THE DEBT CRISIS: WHERE DO WE STAND AFTER SEVEN YEARS?

Jeffrey Carmichael

In August 1982, Mexico declared itself unable to service its external debt. As a result, commercial lending by international financial markets to developing countries evaporated. Within a few months, Mexico was joined by other large debtors, including Argentina, Brazil, and Chile. Thus began the developing world's debt crisis.

Since 1982 there have been maneuvers and concessions (both official and private) by debtor nations and their creditors. This muddling through has been aimed at buying time and warding off large-scale debt repudiation, which would lead to bank failures and the exclusion of most developing countries from world financial markets.

On the positive side, the period since 1982 has given rise to conditions favorable to the debt situation. The recession of the early 1980s was followed by a period of sustained low-inflationary growth in industrial countries. At the same time, there was a steep decline in real interest rates. On the creditors' side, commercial banks have strengthened their balance sheets with additional capital and loan loss provisions. Secondary markets in developing country debt have also emerged. Among the debtors there have been some notable successes, such as the Republic of Korea and Turkey. Even among the less successful, export volumes have grown strongly, noninterest budget deficits have declined, and creative techniques for reducing the debt burden have been tried. There has also been an important shift toward rather than away from democracy (Fischer 1988).

The world debt problem is nevertheless as far from resolution as it was seven years ago. Indeed, the problem has worsened in some
ways. The real output per capita of the highly indebted countries has shrunk by an average of almost 10 percent since the start of the 1980s. Some of these countries are worse off now, by this measure, than they were in the mid-1970s. Big improvements in export volumes were offset for many such countries by falling commodity prices and the consequent deterioration in terms of trade. The large net improvement in the combined trade account of this group still left most debtors unable to cover debt service, with the result that debt continued to grow. By the end of 1987, the combined debt of highly indebted countries had increased to $485 billion (one billion equals 1,000 million) from $350 billion at the end of 1982; at this writing, the debt for all developing nations stands around $1.2 trillion. With debt continuing to rise, there was little or no improvement in indicators of debt burden such as the ratios of debt and debt service to exports.

Since 1982 there has been no shortage of suggestions for solving the debt problem; there have been close to seventy proposals in the past five years. The commonly accepted policy, although it seems to lack a clear long-term goal, has nonetheless responded to debate. Three phases may be discerned: the initial reaction, which emphasized adjustment through demand contraction in debtor countries; the early Baker plan, which emphasized growth and new lending; and the later Baker plan, which extended the growth framework to embrace market-based instruments. More recently, U.S. Treasury Secretary Nicholas Brady has signaled a new direction for official policy, with a greater emphasis on debt reduction and involvement by multilateral institutions. This article reviews the various plans and proposals (see, for example, Fischer 1987, Cline 1987, Williamson 1988, Wertman 1986, and Krueger 1988). It also assesses what we have learned in the past seven years.

Assessing Proposed Solutions: Some Points of Reference

What is meant by “resolving the debt crisis”? Few of the existing proposals address this question. One exception is Fischer (1987), who suggests that the crisis will be over when the debtor countries again have normal access to international capital markets.

One resolution of the crisis might be the establishment of a situation in which the debt levels of developing countries are no longer a threat to world trade or to world political and financial stability. The problem is thus seen as one for both debtor and creditor countries.

A resolution will not necessarily mean that developing country debt will be eliminated. Not only is it reasonable for countries to borrow to finance growth and development, it is economically ra-
tional. Avoiding a debt problem means keeping debt within a country's capacity to service it from current and future trade flows. A sustainable debt situation is one in which there is confidence in the country's ability to service its debt over time, under a reasonable range of economic conditions. Although such a situation might involve short periods of heavy borrowing, the ratio of debt to real per capita output should generally decline or remain steady.

To ensure that debt does not threaten political stability, the burden of debt service should not leave the debtor in a state of long-term economic stagnancy. To guarantee financial stability and world trade flows while resolving the debt crisis, international banks must be left sound enough to direct financial flows to the investments with the greatest promise of return. A resolution should achieve these goals without creating undue pressure for increased protection of either goods markets or financial markets. It should be noted, however, that removing the threat to global political and financial stability does not necessarily require the restoration of all debtors to sustainable debt positions.

Proposals that meet these criteria can be further evaluated according to two standards: efficiency and equity. There appears to be general agreement about the requirements for an economically efficient solution. In pragmatic terms, an efficient solution would be one that:

- stimulated investment and, through investment, economic growth in developing countries
- reduced trade protection in industrial countries
- implemented reform of domestic policies in developing countries at both the macroeconomic level (especially fiscal restraint and sound management of exchange rates) and the microeconomic level (liberalization of markets, removal of distortions, and so on).

There is less agreement about the equity of various solutions to the debt problem. Any resolution involves accepting the burden of past errors. All proposals to resolve the crisis involve judgments about how this burden should be distributed among developing countries, industrial countries, and the shareholders of commercial banks.

