DEBT RELIEF IN DEVELOPING COUNTRIES

The HIPC Initiative*

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1. INTRODUCTION

Formally announced in October 1996 as the leading instrument for external debt relief of the poorer and most heavily indebted developing countries, the HIPC Initiative(1) is about to record its first successful case. External debt of Uganda is expected to reach sustainable levels in April 1998, due to the direct and indirect contribution of international financial institutions and several donor countries. Among these we find Portugal, chiefly involved as an important partner and a leading creditor of Portuguese-speaking African countries. Excepting Cape Verde, which presents a reasonably sustainable external debt, all of these countries are indeed potentially eligible to the HIPC Initiative, Mozambique's currently standing as the most advanced process.

This paper starts by placing the Initiative in the context of efforts drawn by the international community towards solving the "debt crisis" which affected developing countries in the early 1980's (section 2). We then follow to outline the HIPC Initiative, designed to meet the needs of those coun-

2. THE BUILDING-UP TO THE "DEBT CRISIS", ITS DEVELOPMENT AND SOLUTIONS

The so-called "external debt crisis" of developing countries is usually considered to have started when Mexico failed to meet its external debt-service obligations, in August 1982. Rapidly spread throughout the developing world, this crisis reached proportions of a widespread systemic threat, changing substantially the way of facing sovereign risk.

Behind this process were ultimately inadequate domestic options — namely imprudent indebtedness strategies and poor macroeconomic management. Such options resulted in weaknesses that became obvious with the adverse developments of the external environment. Indeed, a combination of several significant factors contributed to that outcome: rising international interest rates, in a context of disinflationary efforts pursued by many industrial countries; a deterioration in the terms of trade which affected most developing countries, and in particular exporters of non-oil commodities; an economic slowdown in several industrial

tries that despite the recovery of most leading debtors throughout the 1990's, remain troubled with the debt burden (section 3). Lastly, we discuss the best strategy in dealing with excessive debt problems, illustrating the macroeconomic standing and the implications of alternative strategies (section 4).

^{*} The opinions expressed in the paper represent the views of the authors, not necessarily those of the Banco de Portugal.

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⁽¹⁾ The HIPC Initiative is destined to the Heavily Indebted Poor Countries, comprising 32 countries with levels of GDP per capita lower than USD 695 and NPV of debt over 220 per cent of exports or over 80 per cent of GDP, plus nine other countries receiving concessional treatment by the Paris Club (or eligible to such a treatment).

countries, which affected exports of debtor countries, thus limiting the latter's debt-servicing capacity; and the continuous appreciation of the US dollar — the reference currency in most loan contracts.

The exceptional magnitude of this problem led the international financial community to tailor specific mechanisms to overcome it, developed in a concerted way so as to minimise the possibility of free riding. Following an initial period when private creditors demanded the strict compliance with debt servicing — which resulted in cumulative delays — the crisis was then faced essentially as a liquidity problem, emerging the so-called "short leash approach".

This approach was characterised by the introduction in debtor countries of adjustment programs supported by the IMF and the World Bank, through which these institutions supplied financing subject to certain rules of macroeconomic conditionality. Compliance with such rules, monitored on a regular basis, would be a prior condition for disbursements to take place — phased in time — aiming at re-establishing an equilibrium, which would ultimately build debt-servicing capacity.

As a counterpart, countries would benefit from the so-called "catalytic effect" — i.e., the availability of creditors (notably commercial banks) to accept not only the consolidation of debt service through reschedulings and/or roll-overs, but also their availability to put forward further financing. At first implemented for short periods (comprising debt service within one or two years), these operations soon proved insufficient. As a result, in mid-1984 the multi-year rescheduling agreements (MYRA) were introduced. These instruments allowed for an extension of the consolidation periods (i.e., the time intervals along which debt service falls due) for three to five additional years.

