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CAPITAL DRAIN, DEBT RELIEF,
AND CREDITWORTHINESS
OF DEVELOPING COUNTRIES

by

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I. The Debt Overhang of Developing Countries*

Even seven years after the debt crisis erupted the highly indebted developing countries have not grown out of their payments difficulties. The Baker initiative of 1985 which envisaged growth and adjustment-oriented external financing for the most important problem borrowers turned out to be a failure. The external indebtedness of all developing countries increased by another 50 per cent in the 1982-1989 period, and exceeded US\$ 1200 billion recently. However, the continued debt accumulation did not help to overcome any of the most serious economic problems facing the majority of Third World economies encountering debt-servicing difficulties [for statistical details, see IMF, 1988]:

- Compared to the stagnation or even decline in the early 1980s, real GDP growth of countries with recent debt-servicing problems (problem borrowers) recovered somewhat in 1983-1987. Nonetheless the growth rate of about 2 per cent remained less than half of that experienced in the late 1970s. Per-capita income continued to stagnate in many of these economies. On the contrary, countries without debt-servicing problems returned quickly to the path of nearly 6 per cent annual growth of GDP after a short and minor decline in 1981-82.
- The performance of problem borrowers was even worse with respect to gross capital formation. The average investment ratio, which amounted to more than 25 per cent of GDP in 1978-1982, remained persistently below 20 per cent in the 1983-1988 period. Consequently, the future growth prospects of this country group look rather grim. Again in sharp contrast, the countries without debt-servicing problems succeeded to sustain investment ratios of more than 26 per cent throughout the 1980s.
- Notwithstanding continued debt accumulation, the Third World suffered from a substantial capital drain. Negative net transfers, i.e. gross credit disbursements minus amortization and interest payments, summed up to an outflow of US\$ 100 billion

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in 1984-1987 [World Bank, 1988b, Vol. 1]. The reversal of capital flows was most dramatic for the major problem borrowers, but substantially less so for East Asia and the Pacific for example.

- The market perception of the difficult situation facing many problem borrowers is illustrated by the significant decline in the secondary market valuation of Third World debt. The weighted average discount for the debt of the 15 most heavily indebted countries exceeded 50 per cent in the second half of 1987 and early 1988; while the market valuation was close to 70 per cent of the face value of the debt less than two years before [IMF, 1988, p. 22b].

Recent discussions in the literature on the debt overhang of developing countries suggest that the above phenomena are in fact interrelated [see e.g. IMF, 1989, pp. 61ff.; Krugman, 1988]. A debt overhang is defined by "the presence of an existing, 'inherited' debt sufficiently large that creditors do not expect with confidence to be fully repaid" [Krugman, 1988, p. 2]. Secondary market discounts clearly reflect such expectations. It has been hypothesized that a considerable debt overhang creates strong disincentives for foreign creditors and investors to transfer more capital and the capital-recipient countries to implement growth-oriented adjustment programs.

A high debt burden is supposed to reduce the borrower's adjustment incentives since all or most of the benefits from increased output would go to foreign creditors [Sachs, Huizinga, 1987]¹.

¹ This argumentation may be exemplified as follows [Sachs, 1989, p. 275]: Assume that, under present economic policy conditions, a borrower is able to service only part of his external debt. The borrower may raise his future debt-servicing capacity to some extent if he were prepared to sacrifice current consumption and, correspondingly, raise investment in export-generating activities. However, this adjustment would be irrational from the borrower's point of view. Reduced consumption today is not offset by higher consumption in the future. The creditors would reap the full benefits of internal economic adjustment, unless the additional export earnings are high enough to allow full debt service and compensate forgone present consumption.

The reluctance of foreign creditors and investors to make more funds available on a voluntary basis is attributed to the fact that the market valuation of new capital transfers would become identical to the value of existing claims [Dooley, 1986]. The higher the current discount on inherited debt, the higher the immediate capital losses of new creditors and investors would be. Moreover, an increasing number of the problem borrowers' traditional creditors opt for exit bonds and similar instruments as a means to refuse further "involuntary" lending to overindebted countries¹. The attitudes of both new and old creditors may render it increasingly difficult for borrowers facing a debt overhang to check the capital outflow.

According to a widespread view the above disincentive problems could only be overcome if the parties involved agree on some form of debt relief. Even the US government, which strongly opposed debt relief in the past, revised its debt strategy fundamentally in March 1989. The initiative launched by the Secretary of the Treasury, Nicholas Brady, strongly emphasized the importance of debt reduction. The World Bank and the IMF were assigned a key role in implementing the new approach. Although the particulars have still to be negotiated, financial incentives for private creditors participating in debt reduction schemes and official credit guarantees are likely to be part of the deal. Probably, the motivation of bank syndicates to grant debt relief will also be strengthened by suspending standard credit contract clauses².