Proposed solutions can be categorized in many ways. Fischer (1987), for example, groups plans according to whether they change the form of claims against debtors while leaving their present value unchanged; reduce the present value of those claims; or maintain the present value of the claims, while making it easier for debtors to

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Solutions to the Debt Crisis: Some Key Ingredients

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service them. Another approach would be to group programs according to whether they aim to provide new money, stabilize debt levels, or reduce debt levels.

There are at least four ideas that recur consistently as elements of solutions to the debt crisis: procedural reform, policy reform in debtor countries, increased investment in debtor countries, and debt forgiveness.

**Procedural Reform**

Few would view procedural reform as the sole solution to the debt crisis, but it is often suggested as a way of reducing the aggregate burden and improving efficiency. Fischer (1987) lists five reforms that offer the prospect of greater efficiency:

- offering multiyear rescheduling to reduce the resource cost of complicated debt negotiations
- using exit options to reduce the size of banking syndicates and thereby increase the efficiency of debt renegotiations
- altering accounting rules to allow partial debt write-downs and gradual amortization, thus further encouraging banks to strengthen their balance sheets
- providing information from government agencies on foreign bank accounts in the United States to help debtors recoup tax revenue on flight capital and to reduce the tax incentive for capital flight
- taxing foreign bank accounts in the United States to reduce incentives for capital flight.

Of these reforms, the first two deal with reducing existing inefficiencies, the third with stimulating activity in the secondary market for developing country debt, and the last two with discouraging, or even reversing, capital flight.

Implementation of these reforms has been limited. Only multiyear rescheduling agreements (MYRAS) have been widely used. Their longer grace periods and extended maturities have given debtors breathing space to work on domestic policies, as well as to avoid time-consuming annual negotiations. Some MYRAS have also reduced interest costs to a level below those on the original loans, thereby offering some debt relief. (For more details on these reforms, see Fischer 1987.)

**Policy Reform**

The need for structural policy reform in debtor countries, at both the macro and the micro levels, is a consistent theme in most anal-
ysis of the debt crisis. As noted earlier, policy reform and investment are acknowledged as essential to an efficient solution to the debt problem. Many regard mismanagement of fiscal and exchange rate policy as the primary contributor to the current situation. Entrenched inefficiencies are also seen as handicapping future investment and growth.

Recognizing these considerations, the Baker plan—which was announced by then U.S. Treasury Secretary James A. Baker in September 1985 and which has formed the nucleus of debt policy since then—recommended broad reform as a precondition for access to new funds. The plan called for liberalizing trade and investment, reforming tax systems, eliminating government subsidies, privatizing public sector enterprises, and increasing the efficiency of domestic financial markets (Wertman 1987).

That a debtor should adopt responsible domestic policies has long been a tenet of the International Monetary Fund (IMF) in country lending. Many proponents of a new multilateral debt facility view the benefits of such an institution partly in terms of the added credibility it could bring to policy reform (see, for example, Islam 1988, Sengupta 1988, and Robinson 1988).

Others believe policy reform should be the critical element in resolving the crisis. According to Krueger, "Longer-term resolution of the problem requires first and foremost, a realignment of domestic policies to achieve greater productivity from existing resources and higher returns from resource accumulation" (1988, p. 8).

Structural adjustment policies have been put in place in a number of countries since 1982. The most far-reaching reforms have been implemented by Chile. In other countries, including Argentina and Brazil, reforms have met with less enthusiasm and, in some cases, have been overruled or overturned.

Despite widespread support for policy reform, implementation faces several hurdles. First, reform can involve substantial reduction of consumption, particularly in the case of macroeconomic realignment, including fiscal contraction and real exchange rate depreciation. Second, these costs often fall on lower-income groups. Third, the size of the debt overhang can act as a tax on policy reform. The cost of structural adjustment falls squarely on the debtor. If the benefits, particularly the greater capacity to service debt, accrue largely to creditors, debtor countries face a disincentive to implement such reform.

**Investment**

The need for investment to stimulate growth in debtor countries was an important element of the 1985 Baker plan. Between 1982
and 1985, efforts at adjustment emphasized austerity and demand restriction. This strategy failed to produce a substantial reduction in debt, despite severe recessions in debtor countries. It was a sharp reminder that supply expansion can be more effective and less painful than demand contraction as a means of servicing external debt and restoring external balance. As growth came to be considered more important so too did investment. As with policy reform, however, a debt overhang can act as an effective tax on investment to the extent that the rewards of successful investment can accrue largely to foreign creditors.

Partial Debt Forgiveness

From the emergence of the crisis in 1982, partial debt forgiveness has been suggested as a component of solutions to the debt problem. Over time, this concept has attracted more adherents.

Debt forgiveness can be applied to principal or interest. If a debtor does not have access to further loans, interest forgiveness provides more relief than principal forgiveness, the present value of the write-offs being equal.

Forgiveness can be voluntary or mandatory. Mandatory debt forgiveness is the cornerstone of various proposals to create new international debt facilities. It also plays a key role in the Bradley (1986) and Sachs (1986) plans, which seek to build on the Baker framework.