Despite longer consolidation periods, delays continued accumulating substantially, requiring new approaches to the problem. In late 1985, the **Baker Plan** (after the US Treasury Secretary) was introduced, preconizing the enlargement of reforms to be adopted by debtor countries — as to strengthen their growth prospects — alongside a substantial concession of new financing, both private and official. However, the reluctance of pri-

vate creditors to meet these requirements proved crucial in limiting this scheme's viability — since the problem formerly seen as a liquidity one was increasingly being treated as a solvency crisis (as evidenced by the growing discounts required by debt traded in the secondary market).

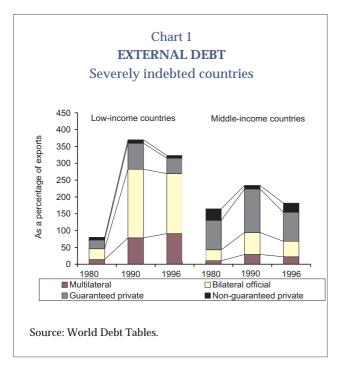
Faced with the absence of serious alternatives, many creditors opted for the development of other less institutional and more market-oriented solutions. Among these, debt buybacks (repurchase agreements with discounts in the secondary market) and debt-equity swaps — frequently associated to privatisation programs in the debtor countries — should be singled out.

The idea that a solvency crisis was at stake became widespread, leading to a new approach to the debt problem. In 1989, the Brady Plan (after the successor of James Baker at the US government) had as its key innovation the possibility of reducing the debt stock (cumulative to other alternatives) in the context of a menu of options submitted to private creditors — a market approach which adjusted to the preferences of the latter. Encompassing several specific instruments, the available options consisted of three major areas: debt service rescheduling, new financing in more favourable conditions, and stock reduction. The latter turned out to be predominant, leading to an average cut of 45 per cent off net present value (NPV).

The Brady Plan culminated a period when the international financial community was mainly concerned with solving the major and more systemic component of the debt crisis — the indebtedness of middle-income countries vis-à-vis commercial banks (85 per cent of developing countries' total debt).

These middle-income countries benefited from macroeconomic reforms and from debt-relief mechanisms made available by the Plan; as a result, in the early 1990's most of them recorded an outstanding recovery, clearly illustrated by their gradual return to the international markets (see non-guaranteed private debt in Chart 1).

However, the debt burden remained excessively high in many other developing countries — particularly the low-income ones from **Sub-Saharan Africa**, which posted a different debt structure (the official component stands frequently



above 80 per cent of the total — see Chart 1). Structurally weaker — featuring narrow production basis, low-skilled human capital, excessive natural growth rates, among others — countries included among this second group ultimately got to see their special situation acknowledged. Hence, as the Brady Plan produced increasingly evident results, a set of instruments specifically tailored to deal with low-income countries' debt got to be developed. Among these, one should single out the Debt Reduction Facility, a World Bank initiative created in 1989 to sustain these countries' private debt repurchase (a significant item of total debt, despite its low share — see Chart 1). Combining World Bank with bilateral grants, this facility reduced in about 85 per cent total private debt in more than one dozen low-income countries, allowing for an 87 per cent discount in average terms.

As regards official debt, low-income countries were granted special support virtually since the beginning of the crisis, through instruments such as the channelling of new concessional loans (both bilateral and multilateral) and the forgiveness of a substantial part of debt due to official development assistance (**ODA**). However, its specificity only gained true visibility in the late 1980's, when a number of **Paris Club** initiatives resulted in progressively higher debt relief ⁽²⁾.

Debt relief was provided on standard terms, periodically reviewed whenever instruments became ineffective as countries' debt situation needed more far-reaching concessions. The first significant progress in this direction took place in June 1987, when repayment and grace periods were extended (the Venice Terms). About one year later, within the framework of the Toronto Terms, creditors for the first time agreed to reduce eligible non-ODA debt service — one of the three rescheduling options made available. The other two consisted of more concessional interest rates and exceptionally longer repayment periods, aiming to reduce by up to a third the NPV of eligible debt service falling due within the consolidation period. However, the Toronto Terms also proved ineffective, since debtors remained insolvent. This resulted in the application of the London Terms (or Enhanced Toronto Terms) in December 1991, whose major innovation consisted of widening the reduction of debt service of eligible non-ODA debt, thenceforth by up to one half of its total NPV.