¹ Consequently, the incentives of traditional creditors to extend more credits to problem borrowers in order to protect existing claims ("involuntary" lending; see Krugman [1988]) are increasingly concentrated on a small number of highly exposed banks; for them exit options are not attractive since they cannot absorb the losses out of old debt.

² This refers to the sharing clause and the negative pledge clause in the first place, which aim at an equal treatment of all members of bank syndicates as far as debt servicing is concerned.

The widespread view on debt relief as a panacea is challenged in the following. In Section II it is shown that beneficial effects of debt relief materialize only under very specific conditions. Moreover the potential economic costs of reducing the overhang in sovereign debt have to be considered. The sovereign risk perspective of international capital transfers is also important in discussing alternative ways to strengthen the adjustment incentives of today's problem borrowers and to check the current capital drain (Section III). Section IV summarizes the major findings.

II. Debt Reduction: Panacea or Stalemate?

The above reasoning on the effects of a debt overhang suggests that disincentive problems may result in a vicious circle of underlending and insufficient internal adjustment by problem borrowers. Arguably the present capital drain poses serious financing constraints to economic policy reforms in the debtor countries. The lack of growth enhancing reform packages which are both consistent and credible further erodes the future debt-servicing capacity of problem borrowers; it thus adds to the reluctance of foreign creditors and investors to sustain, not to speak of increasing, their financial engagement.

The argumentation also suggests that the borrowers have no incentive to break through this vicious circle unless the debt overhang is reduced. In this view, it is up to the creditors to take the first step. It is maintained that, by agreeing to some form of debt relief, both the borrowers and the creditors would be better off. However, this Pareto improvement can only be achieved if the following conditions are met [for a formal analysis, see Corden, 1988]:

- The reduction of the debt burden must be sufficiently large to remove the disincentive effects on the borrower's adjustment efforts; i.e., a cut in current consumption has to be offset by increased future consumption.

- At the same time, the reduction of the debt burden must be sufficiently small to raise the ultimate stream of debt-service payments to the creditors, compared to the situation without relief [see Krugman, 1988, on the so-called Debt Laffer Curve].

The objectives of the subsequent discussion are: to present evidence on the difficulties to achieve a Pareto improvement by granting debt relief; to show that, under conditions of sovereign lending, new disincentive problems may be created by debt relief without solving the existing ones; and to develop the counter-hypothesis that debt relief is no alternative to further financing if the capital outflow out of developing countries is to be checked.

The effects of a debt overhang on economic adjustment and lending as well as the role of debt relief in overcoming disincentive problems are difficult to be evaluated empirically¹. However, a recent analysis by Cohen [1989] suggests that the debt overhang problem is far less dramatic than frequently assumed. The hypothesis tested states that more nominal debt implies less market value for this debt. If this relationship holds both creditors and borrowers would be better off with some debt reduction. The market value of the reduced debt would then exceed the market value of total inherited debt. The critical question is whether or not the elasticity of the market price of debt with respect to its face value is strictly larger than one (in absolute terms). A reduced form equation which allows the elasticity to depend upon the market price level is tested for a sample of 16 countries with a debt/export ratio of more than 3. The results show that only if the current market price of debt is almost zero, the debt overhang hypothesis cannot be rejected at the 90 per cent level of confidence. This applies to countries such as Sudan, Nicaragua, Peru, and Bolivia. For none of the major borrowing countries

¹ This is largely due to the lack of comparable historical evidence; for an interesting discussion on the similarities and differences between the debt crises of the 1930s and 1980s, see Eichengreen, Portes [1989] and the comments by Skiles [1989].

facing debt problems the creditors can be confident that they would gain if they agree to debt reduction schemes.

Moreover the following, though very simple test reveals that favourable effects of debt relief on the borrowers' adjustment incentives and the creditors' incentives to continue lending are doubtful at best. It is assumed that the reschedulings of the 1980s provided for some, though rather modest relief in the sense that debt renegotiation reduced the present value of future debt-service payments. Consequently, the investment response of borrowers should be positively related to the proportion of rescheduled debt in total liabilities if disincentive problems were reduced by debt relief. Similarly, a positive relationship should hold between the quantitative role of reschedulings and the amount of additional lending.