Bradley argues that further lending by commercial banks would compound the crisis by adding to the debt overhang. He proposes that banks annually forgive three percentage points of both principal and interest for three years. In return, debtor countries would be required to adopt economic reforms. The plan also suggests an annual trade relief summit that would include the World Bank, commercial banks, and creditor governments. The Sachs plan proposes much more extensive interest forgiveness, but for a smaller group of countries. This would provide outright debt relief for countries that have experienced falls in gross national product (GNP) per capita since 1980 in excess of 15 percent. Countries with declines between 15 and 25 percent would have all interest obligations forgiven for a period of five years; those with declines greater than 25 percent would be forgiven interest obligations for ten years.

To date, the most wide-ranging proposal for mandatory debt forgiveness is the suggestion of the United Nations Conference on Trade and Development that there be an across-the-board write-down of 30 percent of the commercial bank debt of the “Baker fifteen” countries (UNCTAD 1988). The cost of the action is esti-
mated to be consistent with the banks' existing provisions. In return for the write-down, debtor countries would be required to allocate the entire interest saving to investment in export industries.

Voluntary forgiveness is a more recent and controversial idea. Krugman (1988a and 1988b) and Sachs (1988) make an interesting case that partial debt forgiveness will, in some situations, be in the interest of both debtor and creditor. They argue that policy reform and the allocation of resources to investment are costly in terms of political support and current consumption. If the debt overhang is so great that the main benefits of these sacrifices accrue to foreign creditors rather than to the debtor, the debtor country will be reluctant to take unpalatable measures. In effect, the debt places a heavy marginal tax on behavior that is otherwise globally optimal.

Krugman illustrates this point on a graph he calls the debt relief Laffer curve. This curve is illustrated in figure 1, where the total level of debt, $D$, is shown on the horizontal axis and the total value, $V$ (that is, the expected total payout) is shown on the vertical axis. Krugman's proposition is that beyond a certain point, $B$, the disincentive effect of additional debt is so great that the total expected payout from the country begins to decline. Ultimately, debt could become so high that repudiation is inevitable and the value of the debt falls to zero. For low levels of debt, between zero and $A$, full repayment is expected, and so each increment of debt is valued at full face value; debt levels up to $A$ are sustainable.

According to this analysis, debt forgiveness (for example, if creditors write down their claims from $D_0$ to $D_1$) provides a clear gain to the debtor since it reduces foreigners' claims on domestic resources if events become favorable and the ability to service debt rises. The outcome for creditors is ambiguous: partial debt forgiveness reduces creditors' claims on favorable outcomes in the debtor country; by reducing the size of the implicit tax, however, the probability of a favorable outcome is increased. If a country's debt falls to the right of point $B$ on the curve, the latter effect outweighs the former, and creditors are better off forgiving some (but not all) of the debt.
Many refinements could be made to this simple analysis. The basic message, however, remains that there are levels of debt so burdensome as to discourage remedial action by the debtor. In such situations it is in the interest of both creditor and debtor that the creditor forgive a portion of the outstanding debt. Forgiveness works when debtors are on the “wrong side” of the debt relief Laffer curve (debt levels greater than B) because it improves incentives to debtors.

Categorizing the Proposals

Most proposed solutions to the debt crisis involve a different combination of the elements just outlined, but in their philosophical bases most fall into two broad groups.

The first group reflects the belief that resolution is best handled by the market (commercial banks and debtor governments). The governments of industrial countries could play a catalytic role (by removing market impediments, legal and accounting restrictions, and so on) but would stop short of mandating a solution or committing their own taxpayers to bailing out either the banks or the debtors. The Baker plan is an example of a market-oriented solution in that it suggests desired contributions from debtors and creditors but stops short of imposing them.

The second group of solutions assumes that government intervention is necessary or optimal, or both. These proposals typically involve official mediation and a commitment of public resources. The Brady plan, which envisages debt service guarantees by multilateral agencies, would fall in this category. Also included in this group are proposals that may be referred to as comprehensive because they treat all creditors and all debtors in a uniform way. I would also include mandated solutions (such as uniform involuntary debt forgiveness) and voluntary schemes involving a significant commitment of public funds (such as the establishment of a multilateral debt facility).

The Market-Based Strategy

Supporters of handling the debt crisis case by case point to the evolution of secondary markets for buying and selling loans to indebted countries and of new financial instruments as evidence that innovation in the market is ameliorating the problem. Although these markets are still relatively thin, they at least allow banks to trade what otherwise would be untradable loans. As such, they improve the characteristics of these loans. They also provide some information about the market’s perception of the probability of repayment.
Secondary markets in developing country debt have enabled creditors to strengthen their balance sheets by improving the mix of country and maturity risks in their portfolios. In some cases this has been possible to the mutual benefit of creditors, with no negative effect on debtors, which suggests that the aggregate burden may have been reduced. In other cases, debtors have participated in creative financial schemes to reduce their burdens.