The persistence of debtors' difficulties in meeting their liabilities (even on the basis of the London Terms) and creditors' willingness to increase the level of concessionality led to the introduction of the Naples Terms in 1994. These extended the reduction of non-ODA debt service up to 67 per cent, in NPV terms. In addition, the Terms foresaw the possibility of expanding this relief, considering total eligible stock, which goes beyond a mere rescheduling of flows falling due throughout the consolidation period (following an idea introduced by the London Terms, at the time with no practical expression). The latter option would be limited by the evidence of a good track record by debtor countries, for a minimum period of three years, as regards the implementation of IMFsupported structural adjustment programs — aiming to provide countries with a means of abandoning, once and for all, the cyclic process of rescheduling.

⁽²⁾ This organisation comprises the leading bilateral official creditors, who join efforts towards a concerted action, channelling assistance to debtor countries willing to adopt adjustment programs supported by the IMF and the World Bank.

THE NAPLES TERMS — KEY ELEMENTS

Scope. Official bilateral debt (credit provided or guaranteed by the State), contracted up to a determined date ("precut-off date debt").

Eligibility. Decided by creditors on a case-by-case basis, considering debtor countries' income and indebtedness levels.

Concessionality. Most countries receive a reduction in non-ODA debt up to 67 per cent in net present value (NPV) terms.

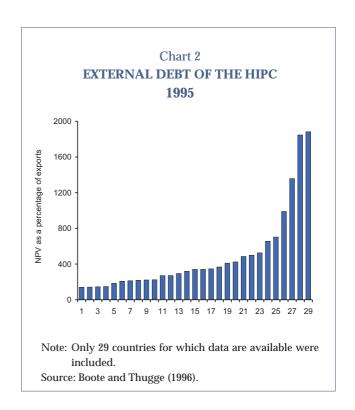
Options. i) debt reduction option through repayment over 23 years with 6 years' grace; i.i.) debt service reduction option through concessional interest rates (with repayment over 33 years); iii) greater grace and repayment periods (20 and 40 years, respectively), but no debt NPV reduction. In case of ODA debt, repayment periods are widened to 40 years, with 16 years' grace, on interest rates at least as concessional as the original ones.

Types of operations. i) flow reschedulings: change of the profile of debt service on eligible debt falling due during the consolidation period (generally in line with the period of the IMF adjustment program); ii) Stock-of-debt operations: for countries with a satisfactory track record with respect to both performance under IMF arrangements and payments under previous rescheduling agreements (the entire eligible stock can be cut off up to 67 per cent of NPV).

3. THE HIPC INITIATIVE

In the early 1990's, the level of debt relief made possible by the mechanisms provided by the international community to debtor countries granted most of the latter with means to overcome satisfactorily their liquidity and solvency constraints. However, to many other countries it became obvious that the size of their debt burden (see chart 2) in relation to their structural weakness hindered an adequate management of debt service, even with full use of all debt relief mechanisms and with sound macroeconomic policies.

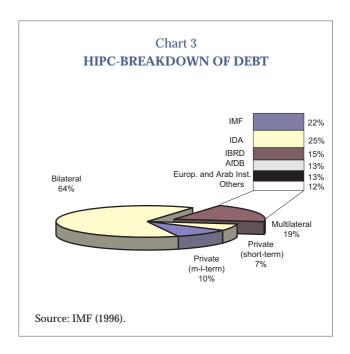
Acknowledging the difficulties experienced by the heavily indebted poor countries, IMF and the World Bank staffs have been developing since 1994 efforts focused on evaluating the level of sustainability of these countries' debts, and proposing alternative strategies whenever the available ones proved insufficient. The concept of **debt sustainability**, central in such analyses, stands for a situation in which debtor countries are able to fully meet their current and future debt service, without resorting to further rescheduling or forgiveness, and without unduly compromising economic growth prospects.