As a first test of these hypotheses, Pearson correlation coefficients relating the quantitative role of reschedulings to overall investment and additional lending are presented in Table 1. Alternative cross-country calculations are performed for a group of 24 borrowing countries which rescheduled part of their debt, and for a larger group of 36 major borrowers; the latter group consists of the 24 borrowers with reschedulings as well as 12 borrowers without major debt-servicing difficulties. The quantitative role of reschedulings is proxied by the amount of debt rescheduled in 1982-1985 (RESCH 1), and 1982-1986 alternatively (RESCH 2), as per cent of outstanding debt in 1982. The investment response (I) is given by the change in the average investment ratio of 1986-1987 compared to 1983-1985. Similarly the lending response is given by the change in average disbursements (DIS), and net transfers (NT) respectively, both as per cent of debt outstanding in 1985.

The calculations presented in Table 1 reveal positive correlations between RESCH 1 and I as well as NT when the calculations are based on the sample of all 36 borrowers. However, this result does not provide strong support to the hypothesis of favourable

Table 1 - Reschedulings, Investment Response, and Additional Lending: Pearson Correlation Coefficients^a

	36 major borrowers ^b		24 major borrowers with reschedulings	
	RESCH 1	RESCH 2	RESCH 1	RESCH 2
I	0.24*	0.17	0.23	0.10
DIS	-0.08	-0.21	-0.06	-0.27
NT	0.24*	0.14	0.23	-0.13

^aVariables defined as follows:

RESCH 1 : amount of debt rescheduled in 1982-1985 (1982-1986) as per cent (RESCH 2) of outstanding debt in 1982;

I : change in the average investment ratio, 1986-1987 vis-à-vis 1983-1985;

DIS(NT): change in average disbursements (net transfers) of long-term debt from private sources, 1986-1987 vis-à-vis 1983-1985, as per cent of outstanding debt in 1985;

* : indicates significance at the 10 per cent level of confidence.

^bThe sample consists of 24 major borrowers with (different degrees of) reschedulings and 12 major borrowers which did not reschedule their debt in the 1982-1986 period.

Source: World Bank, World Debt Tables, 1988-1989 edition, Vol. 1; IMF, International Financial Statistics, var. iss.; own calculations.

investment and lending responses to debt relief. The results may rather be distorted if the sample consists of both credit constrained and non-constrained borrowers. For the latter type of borrowers, which did not reschedule their debt, capital transfers were demand determined; i.e., creditors had no disincentives to continue lending. Moreover, the average investment ratio of the 12 countries without reschedulings was fairly high and stable (1983-1985: 26 per cent); it exceeded the corresponding figure for the 24 countries with reschedulings by nearly 8 percentage points. In other words, the investment behaviour of non-constrained borrowers was not influenced by disincentive problems.

To avoid biased results the calculations are based on the group of 24 problem borrowers in the second half of Table 1. All Pearson correlation coefficients remain completely insignificant

when only those cases are considered where disincentive problems might exist. In other words, debt relief in the form of re-schedulings did neither induce higher investments by problem borrowers, nor additional lending to countries encountering debt-service difficulties.

The conclusions from the above tests, though preliminary, are twofold:

- Most of today's problem borrowers fall into the "weak debt overhang" category. According to Claessens and Diwan [1989], the debt overhang problem can be overcome without a reduction of contractual debt obligations in this case, provided that new loans are made available.
- Favourable effects of debt relief on economic adjustment are not as straightforward as it is frequently assumed in the literature.

Against this background, it is not surprising that the commercial banks were not prepared to engage in large-scale debt reduction schemes in the past. After risk illusions were destroyed with the eruption of the debt crisis in 1982, the sovereign risk of capital transfers to developing countries has become evident. Default on sovereign debt is not only a matter of the borrower's ability to service external liabilities, but also of his willingness to pay [Eaton, Gersovitz, Stiglitz, 1986]. A substantial range of discretion accrues to the debtor after the contract is concluded and the capital is transferred. The honouring of contractual obligations becomes a matter of cost-benefit calculus [Nunnenkamp, Picht, 1988]. Rational lenders will consider the borrower's incentives to default willfully when deciding on whether or not further credits are granted.

Similarly, sovereign risk plays an important role in the lenders' attitudes towards debt relief. In practice the optimal degree of debt reduction cannot be determined unambiguously. An agreement on relief has to be the result of bargaining between debtors and

creditors. The former can be expected to redefine their bargaining position and ask for more relief as soon as the latter indicate that they are willing to forgive some debt. More importantly, commitments of the debtors to implement adjustment programs after relief has been granted are as difficult to enforce by the creditors as earlier commitments to abstain from willful defaults. Once relief is agreed upon, the reduced debt burden may rather weaken the willingness to adjust within the debtor country. The balance in the political competition among interest groups may shift towards those groups opposing economic reforms which increase the country's social welfare, but affect group-specific interests and rents negatively. The government's determination to resist the opposition against reforms is likely to deteriorate since relief reduces the political necessity to undertake adjustments that have distributional consequences. Difficult decisions can be deferred [for a detailed discussion of the politics of adjustment, see Haggard, Kaufman, 1989].

