

INTERNATIONAL FINANCE FOR LESS DEVELOPED COUNTRIES:  
THE UNFULFILLED PROMISE

by

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## INTRODUCTION

For a less-developed country (LDC) international finance is a double-edged sword: it carries tremendous potential for increased economic welfare, but also harbors many dangers. The experience of LDCs in what may become known as the "decade of international debt," from 1973 to 1983, bears this out. On balance, the increased reliance of LDCs on international finance appears to have been beneficial, but there is little question that this financing has fallen far short of its potential and, in some cases, has made borrowing countries worse off.

This paper seeks to provide a perspective on the potential benefits to be derived from international finance and the reasons why it has failed to live up to this potential. Given this perspective, it concludes with a review of various proposals for change in (1) the structure of international finance for LDCs and (2) the behavior of borrowers and lenders within a given structure, in order to judge which of them offer greatest promise.

A theme that runs throughout our analysis is that the failure of international financing for LDCs to fulfill its potential is due not only to bankers lending too much or countries borrowing too much, but also to its structure. An overwhelming proportion of international financing for LDCs is in the form of general obligation credit, and a high proportion of this credit took the form of floating-rate bank loans. From 1974 to 1983, more than 80 percent of non-oil LDCs' net external financing was in the form of credit and two thirds of this amount was in the form of bank loans. While there is nothing wrong with bank credit per se, it entails several characteristics that make it inappropriate for LDCs when it becomes such a large proportion of their external obligations. In particular, general obligation bank loans:

- (1) impose debt servicing requirements that bear a perverse relationship to a borrower's ability to pay as ordered;
- (2) fail to shift risks to a broad "world capital market pool" from particular countries that are unduly exposed,
- (3) do not require that Northern lenders, advisors or trading partners take some responsibility for both the selection and execution of investment programs and projects; and
- (4) concentrate the consequences of potential defaults in a narrow sector of world capital markets.

Overall, what we have seen is too much debt and not enough finance in other forms.

On the positive side, we believe that a number of changes involving little or no incremental transfers could significantly increase the benefits of international finance to LDCs. Further, we note that many of these shifts toward more appropriate finance can and should be incorporated in the ongoing restructuring of the LDCs existing obligations. The changes proposed include a shift in the role of commercial banks, reentry of non-bank financial intermediaries, significant changes in the role of multilateral institutions, including the World Bank and the International Monetary Fund, and an increased role for direct investment and other forms of contractual involvement by non-financial corporations.

This report is organized in five parts. Part I reviews the potential benefits of international finance for developing countries. Part II examines the reasons why existing patterns of external financing for LDCs have failed to fulfill this potential. Part III discusses why this inappropriate structure of financing emerged and why it has persisted despite its

increasingly obvious defects. Part IV outlines changes in the structure of external financing for LDCs that would unlock some of this unfulfilled potential, and Part V provides overall conclusions.

I. THE POTENTIAL BENEFITS OF INTERNATIONAL FINANCE FOR LESS  
DEVELOPED COUNTRIES

The Functions of International Finance

External financing can be valuable to developing countries for several reasons. It can allow them to:

- 1) enhance the potential national income over time by investing in profitable projects that can not be financed with domestic resources,
- 2) accelerate or delay domestic consumption<sup>1</sup> relative to anticipated national income,
- 3) smooth domestic consumption in response to sharp fluctuations in income or required outlays,
- 4) shift risks associated with particular development strategies or economic ventures to foreign investors or governments.<sup>2</sup>
- 5) shift responsibility for the selection or management of investments, and

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<sup>1</sup> Strictly speaking, the reference should be absorption--the combination of consumption and investment.

<sup>2</sup> Formally, these separate goals can be modeled as maximizing the utility of national consumption over time where the utility of consumption at any one point in time depends not only on its absolute level, but also on its level relative to previous and planned levels of consumption. This captures the effects of growing absorptive capacity over time as well as the adjustment of expectations. Since the country is treated as a unit, distributional considerations are ignored. See Sachs and Cooper [1984] for further discussion of the point.

- 6) obtain concessional transfers of resources, in a strict sense a form of aid rather than finance.<sup>3</sup>

1. Enhancing potential income over time. Countries benefit from external financing if it enables them to undertake investments that could not have been financed out of domestic resources alone and whose social return is in excess of the cost of funds obtained. This benefit of external finance is illustrated in Panel A of Figure 1.