In practice, debt sustainability is assessed through certain key indicators, defining a time horizon (five, ten or more years) within which the main macroeconomic variables are projected, and then confronted with the debt reimbursement profile. Therefore, on the basis of empirical research and on a thorough methodological discussion, debt was considered to be unsustainable whenever:

- i) the net present value of the debt-to-exports ratio stands above a given target value within the range of 200 to 250 per cent⁽³⁾;
- ii) or, even with the previous ratio standing below 200 per cent, the net present value of the debt-to-public receipts ratio stands above the 280 per cent threshold, provided that the exports-to-GDP ratio scores over 40 per cent (thus indicating a relatively open economy) and the public receipts-to-GDP ratio is over 20 per cent (indicating a minimum level of tax imposition).

Following those analyses, built on the referred methodology⁽⁴⁾, these institutions concluded that the existing mechanisms would indeed prove insufficient to ensure debt sustainability in several of the countries considered. As a result, a new mechanism was proposed — the **HIPC Initiative** — which came to be officially endorsed at the IMF and World Bank Annual Meetings in September 1996. This Initiative is based upon six guiding principles: i) ensuring overall debt sustainability in each country, therefore providing a final solution to the problem; ii) debt relief would be envisaged only after the debtor country had shown a good track record implementing macroeconomic adjustment programs; iii) new measures should build, as much as possible, on existing mechanisms; iv) ensure the co-ordinated and equitable participation of all creditors in additional action; v) preserve the financial integrity and the preferred creditor status of multilateral institutions:



vi) new external financing for the countries concerned should take place on concessional terms.

Based upon these principles, the HIPC Initiative was set up (see diagram 1) for countries following **four conditions**: being eligible to financing from the International Development Association and from the Enhanced Structural Adjustment Facility⁽⁵⁾; having adopted a structural adjustment program (if countries had not adhered to any yet) within the two first years after the Initiative's formal approval; establishing a good track record in the implementation of those programs, under the terms of diagram 1; presenting evidence of debt unsustainability, even after totally benefiting from traditional debt relief mechanisms, as assessed according to the analyses conducted by IMF/World Bank staffs, and evaluated by their respective Boards⁽⁶⁾. Although aid provided within the Initiative is crucial to the economic viability of potential beneficiaries (see chart 2), the amounts involved — which correspond to the required debt reduction — do not exceed USD 7.4 billion (at 1996 prices).

⁽³⁾ For each country a specific value would be set (within the referred interval), according to certain vulnerability factors — such as the concentration and volatility of exports, external aid dependence or the amount of reserves, among others.

⁽⁴⁾ Note that an important share of these countries' debt presents concessional features (interest rates below market values), hence the respective nominal value undervalues its importance in comparison to countries' repayment capacity. Therefore, the NPV of debt-to-exports ratio provides a better indicator of effective debt burden.

⁽⁵⁾ These are: the World Bank agency specialised in supplying loans under particularly favourable conditions (International Development Association, IDA) and the financial instrument created by the IMF to meet the specific needs of low-income countries (Enhanced Structural Adjustment Facility, ESAF).

⁽⁶⁾ In the context of these analyses — presented at the Decision Point — specific reference values for the NPV of debt-to-exports ratios to be respected by each country at the Completion Point would also be defined (see Diagram 1).

Diagram 1—HIPC INITIATIVE

First stage (3 years)⁽¹⁾

- *Paris Club bilateral official creditors*: provide flow rescheduling under per current Naples terms (reduction of debt service falling due during the first stage, up to 67 per cent of net present value) and commit themselves to provide a stock reduction up to 67 per cent in NPV terms if this stage is completed with success.
- Other bilateral and commercial creditors: provide at least comparable treatment.
- Multilateral institutions: provide support in the framework of an adjustment program.
- · Debtor country: establishes a good track record implementing the adjustment program.

Decision point

1st CASE

Paris Club stock of debt operation under Naples terms (up to 67 per cent NPV reduction of eligible debt) and comparable treatment by other bilateral and commercial creditors is adequate for the country to reach sustainability by the completion point: country does not require additional support under the HIPC Initiative.