Frequently it is argued that moral hazards can be avoided if debt relief were made conditional on economic reforms by the beneficiaries. Claessens and Diwan [1989], for example, assume that conditionality is made operational by multilateral organizations providing the "precommitment technology", i.e., making their own lending conditional on policy actions and linking other lenders' financing to official lending. However, conditionality is not at all a new concept, and past experience suggests that it cannot be enforced either. Letters of intent have often proved to be an insufficient indication of reform-mindedness [for the problems in program design and implementation, see World Bank 1988a, pp. 56ff.]. Moreover it is unlikely that the World Bank and the IMF are willing to enforce conditionality rigorously, e.g. by discontinuing their financial relations with countries which refuse to meet the policy conditions once debt relief has been granted. It is rather in the organizations' self-interest to renegotiate on conditionality ex post and ad hoc [on the self-interest of international organizations, see e.g. Frey, Schneider, 1985; Vaubel 1983; 1985].

Private creditors seem well aware of the above enforcement problems. They still resist the public pressures to engage in large-scale debt reduction schemes. This resistance is likely to continue unless the sovereign risks of debt relief are at least partly assumed by the creditor governments and international organizations, e.g. through official guarantees of principal and interest payments, public funding of debt reduction programs, generous tax allowances for debt write-offs, and increased official lending [Institute of International Finance, 1989]. However, the strategy of shifting the costs of debt relief to official authorities and socializing the sovereign risks of lending to developing countries is very likely to create new moral hazards, without solving the existing enforcement problems [for a more detailed discussion, see Nunnenkamp, 1988]:

- Taking away the risks from banks may encourage private creditors to enter another round of "imprudent" lending, i.e. not carefully evaluating the creditworthiness of individual borrowers.
- Debt relief for problem borrowers discriminates against capital-recipient countries which successfully adjusted to external shocks in the past and thus avoided to default on their debt. Those countries' efforts to maintain debt-service payments in the future may decline if they realize that economic policy failures are rewarded ex post. Hence, debt relief involves the risk of creating more problem cases [see also Buiters, Srinivasan, 1987].

Moreover, it threatens to be at the expense of poor countries strongly dependent on official lending if organizations such as the World Bank get involved more closely into the external financing of fairly advanced problem borrowers. This tendency is already evident from the lending behaviour of multilateral official creditors in the 1980s (Table 2). The structure of credit disbursements shifted significantly towards higher-income developing countries encountering debt-service difficulties¹. Arguably

¹ Similar shifts are to be observed for net transfers out of multilateral official lending.

Table 2 - The Structure of Lending by Multilateral Official Creditors^a, 1980-1987

	1980	1981	1982	1983	1984	1985	1986	1987
Total developing countries (US\$ billion)	11.2	11.9	14.5	15.4	16.6	17.3	20.8	22.2
thereof (per cent):								
Latin America and the Caribbean	27.1	27.2	29.9	28.9	32.8	31.8	33.8	26.0
Highly indebted countries ^b	30.9	30.9	35.2	35.6	38.7	36.2	39.6	33.0
East Asia and Pacific	14.9	21.4	18.6	21.1	18.7	17.6	14.1	18.0
Low-income Asia	21.0	18.7	16.1	14.7	15.1	18.2	16.1	20.4
Low-income Africa	13.9	11.3	9.5	9.7	8.6	8.9	11.6	12.5

^aDisbursements of public and publicly guaranteed long-term debt. - ^bBaker-15 plus Costa Rica and Jamaica.

Source: World Bank, World Debt Tables, 1988-89 edition, Vol. 1.

increased official lending to these countries contributed indirectly to the subsidization of private creditors, in so far as the adjustment needs of commercial banks were reduced. Notwithstanding the overall increase in disbursements, the amount of additional resources channelled to low-income countries stagnated for several years compared to 1980. Especially many African economies which experienced serious debt problems as well, though being of minor importance for private creditors, suffered from the (relative) decline in multilateral lending to this region. It may become even more difficult for low-income countries to meet their external financing needs in the future if the role of multilateral organizations in tackling the debt problems of fairly advanced borrowers is extended, as suggested recently by the Brady initiative.

