Plans." <u>Journal of Political Economy</u> 85 (June), 473-491.
- Obstfeld, Maurice, and Kenneth Rogoff. 1996. <u>Foundations of International Macroeconomics</u>. Cambridge: MIT Press.
- Rogoff, Kenneth. 1985. "The Optimal Degree of Commitment to a Monetary Target." <u>Quarterly</u> <u>Journal of Economics</u> 100 (November), 1169-1189.
- Rogoff, Kenneth. 1999. "International Institutuions for Reducing Global Financial Instability." Journal of Economic Perspectives 13 (Fall), 21-42.

## **Endnotes**

- <sup>1</sup> For example, although Cuba has long since repudiated all debts of the pre-Castro regime, in 1979 the People's Republic of China settled with the U.S. Government on claims against pre-1949 Nationalist China, and Russia recently even settled with holders of pre-1917 Tsarist bonds.
- <sup>2</sup> For a general discussion of moral hazard in this context, see Eaton and Gersovitz (1981). See also Obstfeld and Rogoff (1996), Ch.6, and the many references cited there.
- <sup>3</sup> See deLong (1999) for a useful historical review.
- <sup>4</sup> In the United States, for example, the Federal Reserve System, the Comptroller of the Currency and the Federal Deposit Insurance Corporation render an interagency judgment when they deem that assets are "value impaired."
- <sup>5</sup> The fact that banks can set aside a reserve against prospective decline in the value of loan assets complicates this story somewhat but represents no fundamental change. The reserve is a counter-asset against the loan, reducing the net (loan minus reserve) value on the asset side of the bank's balance sheet. Reserving against a loan therefore reduces the bank's stated equity just as if the bank had written down the value of the loan itself. For purposes that matter to this discussion, the two are equivalent.
- <sup>6</sup> It is useful to distinguish this reason for <u>borrowers</u> to seek debt restructuring from the reason given above for lenders to do so. The lenders' reason for preferring restructuring to default grows out of forces <u>external</u> to the direct borrower-lender relationship: specifically, the capital requirements and accounting practices that are a part of the relationship between lenders and their regulators. By contrast, the <u>borrowers'</u> reason for preferring restructuring to default or mere nonpayment grows directly out of an aspect of the borrower-lender relationship, albeit a relationship between the borrower and its lenders other than those on whose claim the borrower is not performing.
- <sup>7</sup> During the 1994-95 Mexican crisis, for example, many Tesobono holders were domiciled in Mexico. Default would almost certainly have made it impossible for the government to borrow from domestic Mexican lenders, and probably would have shut down the country's credit markets more generally.
- <sup>8</sup> A problematic aspect of credit arrangements under such circumstances is the inability of lenders to enforce agreements that would give their uncollateralized claims priority over similarly uncollateralized but subsequently contracted obligations. One possibility would be to rely on negative pledge clauses precluding such subsequent agreements, perhaps enforced by using non-exclusive jurisdiction clauses (when lenders are in different countries) to enable unsatisfied lenders to pursue their claims from other lenders whose claims are honored when theirs aren't; but this concept apparently remains a theory untried in actual legal practice.

- <sup>9</sup> An interesting empirical question is whether individuals who have gone bankrupt find their ability to gain credit beginning to erode again after, say, five or six years.
- <sup>10</sup> Even a pure rescheduling, with interest and other terms left unchanged, would normally be priced by the market as a decline in value.
- <sup>11</sup> By contrast, bonds issued under U.K. law usually include provisions for convening a bondholder assembly as well as provisions for majority voting.
- <sup>12</sup> See Buchheit (1998a, 1998b, 1998c) for a detailed discussion of sharing clauses, majority action clauses and collective representation clauses. See also Eichengreen and Portes (1995) and Eichengreen and Mody (2000).
- <sup>13</sup> See the account of the Korean restructuring in Euromoney, March, 1998, pp. 32-37.
- <sup>14</sup> Prominent examples include Eichengreen (1999), Folkerts-Landau and Lindgren (1998), Goldstein (1998), Rogoff (1999) and Council on Foreign Relations (1999).
- <sup>15</sup> The classic formulation of the time inconsistency problem in economics is that of Kydland and Prescott (1977). Non-standard applications in the context of a single country's monetary policy are given by Barro and Gordon (1983) and Rogoff (1985). See Dooley (2000) for an application to debt problems that formalizes parts of the discussion here.
- <sup>16</sup> This sum included \$42 billion in costs that the government reimbursed to the Federal Savings and Loan Insurance Corporation before putting that entity out of business, \$79 billion in costs (net-of-liquidation proceeds) borne by the Resolution Trust Corporation, and \$6 billion in contractual tax benefits awarded to private acquirers of failed S&Ls.
- <sup>17</sup> See Bagehot (1873).
- <sup>18</sup> Currency depreciation may also trigger a breach of loan covenants even before any effect on cash flow has appeared.