2nd CASE

Paris Club stock-of-debt operation (on Naples terms) not sufficient for the country's overall debt to become sustainable by the completion point: country requests additional support under the HIPC Initiative and World Bank/IMF Boards determine its elegibility.

Very Second Stage (3 years)(1) ⊥

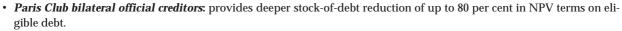
- Paris Club bilateral official creditors: goes beyond Naples terms to provide more concessional debt reduction of up to 80 per cent in NPV terms.
- Other bilateral and commercial creditors: provide at least comparable treatment.
- *Multilateral institutions*: provide enhanced support through interim measures.
- Debtor country: establishes a second track record of good performance under World Bank/IMF - supported programs.

3rd CASE

For borderline cases, when there is doubt about whether sustainability would be achieved by the completion point under a Naples terms stock-of-debt operation, the country would receive further flow reschedulings under Naples terms.

- If the outcome at the completion point is better than or as projected, the country would receive a stock-of-debt operation on Naples terms from Paris Club creditors and comparable treatment from other bilateral and commercial creditors.
- If the outcome at the completion point is worse than projected, the country could receive additional support under the HIPC Initiative, so as to achieve exit from unsustainable debt.





- Other bilateral and commercial creditors: provide at least comparable treatment.
- *Multilateral institutions*: take such additional measures, as may be needed, for the country's debt to be reduced to a sustainable level (multilateral debt relief).

Notes:

(1) The referred deadlines may be shortened on a case-by case basis.

(2) Several alternatives are under discusion, as regards burden sharing among creditors, both for an 80 per cent reduction of NPV, and to go beyond that, when needed to achieve debt sustainability.

One of the particularly innovative aspects of the Initiative is that debtor countries can also benefit, though indirectly, from multilateral debt relief (about one fifth of total debt, see chart 3) through the creation of instruments which will allow for the repayment of multilateral debt service at the Completion Point. The World Bank would provide assistance mainly via the HIPC Trust Fund, supported with the Bank's own funds and the participation of other interested countries; the IMF would provide assistance through "special ESAF operations" — notably grants or concessional loans. Still as regards the latter, resources necessary to sustain its participation in the Initiative are expected to be ensured mainly through bilateral contributions — jointly required for this purpose and to support the ESAF reform⁽⁷⁾.

Since the formal approval of the Initiative in September 1996, several candidates have been analysed on a case-by-case basis — namely countries presenting a strong track record under adjustment programs. In the process, four countries have already been selected. All of them have benefited from substantial reductions in the length of both stages: Uganda (Decision Point in April 1997 and Completion Point in April 1998), Bolivia (September 1997 and September 1998), Burkina Faso (September 1997 and April 2000) and Guyana (December 1997 and December 1998), the latter having been the first country to be considered under the fiscal criteria. Among the remainder cases under most advanced consideration, Mozambique is worth being singled out — this country has displayed a good track record as regards adjustment efforts, but its particularly high relative level of debt has turned out to be a major obstacle. Indeed, Mozambique's debt will still be unsustainable at the projected Completion Point, in case relief granted does not go beyond the 80 per cent threshold. Bilateral and multilateral creditors are currently discussing the possibility of sharing the remaining burden.

4. MACROECONOMIC IMPACT, DEBT OVERHANG AND INCENTIVE MATCHING

The proportions reached by the "debt crisis" in most developing countries in the early 1980's namely its repercussion over the international financial system and the size of its implications over the debtor countries — triggered a boost in the scientific community's interest on the subject, in parallel to political initiatives. In this context, a particularly crucial analysis is that of the impact produced by an excessive amount of external debt on debtor countries' economic performance (i.e., to what extent excessive debt accounts for a weaker pace of growth and a slower introduction of reforms). Among the various ways by which such impact is passed through, four mechanisms are usually singled out (see for instance IMF (1996)): the crowding out of investment by debt service, the limitation of access to international financial markets, additional uncertainty, and the so-called "debt overhang".