The solid line represents the anticipated income path with domestic financing only, the dotted line indicates income attainable with the increased investment made possible by external financing, and the shaded area shows the cost of financing or "debt service." The area between the solid line and the shaded area is the gain in net national income resulting from external financing. The decision rule associated with this goal of enhancing income over time is to borrow abroad up to that point where the marginal cost of finance -- the interest rate if one abstracts from uncertainty -- is just equal to the marginal yield or return expected from the project or program being financed.

Examples of financing to enhance income include the United States in the late 1860s, when on the heels of the Civil war it borrowed substantial amounts from Europe to build the transcontinental railroad, or in this century, Brazil with its massive turn to external sources in the mid-1960s to finance an export-oriented industrial economy. In both these cases, foreign finance followed basic institutional and technological changes that created major new investment opportunities.

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<sup>3</sup> For a recent discussion of finance versus aid, see Leipziger [1984].

Figure 1

Patterns of External Finance

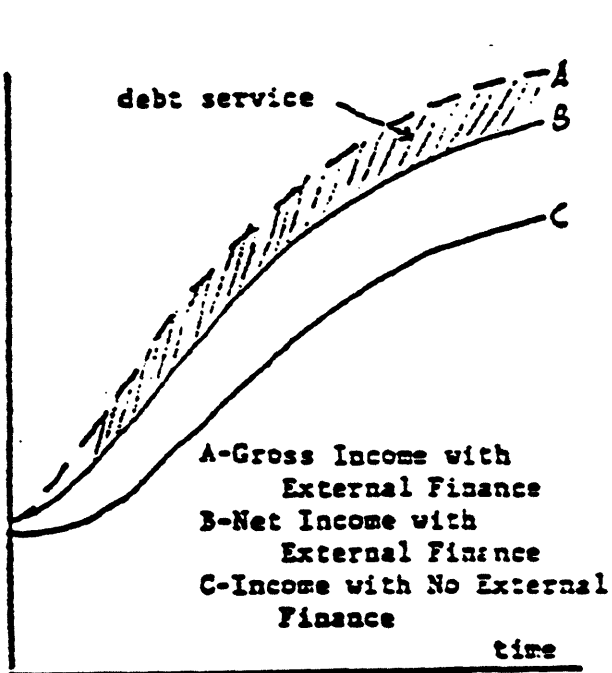


Figure 1A  
External Finance to Enhance Potential Income Over Time

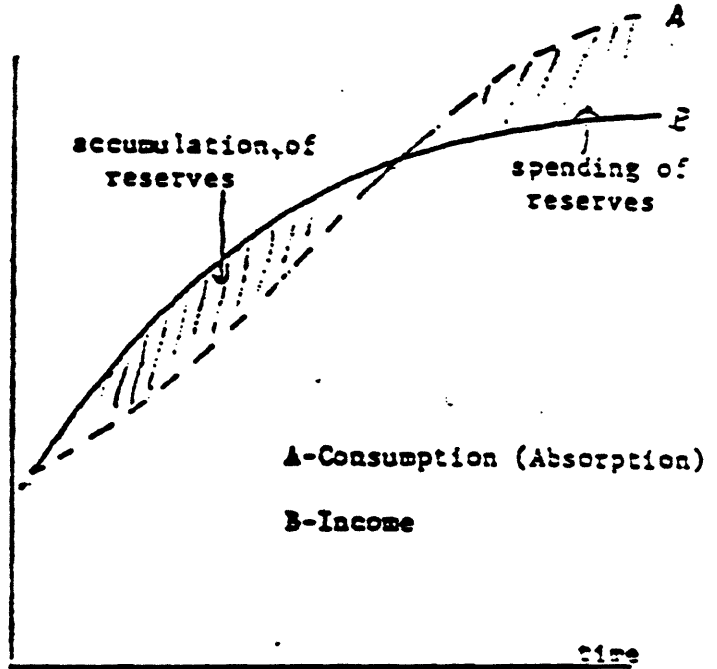


Figure 1B  
External Finance to Postpone Consumption Relative to Pattern of Income