Officially promoted debt relief may even have detrimental effects on the perceived beneficiaries, as far as their future access to private capital markets is concerned. The possible contribution

of debt reduction schemes in checking the current capital drain is frequently overstated. Table 3 reveals that the reversal in international capital transfers is mainly a problem of drastically reduced inflows of new credits, rather than an increased debt-service burden on existing debt. The evidence is most striking for the financial relations of the Third World with private creditors: For all developing countries, more than 70 per cent of the change in average net transfers vis-à-vis 1980-1982 is to be attributed to the reluctance of banks to extend new credits. In the case of Latin America, i.e. the major problem region, reschedulings and debt renegotiation led to debt-service payments in 1983-1987 which were even lower than those in 1980-1982¹. The major challenge of credit constrained debtors, attempting to check the capital drain, is thus to induce private creditors to resume lending.

Especially for today's major problem borrowers debt relief offers no promising alternative to further financing. Debt relief may render it even more difficult to raise fresh money. Borrowers have to take into account that they might be cut off from international capital markets after they have "succeeded" to obtain relief on outstanding liabilities. Default on external debt can generally be expected to involve costs for the defaulting countries in terms of market access, unless the borrowers can credibly commit themselves against renewed demands for relief in the future². From a sovereign risk perspective it is hardly con-

¹ It was only for East Asia that higher debt-service payments were the dominant factor in explaining reduced or negative net transfers. In this region, however, the development of disbursements and net transfers was mainly demand determined. Several countries, such as South Korea and Malaysia, became extremely reluctant to raise new loans and prepaid old debt.

² Eichengreen and Portes [1989] have found no evidence that countries which defaulted in the 1930s incurred costs in terms of inferior capital market access, once they reached settlement agreements with the creditors. Neither defaulting nor non-defaulting debtors had significant access to foreign portfolio capital after World War II. However, the conclusion that individual bond holders did not discriminate between different

Table 3 - Long-Term Debt Flows^a to Developing Countries from All Sources and Private Creditors, 1980-1987^b
(US\$ billion)

	Total creditors					Private creditors ^c				
	1980- 1982	1983- 1985	1986- 1987	1983- 1985	1986- 1987	1980- 1982	1983- 1985	1986- 1987	1983- 1985	1986- 1987
	change ^d					change ^d				
Total developing countries										
Disbursements	115.4	92.7	87.2	-22.7	-28.2	84.6	60.6	49.7	-24.0	-34.9
Debt service	87.5	102.2	120.7	14.7	33.2	72.0	80.1	85.8	8.1	13.8
Net transfers	27.8	-9.5	-33.4	-37.3	-61.2	12.7	-19.5	-36.1	-32.2	-48.8
Latin America and the Caribbean										
Disbursements	51.9	26.4	20.0	-25.5	-31.9	44.5	17.6	9.4	-26.9	-35.1
Debt service	44.0	42.5	40.2	-1.5	-3.8	39.2	36.0	30.4	-3.2	-8.8
Net transfers	8.0	-16.2	-20.3	-24.2	-28.3	5.2	-18.5	-21.1	-23.7	-26.3
East Asia and the Pacific										
Disbursements	19.4	24.9	23.1	5.5	3.7	14.2	18.6	16.3	4.4	2.1
Debt service	13.1	20.0	31.7	6.9	18.6	10.7	16.0	24.0	5.3	13.3
Net transfers	6.3	4.8	-8.6	-1.5	-14.9	3.6	2.5	-7.7	-1.1	-11.3
Africa, south of the Sahara										
Disbursements	11.4	9.0	9.0	-2.4	-2.4	6.7	4.4	3.3	-2.3	-3.4
Debt service	5.3	8.0	6.9	2.7	1.6	3.9	5.9	3.8	2.0	-0.1
Net transfers	6.0	1.0	2.1	-5.0	-3.9	2.7	-1.5	-0.6	-4.2	-3.3

^a Net transfers represent the difference between gross disbursements of new loans, and principal and interest payments (debt service) on existing debt (capital outflow in the case of negatively signed net transfers). -
^b Period averages; minor inconsistencies are due to rounding. - ^c Public and publicly guaranteed long-term debt from private creditors plus total private non-guaranteed long-term debt. - ^d All changes vis-à-vis 1980-1982.

Source: World Bank, World Debt Tables, 1988-89 edition, Vol. 1.

types of debtors after losses were incurred in the 1930s, cannot easily be applied to the current situation. Commercial banks, which represent the most important group of private creditors in the 1980s, are far better equipped than private bond holders as far as comprehensive and differentiated risk evaluation is concerned.

ceivable that, at least in the short run, private creditors would not remember their bad experience with borrowers unable or unwilling to service their external debt. More specifically the incentives for "involuntary" lending are reduced substantially after having agreed to debt relief. It is no longer necessary to protect existing claims by throwing good money after the bad as soon as the losses out of old debt have been realized. Banks will then refuse to participate in new financing packages and concerted lending.