As regards the first, the need to meet debt service obligations in a context of scarce resources has a negative impact on the levels of contemporary investment. Indeed, the higher the debt service, the lesser resources are available to current investment financing, with current consumption held constant — a **crowding out effect** identified by Cohen (1993). This factor is particularly significant in the case of the Initiative's potential beneficiaries, given their high needs for investment, due to the size of their structural weaknesses.

A second aspect deals with the consequences resulting from the difficult access to the international financial markets whenever accumulated debt reaches excessive levels — raising doubts about countries' capacity to meet future debt service. Under these circumstances, the international markets would not be willing to provide new financing (other than the rescheduling of existing debt, to a large extent involuntary), a phenomenon

⁽⁷⁾ This reform mainly consists of ensuring the continuity of ESAF in a self-sustaining way (i.e., indefinite operation without resorting to additional financial support), which will be viable from 2004-05 onwards. Since the resources of present ESAF are expected to be exhausted by 1999-2000, continuing its operations during the interim period might be ensured through the creation of an "interim ESAF". As in 1994, when the IMF decided to extend the original ESAF (short of financial resources by then), a call to contribute has been directed to the Portuguese authorities — whom have already indicated their availability (in principle) to meet that request.

usually known as **credit rationing** (Borensztein, 1990). This corresponds to a situation in which real domestic interest rates are higher than international ones, hence constraining foreign direct investment. Unlike the previous situation, this aspect is less binding as regards the heavily indebted poor countries, since most of these probably would still have great difficulty in attracting a significant amount of foreign capital in the shortmedium run, even if the debt problem were not as pressing.

Equally important is the overall increase of un**certainty in the economy**, due to excessive debt which brings about instability, jeopardising an efficient allocation of resources. In addition to the elements of greater or lower uncertainty linked to the type of debt relief strategy adopted (see below), the eventual incapacity to fully meet debt relief obligations may have two direct implications. First, such incapacity provides a factor of uncertainty as regards the amount of domestic resources which will come to be affected to that purpose; second, because this debt is mostly official, doubts may arise concerning the possible resort to higher taxation in order to meet those liabilities — a particularly pressing setting in heavily indebted poor countries.

Finally, the fourth main negative effect of debt in this context, frequently highlighted when the best debt relief strategy is under discussion, is the so-called **debt overhang impact** — indicating a situation in which the debt burden is such that future service is an increasing function of the level of economic activity (i.e., reimbursement expectations increase as growth intensifies). Under such circumstances, debt appears as an implicit tax, working as a mechanism discouraging current investment (and any other initiative oriented to promoting growth). The size of debt and the need for investment faced by heavily indebted poor countries suggest that this is indeed a key factor in such cases.

When a given country's debt burden becomes excessively high, to the point where the possibility of debt repayment in the agreed conditions is at stake, agents involved are left with three options (IMF, 1996): one passive strategy, letting arrears accumulate, and two active strategies — refinancing existing debts (to ensure its service), or reduc-

ing the existing liabilities through debt stock or debt service relief.

Since two types of agents are basically involved in these situations — debtors and creditors — the optimal strategy consists in maximising joint utility, through a set of adequate incentives. As regards creditors (usually supposed to take the initiative), separate consideration of their interests leads to a refinancing strategy, even in the presence of debt overhang — i.e., even if creditors admit that the face value of their credits is higher than the present value of resources which can be allocated to pay future service.

This concept can be illustrated through an example (Krugman, 1988), built on the following assumption: two periods are considered (1 and 2); in the first a debt (D) is inherited, and supposed to be repaid in that same period; the debtor country is willing to meet its debt with its own funds, which amount to a known value (x_1) , complemented with a loan (L, with $L = D - x_1$), to be repaid in period 2; this repayment is to be made transferring own funds which can take one of two possible amounts, depending on whether the economic situation evolves favourably (x_{2G}) or not (x_{2B}) ; probabilities p and (1-p) are associated to these two states, respectively; total reimbursement is only possible in the first case.