There are many kinds of market instruments, both proposed and extant, that could play a role in resolving the debt crisis. Fischer (1987) lists ten ways of changing the nature of claims on debtors so as to help resolve the crisis: development of secondary and insurance markets, indexed loans, contingent lending obligations, longer-maturity debts, debt-equity swaps, debt service in local currency, return of flight capital, country funds, debt subordination, and interest capitalization. To the extent that the crisis for debtors is one more of debt service than of debt level, the benefit of these instruments to the debtor nations lies in their capacity to reduce debt service or the variability of debt service, or both.

Debt service insurance is potentially useful as a means to hedge the variability of debtors' external exposure, as is indexation of debt service to various measures of performance by the debtor (see Lessard and Williamson 1985 for a description of several market instruments). That these markets have not grown significantly suggests that the cost of such a hedge may at present be too high.

**Buybacks.** Among the instruments of debt reduction, of particular significance was the recent repurchase, or buyback, by Bolivia of almost half its outstanding bank debt. The motivation behind a buyback is an attempt by the debtor to take advantage of the large discount available in secondary markets to reduce its debt.

Standard international debt contracts, however, prohibit repurchase by the issuer (see Bulow and Rogoff 1988). Thus a debt repurchase necessarily involves extensive negotiations between debtors and creditors and even then ventures into untried legal territory. These negotiations may involve some costs for the debtor. These could be explicit costs, such as the commitment of existing or future foreign reserves in the form of guarantees. The costs could also be contingent, such as sanctions paid for under performance on policy reform. In evaluating buybacks, it is important that all costs be accounted for by both debtors and creditors.

Bolivia negotiated the repurchase of its debt with its creditors early in 1987. Funds totaling $34 million were raised from a group of anonymous donor countries. With these funds, Bolivia repurchased $308 million (at an implicit discount of around 90 percent) of its outstanding foreign commercial bank debt; the repurchase
represented about 46 percent of Bolivia's commercial bank debt. Of the total, $268 million was purchased outright, while the remaining $40 million was exchanged for local-currency bonds that can be converted into Bolivian equity later.

As will be discussed later, there are various opinions about the distribution of benefits from the Bolivian buyback. In any event, the opportunities to extend this type of operation to many highly indebted countries are quite limited. With outstanding debt of only $4.6 billion (about 15 percent of which was owed to commercial banks) and an extremely low secondary-market price, Bolivia was an ideal candidate for such a scheme. It is doubtful whether any large debtors could muster enough reserves or foreign aid to have more than a minor effect on the total debt outstanding.

DEBT SWAPS. Debt swaps have already been used by Brazil, Chile, Mexico, and Venezuela, among other countries (debt swap programs are described in Regling 1988 and Euromoney 1988). Between 1984 and 1988, these countries converted roughly $6 billion of bank debt into domestic equity. Chile stands out as having made significant progress in reducing its debt through swaps, having retired more than 13 percent of its debt by this method.

Roberts and Remolona (1987) identify three different types of debt swaps: debt-debt swaps, debt-peso swaps, and debt-equity swaps. Deals often combine one or more of the three types.

Debt-debt swaps involve a direct exchange of ownership between existing creditors. For example, a Mexican bank may swap Argentine debt to a U.S. bank in return for Mexican debt. In a debt-peso swap, a resident citizen of the debtor country first sells a foreign asset to purchase his own country's foreign-currency debt in the secondary market. He then exchanges that claim for domestic currency, domestic debt, or domestic equity. These usually involve concessionary terms and are intended to repatriate capital that would otherwise flow out of the country.

Debt-equity swaps have attracted most analytic attention. In these transactions, a foreign creditor exchanges his claim on the debtor for equity in a domestic firm. These swaps serve as a vehicle for foreign direct investment and usually involve concessionary terms.

Most debt swaps have been voluntary. In contrast, a proposal by the Bank of Nova Scotia (1987) involves a mandatory debt swap. Under the proposal, debt relief in the form of limited interest rate reductions would accrue to creditors in local currency and would be available for conversion into equity in the debtor country. Dornbusch (1988) makes a similar suggestion but extends the coverage to all interest payments due in foreign currencies.
DEBT DEFEASANCE. Yet another version of debt swap, with elements of a buyback, is debt defeasance, which involves replacing existing debt with new debt (typically exit bonds). In essence, defeasance is the issuance of new securities, usually on concessionary terms to the debtor, which exempt the creditor bank from participation in future rescheduling. An attempted issue by Argentina in mid-1987 attracted little interest. Mexico carried out a more successful issue in early 1988, redeeming $3.5 billion in face value of its outstanding debt. The new bonds carried a guarantee of principal provided by U.S. Treasury zero coupon bonds with the same maturity as the new Mexican issue; the Treasuries were purchased from Mexico's foreign reserves. Thus the new debt was partially senior to the remaining undefeased debt. That the Mexican issue was not more successful may have resulted from ambiguity about the seniority of the new debt with respect to interest payments. (For a fuller discussion, see Williamson 1988.)