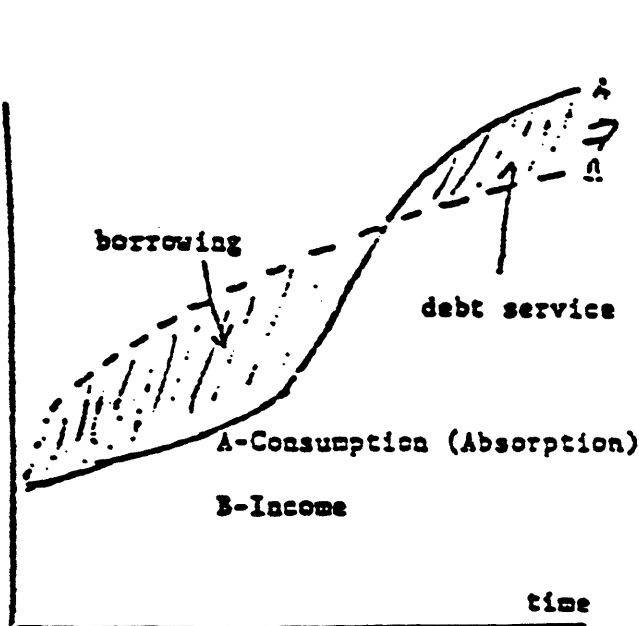


Figure 1C  
External Finance to Accelerate Consumption Relative to Pattern of Income

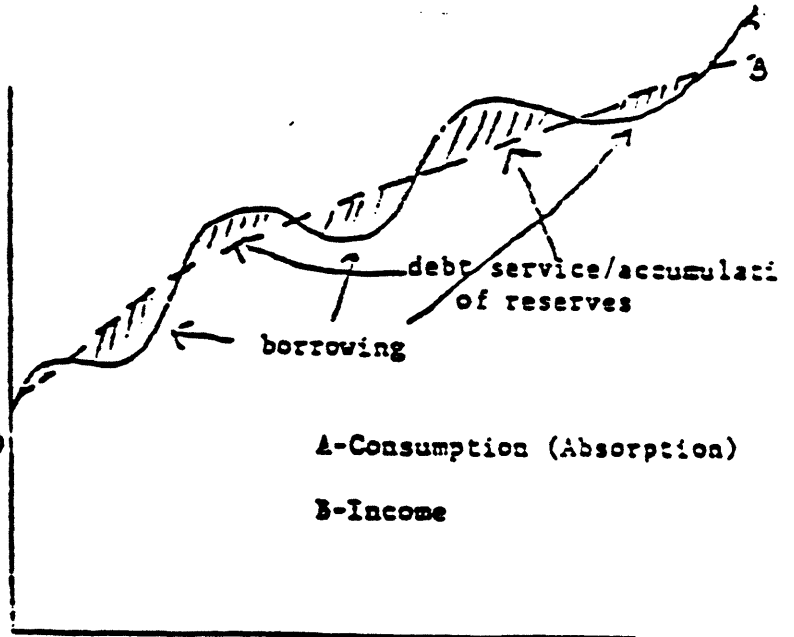


Figure 1D  
External Finance to Smooth Consumption

2. Altering the time path of national consumption. Countries whose current income outstrips their "absorptive capacity" and threatens to disrupt their society, or that face an imminent decline in external revenues as resources are depleted, often delay expenditures by accumulating external financial claims, thus trading reduced present expenditures for increased potential future expenditures. Alternatively, countries that expect high future incomes from proven resource positions often borrow abroad to accelerate expenditures in anticipation of these revenues. In either case, external finance allows a country to uncouple current expenditures from current income and shift expenditures to those years where they are most valuable. This shifting of expenditures is illustrated in Panel B of Figure 1 for a country seeking to delay consumption, and in Panel C for a country spending in anticipation of future revenues.

The decision rule associated with this goal of shifting income over time to enhance the value of national expenditures is to borrow (lend) to that point where the marginal cost (expected return) of external finance is equal to the country's marginal rate of time preference for expenditures.

Examples of the use of external financing are Saudi Arabia and other core OPEC countries that "stored" purchasing power abroad during the early years of their revenue boom. The case of Mexico represents a combination of enhancing income and shifting consumption. With the oil discovery, the country not only had immense new investment opportunities, but also higher immediate consumption demands based on the sense of greater national wealth. Thus it shifted consumption forward in time while it also borrowed to finance investment.