To summarize, the widely acknowledged steps towards debt reduction are rather unlikely to solve the disincentive problems which characterize the capital transfer negotiations between private creditors and the major problem borrowers currently. Debt relief involves considerable economic costs for both the perceived beneficiaries and non-beneficiaries¹. Especially third countries will be negatively affected by public involvement in debt reduction schemes. We have, therefore, to look for alternative ways to overcome debt problems. Most importantly, the chances of developing countries to restore international creditworthiness have to be discussed.

III. How to Restore Creditworthiness: Current Obstacles and Possible Solutions

The prospects for the resumption of private lending to developing countries appear gloomy in view of the persistently high negative net transfers. Sometimes it is even suggested that the present attitudes of commercial banks render any attempts of borrowers to regain international creditworthiness meaningless. In the fol-

¹ Lamdany [1988] correctly argues that the debtor must ascribe a higher value to his external debt than the creditor does, for debt reducing buy-backs to take place voluntarily. Arguably the favourable valuation of debt reduction by the debtors is at least partly due to the neglect of the costs in terms of forgone future credits; whereas private creditors agree to buy-backs exactly because exit options are offered.

lowing, it is argued however that current problems are not insurmountable. Disincentive problems with regard to continued lending and internal adjustment are supposed to be due to uncertainties of both creditors and debtors concerning the distribution of losses from former lending and the institutional framework for future lending, rather than being a consequence of the debt overhang as such.

Uncertainties mainly stem from ongoing discussions on the role of creditor governments and international organizations in assuming part of the losses from former lending and the risks of future lending. Commercial banks are strongly engaged in political lobbying on publicly subsidized exit options and official guarantees of new loans. Similarly, debtor governments bargain on publicly sponsored debt relief, thereby supporting those interest groups which resist immediate and sweeping policy reforms. The wait-and-see attitudes of creditors and debtors may be overcome, however, if the "rules of the game" were clarified and the socialization of losses and risks unambiguously rejected. Debtor countries would then realize that there is no promising alternative to economic adjustment. The internal power balance would probably shift towards those interest groups supporting policy reforms. This, in turn, may reduce the reluctance of private creditors to continue lending.

Removing the distortions arising from public interference may render it easier for individual debtor countries to influence the decision making of private creditors. The decision to realize exit options or to continue lending strongly depends on the creditors' expectations on the borrowing country's ability and willingness to service its debt in the future. Hence, borrowers may attract new capital inflows by implementing economic policies which enhance their future debt-servicing capacity and by credibly precommitting themselves against willful default.

Actually it has been shown in a recent empirical study on the determinants of bank lending to developing countries in the 1980s

that adjustment efforts by the debtors are honoured by the creditors (Table 4). The estimates were based on cross-country regressions run for a sample of 36 Third World economies that maintained considerable credit relations with Western commercial banks¹. Separate estimates were performed for two subgroups of credit constrained borrowers. [for the classification of the sample countries, see Nunnenkamp, 1989]: 14 borrowers for which involuntary lending has been orchestrated, and 12 borrowers without involuntary lending². Selected economic policy variables and performance variables were considered as possible determinants of net transfers from private credit sources (NTR, expressed as a proportion of GNP)³. Among the equations estimated, the following figures prominently:

$$\text{NTR} = a_0 + a_1 \text{INVR} + a_2 \text{WMSHD} + a_3 \text{REXR} + a_4 \text{DEFR}$$

where: INVR = gross fixed capital formation, as per cent of GDP ;

WMSHD = annual change in world export market share of sample countries;

REXR = annual change in real effective exchange rate;

DEFR = government budget deficit, as per cent of GDP

The empirical results summarized in Table 4 show that higher investment ratios (INVR) and favourable world market performance (WMSHD) induce higher net transfers from private credit sources. The significantly positive coefficients of both variables indicate that adjustment efforts by the debtors are honoured by the creditor banks. This result also holds for credit constrained debtors (with the exception of WMSHD in the case of constrained

¹ Annual data for the years 1983-1986 were pooled in the OLS regressions performed [for details, see Nunnenkamp, 1989].

² The regime of involuntary lending includes countries for which equiproportional increases in loan exposure were coordinated by bank advisory committees in 1983-1987 [see the country list in Watson et al. 1988, p. 28].

³ Explaining variables were calculated as two-period averages for the years t and $t-1$. In this way a lagged impact on NTR may be captured, and problems of simultaneity were reduced.