A recent proposal by First Interstate Bank (1988) incorporates some of the features of Mexico's defeasance scheme. New lending from commercial banks would be extended to highly indebted countries provided that part of the proceeds be set aside to purchase U.S. government zero coupon bonds to collateralize the eventual repayment of principal.

The Miyazawa plan (1988), presented at the 1988 Toronto Summit, proposes that debtors convert part of their debt into securities. Principal would be guaranteed by liens against debtors' foreign exchange reserves and against receipts from the sale of state-owned assets.

REFLECTIONS ON MARKET-BASED SOLUTIONS. A key to the appeal of market-based solutions is that nearly all of the instruments involve some reduction in debt and debt service. These instruments could provide an incentive for growth and efficiency by reducing the implicit tax on investment and policy reform.

There has been some dispute over the distribution of gains from market-based instruments, particularly when the action creates little incentive for investment and reform. The conventional case, that debtors gain from market-based debt reductions, has been argued elegantly by Froot (1988) and Helpman (1988). Bulow and Rogoff (1988), however, maintain that creditors receive most of the benefit. What kind of role market-based solutions will play depends on how well these differences can be resolved.

As an example of the divergence of views, consider a buyback in which the debtor uses its foreign reserves to repurchase some debt. Assuming that the country is not so indebted that banks have given
up thinking they will be repaid, this buyback has two components. First, it reduces the level of outstanding debt with a claim on the debtors' future resources. Second, by paying for that debt reduction with current reserves, it reduces the resources from which the remaining debt can be paid.

If the value of reserves is factored in to the valuation of debt, the value of the remaining debt should fall by the amount of the reserves spent on the buyback. As long as the debt repurchase takes place at a discount, the debtor decreases its liabilities by a greater amount than the reserves it spends.

The creditors gain the reserves (on which they already have a claim), which they pay for in discounted debt. Since reserves are claims on industrial countries, they are of higher quality than the debtor's remaining assets. All things being equal, creditors would prefer to pay for reserves with undiscounted debt and offer a deeper discount for the remaining lower-quality assets, but the equilibrium discount on the buyback must ensure that the options of selling out or holding remaining debt carry the same average price for the creditor. Since remaining debtors hold claims on less attractive assets, the price of their debt is likely to fall, thus raising the discount on the buyback. A buyback from existing reserves therefore appears to offer a gain for debtors and a loss for creditors.

Exit bonds, or buybacks financed with future savings, are the same as buybacks financed with current resources, provided the exit bonds have seniority over nonexit debt. The loss to creditors again arises from debtors' ability to sell off high-quality assets at favorable prices.

This interpretation of buybacks is consistent with the models of Froot and Helpman. Bulow and Rogoff carry out essentially the same analysis but reach the opposite conclusion: creditors gain nearly all the benefits, whereas debtors gain little. Indeed, when the opportunity cost of resources is considered, debtors lose from buybacks.

The divergence arises from different assumptions about how creditors perceive the value of their assets. Whereas Froot and Helpman assume that foreign reserves are fully discounted into the value of debt, Bulow and Rogoff assume the opposite: that the expected future payoff to creditors is independent of reserves. Not surprisingly, in the Bulow and Rogoff analysis, creditors come out ahead because they receive what they see as a windfall equal to the reserves used in the buyback. According to Bulow and Rogoff, the transaction does not introduce any additional resources, so that if creditors gain, debtors must lose.

How creditors perceive the value of reserves is a difficult question. There is, however, a more fundamental point about perceptions.
Bulow and Rogoff, Froot, and Helpman all assume that debtors perceive the burden of the debt (in terms of its resource cost) as equal to its market value—that is, that they view it in the same way as creditors. This would be a reasonable assumption if debtors were allowed to trade their debt freely in secondary markets, but they are not. Thus the marginal cost of debt to debtors could be quite different from the marginal value to creditors.

If, as Bulow and Rogoff assume, creditors regard the value of debt as independent of current reserves, a buyback financed from reserves raises the price of remaining debt, thereby raising the creditors' welfare. If the debtor intends to repay its obligations in full, to the debtor, the burden of the debt is its full face value. If the market price is at a discount then, by implication, creditors either do not realize the debtor's intention or do not believe it. Any buyback at a discount necessarily reduces the debtor's perception of debt burden. Thus, even in the view of Bulow and Rogoff, both debtor and creditors can gain if the debtor's perception of the debt burden is greater than the creditors' perception of its value. Conversely, if the debtor regards the burden as below the market value (that is, if it plans to repudiate), then a buyback is a waste of its resources.

There are other ways buybacks can benefit both debtors and creditors. Bulow and Rogoff play down the incentive effects that are central to the case made by Krugman and Sachs for mutual gain. Froot actually argues that, in the case of a buyback from current resources, the incentive effects could be reduced. This, however, rests on the unlikely assumption that intertemporal substitution effects are sufficient to reduce desired savings. Williamson (1988) argues that creditor banks can derive benefit from different courses of action. Some banks may offer a high discount to eliminate risk; others, believing payouts will be higher, prefer to hold on.