3. Smoothing the path of national expenditures over time. With so-called "balance of payments" financing, LDCs use external financing to maintain

national absorption in the face of shortfalls in export revenues that result from downturns in the world economy, shifts in terms of trade, domestic economic problems, or sudden increases in desired or required expenditures resulting from external or domestic pressures.<sup>4</sup> In contrast to financing taken on to enhance income which might be termed "true development finance," balance of payments financing is often viewed as something to be avoided. True, the need for such finance is often the result of economic mismanagement, but this fact should not obscure the major benefits to be obtained from short-term "de-coupling" of income and expenditures. Panel D in Figure 1 illustrates how balance of payments financing can smooth expenditures over time. The solid line represents national income in the absence of any short-term financing, the dotted line shows "smoothed" income, and the shaded area indicates debt service associated with the short-term financing.

The decision rule associated with short-term finance to smooth expenditure is simple to state but hard to implement: borrow in the short-term to offset temporary declines in net resource flows and use short-term surges in income to repay debt or accumulate reserves. The difficulty lies in distinguishing short-term shocks from basic shifts in a country's economic circumstances.<sup>5</sup>

Most oil-importing countries engaged in such balance of payments financing in the wake of the first and second oil shocks. The International Monetary Fund's Compensatory Financing Facility and the European Community's Stabex

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<sup>4</sup> Short-term borrowing is a substitute for drawing down national reserves. Therefore, reserves and "borrowing capacity" serve similar functions.

<sup>5</sup> In practice, it is very difficult to distinguish between short-term fluctuations in income and long-term declines in wealth. Thus, borrowing to deal with what is thought to be a temporary shortfall might result in an acceleration of consumption in face of declining future income prospects!



facility are examples of institutionalized mechanisms that seek to distinguish between export shocks and mismanagement and hence reduce some of the dangers inherent in this type of finance.

4. Shifting risks to external investors. Another way to smooth expenditure flows in the face of uncertain, fluctuating revenue streams is to exchange claims against the risky revenue stream from a country's endowment for claims promising a more stable and, in most cases, smaller revenue stream.<sup>6</sup> Financial mechanisms that perform this function include futures, contracts, equity interests in specific ventures, and bonds or other contracts indexed to variables whose future value is uncertain.

When there are uncertainties regarding either future returns or financing costs, financing decisions must take into account not only the (expected) marginal cost of financing and the (expected) marginal return of the investment in question, but also the impact of the resulting allocation of risk on the country's well-being. Two principles are at work in this case. The first is related to the relative willingness of the borrower or lender to accommodate risk, the second to the relative ability of one party or the other to average out or modify the risks.

In general, both the borrowing country and the lender prefer to avoid risks. As a result, the borrower would be willing to pay a premium, i.e. a

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<sup>6</sup> The reason why a developing country should expect to have to accept a stable income stream that is smaller than the expected level of its initial risky stream is that investors in world capital markets are risk averse and demand a premium to take on the risk. The reason why shifting risk to foreign investors can make the country better off is that the premium demanded may be less than the implicit premium the country should apply to reflect its own risk aversion. The "outside" risk premium is likely to be less than the "inside" risk premium whenever outsiders have greater scope for reducing the risk in question through diversification than the country in question.

higher expected cost, to shift the risk to the lender, whereas the lender would demand a premium for taking on the risk. To the extent that the lender, either because of a greater ability to diversify a specific risk or a greater tolerance for bearing risk, demands a smaller premium than the maximum the borrower is willing to pay, it will have a comparative advantage in bearing the risk in question and both parties will be better off by transferring risk.

The resulting decision rule is for a country to shift risk via financial mechanisms up to the point where the marginal risk premium demanded by external investors or financial institutions is just equal to the cost (in real resources) of reducing these risks by adopting alternative development strategies, or to the premium that the country is willing to pay to eliminate these uncertainties.<sup>7</sup>

5. Shifting responsibility for the selection or execution of programs or projects. When a country's obligations are linked to the outcomes of specific projects or undertakings, as opposed to being backed by its general credit, foreign lenders or investors obtain a stake in the success of the project, or enterprise program in question. This linkage may lead to improved performance and reduced risk when lenders or investors have some control over variables crucial to a project's success. For example, if part or all of a project-specific obligation is tied to the performance of the project being financed, the vendor will have a greater interest in seeing that the project design is appropriate and its management is satisfactory. Similarly, if global obligations of a specific borrowing country are linked to that country's volume of manufactured exports, lenders will have an interest in

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<sup>7</sup> A rigorous statement of this decision rule requires an explicit specification of the national utility function with respect to the expected level and uncertainty of anticipated future income.

seeing that exports are not hampered by protectionism in industrialized countries. The other side of the coin, of course, is that as the investor's stake in a particular project or program grows, the lender will demand greater control. Equity investment, whether of a direct or portfolio nature, represents the extreme case of shifting risk, and consequently responsibility in the degree of control required by the investor.