Table 4 - The Impact of Economic Policy and Performance Variables on Net Transfers to Developing Countries from Private Credit Sources^a: Pooled Cross-Country Regression Results, 1983-1986

	Constant term	INVR	WMSHD	REXR	DEFR	\bar{R}^2 F	Degrees of freedom
36 credit constrained and non-constrained countries	-6.39** (-5.68)	0.204** (4.20)	0.059** (2.55)	-0.024 (-0.96)	-0.040 (-0.87)	0.22 6.94	78
14 credit constrained countries with involuntary lending	-5.08** (-2.97)	0.164* (1.84)	0.109** (2.11)	0.000 (0.00)	-0.025 (-0.16)	0.22 3.22	28
12 credit constrained countries without involuntary lending	-12.66** (-3.42)	0.437** (2.55)	-0.021 (-0.62)	-0.047 (-1.13)	-0.099 (-1.47)	0.16 1.97	17

^aVariables defined as follows: INVR: gross fixed capital formation as per cent of GDP; WMSHD: annual change in world export market shares of sample countries; REXR: annual change in real effective exchange rates (negative in the case of depreciations of the borrowers' currencies); DEFR: government budget deficits as per cent of GDP. All explaining variables calculated as averages of periods t and t-1; t-statistics in parentheses; ** indicates significance at the 5 per cent level; * 10 per cent level; for methodical details, see Nunnenkamp [1989].

Source: Own calculations.

borrowers without involuntary lending). The positive impact of a favourable export performance on net transfers is most pronounced for the regime of involuntary lending. All in all, the evidence suggests that it pays for today's problem borrowers to implement economic adjustment programs.

The overall explanatory power of the estimates in Table 4 remains limited, however. Probably this is at least partly due to the fact that few problem borrowers have embarked on comprehensive and consistent policy reforms. The relationship between domestic policies and net transfers from abroad is likely to become stronger if remaining disincentives for internal adjustment were removed. Both private creditors and creditor governments can and should help to achieve this goal:

- Commercial banks may strengthen the debtors' confidence that promising adjustment programs need not to be cancelled due to financial constraints during the difficult transition period. This may be achieved by establishing a "common fund", financed

by the banking community, which is explicitly devoted to financial support of economic reforms in highly indebted countries. The incentives of borrowers to implement immediate and sweeping reforms would increase if they have to compete for the limited funds available from this fund, and if the most successful among the reform-minded countries were granted preferential access. In this way the internal resistance to adjustment by political interest groups may be weakened; it would become evident that it is mainly in those interest groups' responsibility whether or not the country gains access to foreign capital.

- Apart from clearly defining the institutional framework for international capital transfers, the removal of trade barriers against Third World exports would be the most important contribution of creditor governments. Comprehensive trade liberalization would add to the economic benefits of debtor countries from policy reforms, work against the widespread export pessimism and, hence, undermine the position of interest groups opposing internal adjustment. Under present conditions, however, neither the GATT nor other organizations have effective sanctions at their disposal so that previously announced liberalization programs cannot be enforced. A feasible way out may consist of a commitment of creditor governments to compensate developing countries for refused liberalization by contingent aid payments. Such a commitment is easier to enforce if combined with a change of voting rights for member countries, e.g. in the World Bank. Under a modified rule, the principle of "one country - one vote" would be applied in decisions on contingent aid allocations, provided the GATT notifies that the agreed liberalization schedule has been violated. The maximum of funds to be distributed under this modified rule is given by the estimated welfare losses of recipient countries due to refused liberalization.

Another reason for the limited explanatory power of the estimates presented so far is that sovereign risk variables were not con-

sidered explicitly. Table 5 reveals that the lending behaviour of banks is strongly influenced by sovereign risk arguments. Most notably, net transfers are smaller if the borrower's potential benefits from default increase (proxied by EDTG and DSERG), and higher if potential costs of default in terms of forgone trade are relatively high (proxied by TRADE)¹. Hence it would be crucially important for borrowers seeking for improved creditworthiness to reduce sovereign risks.