In their analyses of market-based transactions, Bulow and Rogoff, Krugman, Froot, and Helpman introduce some interesting insights by looking at the components of market transactions. Most instruments contain an element of debt forgiveness, which, in its pure form, is equivalent to a buyback from donated resources (as in the Bolivian buyback).

Similarly, a debt-equity swap can be broken down into a sale of assets to a company through a conventional foreign investment program, plus a buyback financed with the proceeds. The buyback should increase the debtor's welfare in proportion to the discount received. If the entire discount is returned to the creditor as a concession, the net improvement for the debtor will depend largely on whether the incentive creates a net increase in aggregate investment (allowing for the substitution of subsidized investment in projects...
that would have been made in any case). This net increase in aggregate investment has been referred to as additionality and is often considered necessary if a debt-equity swap is to be in the debtor's interest. This is an important consideration but not the only one. Gains from differences in perceptions could, for example, still leave the debtor better off even if additionality were zero.

Breaking market transactions into their component parts also shows that particular transactions should not be dismissed on grounds of being domestically adverse (for example, debt-equity swaps are often called inflationary). Typically, transactions involve a pure instrument plus a domestic policy action; it is often the policy action that needs correcting.

In some cases the component parts of a transaction may be separable and obtainable at lower cost in some other way. This may not be so in other cases. For example, it is questionable that Bolivia would have received its grant of $34 million in aid had it not been tied to the debt buyback. The feasible combination of elements will often reflect practical or political considerations. The debtor is concerned primarily with extracting as much value as possible from a transaction.

Some degree of debt forgiveness can be achieved through the market, but the market may not be able to provide enough forgiveness, and quickly enough, to resolve the crisis. If creditors could benefit from outright forgiveness—an option always open to them, and one that does not require complex financial instruments—why have they not already done so? In terms of the debt relief Laffer curve, why have creditors not moved quickly to point B, where no further forgiveness is in their interest? It is possible that few, if any, debtors are on the wrong side of the debt relief Laffer curve. Given the deep discounts evident in secondary markets, however, this seems unlikely.

The free-rider problem. A more important reason that more outright forgiveness has not been seen is the so-called free-rider problem. Each creditor, acting on its own, can have only a minimal impact on the total debt of a given debtor. If one creditor expects others to forgive part of their debt, that creditor is better off letting its loans stand, because the average price of the debt will rise. Correspondingly, if the creditor expects no one else to forgive, then it stands to lose heavily if it forgives part of its debt, since it can raise the price by only a small amount. Clearly, when the debtor is on the wrong side of the debt relief Laffer curve, a cooperative solution, in which all creditors agree to forgive part of the debt, is superior to the situation in which each stands back hoping the others will move first.
The difficulty is in getting creditors to act as a group, even when it is in their interest to do so. But if the debtor initiates a market-based debt reduction scheme, the prospect for extracting debt forgiveness should be quite good. In such a case, each creditor faces an incentive to participate (provided the price is appropriate) rather than to hold back; thus the free-rider problem is removed. Consider, for example, the case of exit bonds with seniority. Seniority is all or nothing. If any one creditor refuses seniority then the exit bonds are worth exactly the same as the old debt. If any one creditor agrees to seniority, then the value of the old debt rises (due to the incentive effects) if the debtor is on the wrong side of the debt Laffer curve. Thus no creditor faces a penalty by granting seniority, even if others choose not to.

There is, then, a sound case that market-based instruments can extract debt forgiveness more effectively than creditors acting unilaterally. Furthermore, the forgiveness extracted could be in the creditors' interest anyway.

There remains the question of whether such relief will be sufficient to resolve the crisis. It is possible that, even if all debtors were restored to the right side of the debt Laffer curve, the situation would still be unsustainable. After all, the analysis of incentives shows only the direction of change in policy reform and investment; it says little about the adequacy of the size of these changes or about the bases from which the changes occur. It is also possible that debtors' resources to activate the market-based programs are inadequate. Finally, relief brought about by the market might be too slow in coming to avert political disruption in debtor nations or financial instability in general.

**Intervention as an Alternative**

Official intervention can take one of several forms. By far the most commonly proposed solution to the debt problem is that a multilateral agency should mediate between debtors and creditors. In such proposals the intermediary is seen as being able to achieve debt reduction and consolidation in a way that the market cannot.

**Multilateral institutions as intermediaries.** In the aftermath of the Mexican default, Kenen (1983) and Rohatyn (1983) proposed the formation of a new institution to intermediate between debtors and creditors. The new entity would purchase debt from the banks at a discount in exchange for its own debt. The discount would then be passed on to the debtors.

There have been numerous variations on this generic plan. The variables include what form of debt forgiveness is involved, whether
Table 1. Features of Proposals for a Multilateral Agency to Intermediate between Creditors and Debtors

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the involvement of banks is voluntary or mandatory, whether debtors are treated uniformly or case by case, whether the institution buys the debt or simply provides a guarantee for new lending, and how the institution is organized (how it is funded, whether it is a function of existing institutions or a new entity, and so on). All proposals have in common the establishment of an official intermediary between debtors and creditors, and the explicit or implicit commitment of taxpayers' money. Most view the intermediary as having greater power than the commercial banks to enforce policy reform in debtor countries.