L is provided whenever the solvency condition is met:

$$[px_{2G} + (1-p)x_{2B}](1+i)^{-1} > L$$
 (1),

(where *i* stands for the opportunity cost of capital to creditors), which is the case when the present value of expected repayment exceeds the value of the loan. This being the case, the country will be able to meet its financial obligations, therefore being solvent. It should be noted that (1) can also be interpreted as a sufficient condition to the disbursement of the necessary financing, as becomes clear with the following alternative formulation:

$$r > i_L = [px_{2G} + (1-p)x_{2B}]L^{-1} - 1 > i$$
 (1'),

where r is the maximum admissible rate — so that $L(1+r) = x_{2G}$, where creditors receive total transferable resources — and i_L is the rate at which L is contracted, with $i_L = i_L(p)$ and $i_L' > 0$, since L is di-

rectly proportional to the expectations regarding the debtor's future repayment capacity. In particular, $i_L > i$ defines a higher opportunity of investment than market conditions, so any risk-neutral creditor should be willing to supply L, independently of already being a creditor as regards the referred country.

However, (1) is only a sufficient (not a necessary) condition to the availability of financing. If this condition is not fulfilled, the debtor country will not necessarily face a liquidity crisis. Indeed, a default situation would thereby result, which would not be in the **original creditors**' interest — since in this case effective repayment would be lower than potential repayment. Consequently, creditors would continue to be willing to refinance even if the country were not solvent. In fact, one can easily admit that the present value of resources that creditors expect to receive in case of default takes value *Z*, lower than potential repayment, such that:

$$Z < x_1 + [px_{2G} + (1-p)x_{2B}] / (1+i) < D$$
 (2)

Note that this strategy, which is optimal to creditors, may not always determine ex-post losses to the latter, since it allows for the possibility of full reimbursement. In addition, this option only concerns initial creditors, since no other creditor would be willing to participate in such an operation, with debtors being considered insolvent from the start. Finally, initial creditors will only be interested in opting for this solution in the context of a concerted action, since each creditor taken individually would rather not provide new financing, letting others creditors carry the risk burden — this is the **free riding problem** (identified by Cline (1983), among others) which clearly reflects the public good quality of this strategy.

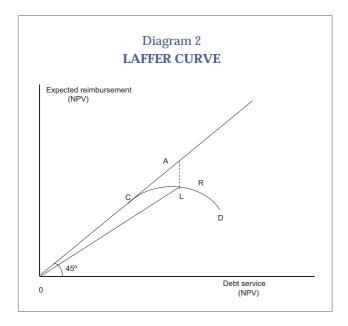
Therefore, even in the presence of a potential loss, initial creditors would always have an incentive to supply new financing, as a way to preserve the value of their loans. Consequently, it seems that the second admissible active strategy (debt reduction) would always be disregarded by creditors, who would prefer refinancing. However, this finding will not hold if incentives to debtors are introduced in the analysis. Indeed, a debtors' potential repayment is not independent of the

amount of debt — it depends on the effort of adjustment the country has to carry out so as to increase its ability to generate resources in the future. If the maximum amount of the latter (which corresponds to an adjustment effort pulled to the maximum supportable limit) stood below the debt burden, a debt overhang situation would arise. Under these circumstances, all benefits would be appropriated by creditors, debtors being left with no incentive to undertake the required adjustment.

Using the same example above described, consider an extreme situation, in which the value of resources potentially transferred in period 2 depends solely on the adjustment effort of debtors (Sachs, 1986). Here, p is no longer exogenous, being an increasing function of the adjustment effort A:p = h(A), with h' > 0. In this setting, the optimal rate for creditors, i_L , will also be an increasing function of $A:i_L = g(A)$, with g' > 0.

However, when the interest rate is determined under these circumstances — where creditors are the residual claimants of the adjustment effort debtors hold no incentive to adopt adjustment measures, for these could reduce their future reimbursement capacity. Consequently, creditors may be willing to accept an interest rate lower than i_{L} . An equilibrium rate i* would therefore be defined — low enough to incentive debtors to adopt optimal adjustment. If we compare expected reimbursement using i^* and i_L , we note that the reduction in the interest rate — corresponding to a reduction in the NPV of debt — leads to an increase in the market value of debt. We finally conclude that the joint consideration of incentives to debtors and creditors may lead to a preference for a strategy of debt reduction, whenever debt is excessive (debt overhang).