Table 5 - The Impact of Sovereign Risk on Net Transfers to Developing Countries from Private Credit Sources^a: Pooled Cross-Country Regression Results, 1983-1986

	Constant term	EDTG	DSERG	TRADE	SHDEX	STDG	SHXDC	R ² F	Degrees of freedom
36 credit constrained and non-constrained countries	-1.79* (-1.84)	-0.052** (-6.71)		0.105** (3.98)	0.029** (2.73)	0.012 (0.31)	-1.34* (-1.89)	0.34 11.20	92
	-0.64 (-0.60)		-0.47** (-6.13)	0.062** (2.64)	0.001 (0.09)	0.062* (1.70)	-0.07 (-0.10)	0.31 9.58	92
14 credit constrained countries with involuntary lending	-1.57 (-0.95)	-0.093** (-6.23)		0.211** (4.23)	0.033** (2.67)	0.059 (0.85)	-2.10* (-1.87)	0.51 9.00	33
	-1.44 (-0.73)		-0.67** (-4.30)	0.174** (2.95)	0.009 (0.64)	0.124 (1.49)	-1.63 (-1.23)	0.32 4.57	33
12 credit constrained countries without involuntary lending	-9.00** (-2.07)	-0.031* (-1.84)		0.088* (2.04)	0.051 (1.63)	0.398* (1.70)	0.86 (0.20)	0.32 4.10	28
	-6.87* (-1.79)		-0.36** (-3.20)	0.081** (2.54)	0.000 (0.01)	0.349* (1.81)	3.81 (1.48)	0.44 6.21	28

^aVariables defined as follows: EDTG: total external debt outstanding as per cent of GNP; DSERG: debt service on long-term debt as per cent of GNP; TRADE: dependency on external trade relations (imports plus exports as per cent of GDP); SHDEX: dependency on trade financing, proxied by short-term debt as per cent of the borrower's exports; STDG: fluctuation in real GDP per capita; SHXDC: importance of borrowing countries as export markets for the creditor nations. All explaining variables, except EDTG, calculated as averages of periods t and $t-1$; t -statistics in parentheses; ** indicates significance at the 5 per cent level; * 10 per cent level; for methodical details, see Nunnenkamp [1989].

Source: Own calculations.

¹ For additional calculations and a detailed interpretation of results, see Nunnenkamp [1989].

While no internationally binding legal system exists by which sovereign risk can be contained, commitments to abstain from willful default are credible only if transfer agreements are self-enforcing. This may be achieved if borrowing countries agree to supplement the traditional credit contracts by third-party contracts. The latter must be enforceable within the domestic legal system of the creditors and enable them to reject demands for debt relief when the borrower is able to service his debt [for an interesting proposal along these lines, see Stüven, 1988].

A less ambitious approach does not require any coordination between borrowers and lenders, nor institutional innovations. The borrowers may attempt to reduce sovereign risks unilaterally by implementing economic policies which limit the potential benefits from willful default, and raise the potential costs of such a behaviour. In view of the above results, outward-oriented development strategies may be most helpful in this respect. Export orientation and import liberalization render the capital-recipient countries more dependent on continued trade relations. Under such conditions the threat of creditors to impose trade sanctions and to cut down trade-related financing is an effective means to reduce the incentives for willful default. Moreover a sound debt management may set limits to the potential benefits from default, e.g. by reducing the extent and volatility of foreign debt accumulation and by avoiding any bunching of debt-service obligations.

IV. Summary

It is widely agreed among economists and politicians that the persistent debt problems of developing countries cannot be solved without some form of debt relief. Even by the US government debt reduction is now considered as an effective means to overcome the negative effects of a debt overhang on economic adjustment in and private lending to highly indebted countries. Moreover it is hardly disputed that international organizations should play an

important role in implementing and financing debt reduction schemes.

The perception of debt relief as a panacea has been challenged in this article. Viewed from a sovereign risk perspective it is highly doubtful that both debtors and creditors would be better off after having agreed to debt relief. Favourable effects on internal adjustment by debtor countries are difficult to enforce and uncertain at best. The resistance of commercial banks to engage in large-scale debt reduction schemes is likely to persist unless private losses are at least partly assumed by the creditor governments and international organizations. The socialization of risks, however, would create new disincentive problems without solving the existing ones. Most notably, private capital outflows from developing countries may increase rather than decrease, since access to capital markets is probably further impaired by debt relief.

Especially for today's major problem borrowers it is impossible to check the capital drain without encouraging private creditors to resume lending. To regain international creditworthiness economic policies should be implemented which enhance the future debt-servicing capacity of borrowers and provide safeguards for the creditors against willful default. Investments in export generating activities are most important in both respects. Outward-oriented industrialization adds to the potential costs of debtors from willful default and, hence, reduces sovereign risks.

Creditor nations should help to weaken the resistance to economic adjustment within highly indebted countries by clearly defining the institutional framework for international capital transfers and dismantling trade barriers against Third World exports. The wait-and-see attitudes of both borrowers and lenders may be overcome once the socialization of risks is unambiguously rejected. A feasible way to enforce comprehensive liberalization programs may consist of a commitment of creditor governments to compensate developing countries for refused liberalization by contingent aid payments, combined with a change in voting rights as far as the allocation of these funds is concerned.

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