While the major proposals are briefly described below and summarized in table 1, there are many more proposals than can be covered here. Summaries of some of the other proposals can be found in the “Debt Plan Scorecard” (The International Economy, July–August 1988) and in Wertman (1986).

Several of the more modest proposals focus on the role of international institutions in providing credit enhancement. Lever and Huhne (1987) suggest a partial guarantee scheme to export guarantees. The guarantees would be administered by national credit agencies in conjunction with the IMF. Creditors would pay for the guarantee up to a ceiling, which would leave some risk uncovered. Loans covered by these guarantees would be subject to conditions laid down by the IMF.

Rotberg (1988) suggests a similar scheme, in which the World Bank would play the role of guarantor. The guarantee, limited to repayment of principal, would be in the form of a twenty-year put option (that is, the World Bank would offer new lenders the right to
sell their loans to the Bank after twenty years). If the option were exercised, the creditor would be obligated to reinvest the proceeds with a World Bank affiliate that would have been established for this purpose.

More comprehensive schemes involve direct purchase of the debt of developing countries. Kenen (1983) suggests the establishment of an International Debt Discount Corporation (IDDC). Capital of the IDDC would be subscribed by the governments that create it. The IDDC would open its discount window for a short, fixed period. Any bank wishing to use the window would be required to discount (at a fixed rate of 10 percent) a uniform fraction of all its developing country debt. In return, the bank would receive long-term guaranteed IDDC bonds that would pay the market interest rate. The discount received on incoming debt would be passed on as modest debt relief to debtors. This scheme transfers the risk of default from the banks to the industrial countries backing the IDDC; its viability rests on the ability of the IDDC to convince debtor countries to adopt policy reforms and meet their obligations.

Rohatyn's proposal differs from Kenen's mainly in the form of funding specified for the IDDC. In Rohatyn's proposal, the new institution would borrow from the market as well as from creditor governments. His plan also differs from Kenen's in that it extracts relief for debtors in the form of concessionary interest rates rather than as a discount on face value. In late 1986, U.S. Senator Paul Sarbanes proposed a similar scheme, except that funding would come from Japan's large external surplus. The Japanese commercial banks have established an IDDC of sorts, but the scheme appears to have no debt relief involved (see Krueger 1988 and Fischer 1987). Variations on the IDDC plan, specifying different sources of capital, have been suggested by Islam (1988), Sachs (1987), and Sengupta (1988).

After the Sarbanes proposal, Weinert (1987) proposed an IDDC-type scheme using secondary market prices as a guide to the extent of discounting. U.S. Representative La Falce (1987) proposed legislation based on this strategy. The La Falce plan suggested using approximately $4 billion of the IMF's holdings of gold to capitalize the new institution. In contrast to the take-it-or-leave-it rules of the Kenen proposal, La Falce's idea was that banks would voluntarily participate.

Robinson (1988) has put forward a more ambitious proposal that seeks to combine Kenen's notion of debt reduction with a plan to promote new lending. Robinson's new agency, the Institute of International Debt and Development (I2D2), would be jointly funded by the World Bank and the IMF. The I2D2 would seek to extract growth-oriented policy reform from debtors case by case. It would
purchase debt from creditors at a discount, offering in return either perpetual debt or preferred stock. In a gambit aimed at new lending, the 12D2 would reserve the right to subordinate existing debt to future debt incurred by the same debtor. To maintain discipline, the debt relief concessions and the subordination would be suspendable if debtors failed to adhere to agreed adjustment plans.

**Proposals for a Multilateral Debt Agency.** The number of proposals involving official intervention and the commitment of public money is an indication that at least some are unconvinced that the market can generate enough debt reduction on its own to stabilize the situation. Although official intervention offers the prospect of quicker action (that is, once all involved parties agree on the desirable form of intervention), most proposals in this group face serious implementational difficulties, which are generally recognized by the authors (see, for example, Kenen [forthcoming]).

First, official intermediation schemes that establish an institution to purchase bank debt face free-rider problems of their own. As with debt forgiveness, official intermediation should bring about a greater ability to service debt. This will happen if the new intermediary commits public money (which would be similar to aid) or effectively monitors policy reform, or both. If the capacity to service debt improves, the value of claims not included in the scheme should increase. By implication, the more successful the intermediary appears before the fact, the more it will have to pay to induce creditors to participate. If not enough creditors participate, these schemes are not likely to work.

The alternative is to make participation mandatory or institute a system of seniority among participants (as suggested by Robinson). Both of these courses of action raise a host of legal problems. Some of the most difficult legal issues arise from the involvement of creditors from many countries, each with its own legal code. These considerations become particularly tricky under proposals that alter the rights of parties to existing contracts.