This phenomenon can be illustrated by means of a diagram (see Krugman, 1989). Diagram 2 plots a relationship between the NPV of expected debt service (y-axis) and the NPV of liabilities (x-axis). For small levels of debt, debtor countries are expected to fully meet debt service (segment OC). However, as the debt burden increases, the probability of default becomes greater (curve CD). Hence, the slope of any segment like OL (for instance) stands for the shadow price of debt in the secondary market, being AL the respective discount.



Since debt relief attenuates the distortion on investment caused by the implicit tax, the probability of the remaining debt being reimbursed rises. If this effect is strong enough, debt relief will work as a "positive sum game", also benefiting creditors (apart from debtors) — through an increase in expected redemption. This would be a situation in which the debtor country is in the "wrong side" (i.e., in the downward part) of curve CD, since debt relief would not increase expected reimbursement otherwise, and creditors would therefore no longer benefit from it⁽⁸⁾. Curve CD is actually quite similar to the **Laffer Curve** used in public finance: just as a cut in the tax rate can increase tax receipts, so can debt relief increase expected reimbursement.

In addition to the above-described rationale, built on the debt overhang theory, other reasons can justify the preference for a debt reduction strategy — the most relevant consisting of the reduction in uncertainty ⁽⁹⁾. Not only is uncertainty one of the main distortions resulting from excessive debt accumulation, as referred above — it

tends to aggravate when a refinancing strategy is chosen. Indeed, refinancing is commonly provided in a gradual basis, and subject to conditionality, so that payments depend on the adjustment effort, to a great extent a function of exogenous factors.

Finally, a usual criticism towards active strategies against "debt crisis" situations is the possibility of moral hazard. Indeed, debtors may believe that if their situation does not improve, further aid shall be granted — hence debtors will have no incentive to increase their capacity for future reimbursements⁽¹⁰⁾. To minimise this risk, refinancing strategies usually include a conditionality element (i.e., new credit is paid gradually and conditional on a good track record in adopting macroeconomic adjustment programs). This relative drawback of debt reduction strategies may, however, be mitigated if the continuous and successful implementation of these programs is imposed as a pre-condition — as in the case of the HIPC Initiative.

5. CONCLUSION

The contrast between the recovery process undergone by middle-income debtor countries and the difficulties still experienced by low-income countries marked the development of strategies aiming to overcome the "debt crisis". In this context, an assessment of the two relevant options — reduction or refinancing — tended to favour the former, in such cases where debt clearly yields significant adverse effects on economic performance.

It is precisely the measurement of this debt overhang phenomenon what the HIPC Initiative aims to do by means of its debt sustainability analyses. If these indicate that resources available in the future are insufficient to meet debt service, even when the existing relief mechanisms are fully used, the HIPC Initiative prescribes a substantial

⁽⁸⁾ Note that any point over curve CD has implicit a discount in the secondary market, implying that the mere existence of this discount is not sufficient for creditors to benefit from the option of debt reduction.

⁽⁹⁾ A recent IMF paper (Carlson, Husain and Zimmerman (1997)) suggests another innovative justification for debt reduction. The authors sustain that reduction could already be implicit in financing contracts, in the form of a risk premium, to accommodate adverse occurrences out of the control of both parts.

⁽¹⁰⁾ In addition to this type of moral hazard, which is specific to the heavily indebted countries (such as the potential beneficiaries of the Initiative), another type of moral hazard — more frequently discussed and independent of the initial level of debt is worth being mentioned: the incentive to indebtedness resulting from the idea that creditors will be available to provide the necessary aid in case of unfavourable evolution. According to this concept, debt relief mechanisms would tend to increase the probability of forthcoming crisis.

reduction of debt service. However, it should be noted that the eventual success of the Initiative in removing debt as an important obstacle to economic development is not a sufficient condition to attain this end — both the continuation of external capital inflows and the maintenance of adjustment efforts by debtor countries are also required.

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