A second problem with official intermediation is the question of pricing. Given economic events since 1983, it is probable that, had an official intermediary been set up with the pricing structures that were then being discussed, it would now be in financial difficulty. Uniform pricing would discriminate against some countries and, in a voluntary scheme, would encourage oversubscription of bad risks and undersubscription of better risks. Secondary markets are too thin to be a reliable guide in pricing. Furthermore, the discounts implied by current secondary markets would involve a greater loss to commercial banks than most could bear.
A third problem involves moral hazard. The prospect of relief through an official agency could encourage debtors to erode their debt-servicing capacity in order to attract more aid. Any official solution involving public money penalizes, to a certain extent, those debtor countries that have worked hardest to restore sustainability. If cases are evaluated on their own merits rather than handled according to uniform rule, there is more leeway to reward good performers.

Finally, there is the question of equity. Any intervention involving public money shifts the burden, at least partially, from debtors and creditors to taxpayers in industrial countries. Unless the stakes were extremely high, this could be hard to justify.

In his speech to the Bretton Woods Committee in Washington, D.C., on March 10, 1989, U.S. Treasury Secretary Brady signaled yet another change in official policy for dealing with the debt problem. Although Brady sought to play down differences with the Baker plan, his program appears to accept debt reduction as an essential ingredient. Significantly, it also includes the World Bank and the IMF as intermediaries in debt reduction.

The plan, which still has not been described in detail, has multilateral intermediaries facilitating buybacks by heavily indebted countries. Funds are to be provided through the intermediaries to guarantee interest payments. The new plan retains the case-by-case emphasis of the Baker plan, along with its emphasis on policy reform in debtor countries.

In the absence of detailed information, it is difficult to assess the plan's chances of success. It faces many hurdles, not the least of which is winning the cooperation of industrial countries, commercial banks (which must agree to a general waiver of loan conditions that prohibit repurchase of debt by debtors), and debtor countries. Beyond that, there are the questions of funding the plan, ensuring the continuation of new lending, and seeing that debtor countries adhere to policy reform.

In surveying the literature published since the debt crisis erupted in 1982, it is interesting to note the convergence in views on some of the principal issues.

Few would argue that the debt situation has improved since 1982; to many it has become more urgent. There is also growing agree-
ment that resolution of the crisis will involve some debt forgiveness, whether it comes voluntarily from the commercial banks, is extracted from the banks with market-based instruments, or is mandated by the governments of industrial countries.

There is also little disagreement that efficient resolution of the problem requires economic growth in the developing countries. Belt tightening by itself, which was tried between 1982 and 1985, is unlikely to solve the problem. Indeed, the case for partial debt forgiveness usually emphasizes the positive incentives it creates for both investment and structural adjustment of domestic policy in debtor countries.

The principal point of disagreement is whether the necessary debt reductions and consequent adjustments in policy in developing countries can be generated by market forces alone. The alternative is usually seen as intervention by governments and the possible commitment of public funds.

The growth of secondary markets for debt and the engineering of market-based instruments that provide some degree of debt relief are encouraging signs that the market may be working toward a solution. Theoretical analyses support the argument that these transactions are moving the system in the right direction. Those who suggest that the market should be left to find its own solution to the problem also point to recent recoveries in some commodity prices and the possibility that the international economic environment could turn out to be more favorable for developing countries than is currently believed.

Another strategy is to provide quick relief through official intervention. Of the many proposals of this type, most involve establishment of a new international institution, capitalized by industrial countries, to intermediate between debtors and creditors. These schemes offer a more comprehensive solution, but the complexity of operations presents obstacles. These difficulties are not necessarily insurmountable, but they could lead to substantial inefficiencies and increased cost to taxpayers. The recent shift of U.S. policy in the direction of official intermediation of the crisis suggests that there may be a growing willingness to bear these costs.

There is no one correct solution to the international debt problem. Plans of attack vary widely in their implications for efficiency and equity as well as in their ability to get the job done, and done quickly. Policymakers may be willing to sacrifice efficiency and equity for expediency if the situation worsens. What is clear is that the debt problem remains the most significant threat to international political and financial stability. The lessons learned at great cost in the 1980s should not be quickly forgotten.
The past seven years have seen little improvement in the world debt situation. During this period, policymakers have shifted their attention from demand reduction by debtor nations to supply expansion. Most recently, debt reduction has become the principal issue.

This article reviews various ways of resolving the debt problem. There is widespread agreement among competing proposals that an efficient solution requires both debt reduction and economic growth in debtor countries. Disagreement arises over whether the necessary debt reduction and consequent adjustment in policies in developing countries can be generated by market forces alone. The alternative is usually thought to be intervention by governments and commitment of public funds. This article groups and analyzes proposed solutions according to their relation to these two positions.

The survey concludes that there is no clear-cut solution to the problem. Methods vary widely in their implications for efficiency and equity as well as in their capacity to improve the situation and to do so quickly. Inevitably, official policy will continue to be determined less by economic ideals than by exigencies. The more urgent the problem becomes, the more likely the balance is to swing from reliance on the market to direct intervention.

References


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