Debt involving repayment obligations that are fixed regardless of specific investment outcomes, even if nominally linked to a specific project or enterprise, is unlikely to fulfill this function since it will probably be viewed as a general obligation of the borrowing country. Only where the project is financed on a stand-alone basis, with no possibility of a governmental bail-out, will so-called "project financing" provide this link.

6. Obtaining concessional resource transfers. Most financial transactions involve the exchange of current real resources for claims (often uncertain, and sometimes explicitly contingent on future events) against future income. However, financing involves concessional transfers of resources whenever current resources are transferred without a (full) corresponding transfer of financial claims. The decision rule with concessional finance is to obtain as much as possible since it directly increases the LDCs' potential level of expenditures without creating offsetting claims against future income. While concessional finance has declined as a proportion of total financing of LDCs over the last decade, many countries appear to have continued to view external finance as something that should be utilized to the fullest extent possible, rather than something in which the current benefits must be carefully traded-off against the resulting future costs.

Interactions with Past Financing Actions.

At any point in time, a country's financing requirements and options are determined to a large extent by repayment obligations resulting from past financing choices. In deciding on external financing to enhance income or to shift or smooth the pattern of expenditures, these claims against current income must be taken into account. A country may have sufficient gross income to finance all attractive development projects, but repayment obligations may bring net income below the required level. Thus in order to maintain the desired investment pattern it will have to "roll over" the existing financing. Similarly, a country's increasing gross current income may be sufficient to cover the desired current level of consumption, but repayment obligations may bring net income below the desired level making roll over desirable. Finally, the existence of fixed external obligations will exacerbate the impact of sudden revenue shortfalls since the absolute decrease will represent a larger proportionate decrease of net revenues than of gross revenues.

The flexibility of the timing of repayments will thus be a major factor in determining a country's gross external financing requirements. This will be true whether the flexibility takes the form of allowing deferral of repayments as a function of some set of external events, or actually changing the amount due, as is the case with contingent, risk-shifting financial contracts.

The Correspondence of Financing Instruments and Financing Functions.

Each of the six functions of external financing described above are associated with specific forms of financing: debt financing, risk capital financing and grant or subsidy financing. Debt financing involves claims with (substantially) fixed repayment requirements. It can transfer resources over

time to enhance income and to shift or smooth consumption. Risk capital financing involves claims whose repayment is contingent on specified future outcomes. It shifts risks, and under some circumstances, responsibility. Subsidy financing involves unrequited transfers of resources in the form of grants, subsidies, guarantees, or concessional interest rates.

Table 1 illustrates the correspondence of each of these functions of finance with a more detailed breakdown of different types of finance.

#### The Changing Structure of LDC Finance

Although the external financing of LDCs involves a variety of instruments and institutions, debt finance plays an increasingly role. Further, an increasing fraction of debt finance is in the form of loans from private creditors, primarily commercial banks. Virtually all such debt carries floating interest rates and, until the most recent reshedulings, was largely denominated in dollars.

From 1974 to 1983, debt from private sources accounted for nearly 50 percent and total debt for over 80 percent of net external LDC financing, excluding the build up in official reserves and LDC private holdings reflected in errors and omissions.<sup>8</sup>

## II. SHORTCOMINGS OF EXISTING PATTERNS OF INTERNATIONAL FINANCE

### What Constitutes Good International Finance?

The answer to the question of whether debt financing, which has come to dominate the external financing of LDCs is a complicated one. It depends on the extent to which it enables borrowers to exploit investment opportunities,

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<sup>8</sup> International Monetary Fund [1985].

Table 1

Financial Mechanisms: A Three Dimensional Typology

Mechanism	Extent to Which Transfers Resources Over Time			Extent to Which Shifts Risks			Extent to Which Involves Concessions Resource Transfer		
	Not at all	Short Term	Long Term	Little	Moderately	To large extent	Little	Moderately	To large extent
Commercial Bank Loan		X		X			X		
Long Term Bond			X	X			X		
World Bank Loan			X	X				X	
IDA Term Loan			X		X				X
IMF Compensatory Finance		X			X				X
Commodity Futures Contract	X					X	X		
Commodity Price Linked Bond			X			X	X		
Equity Investment			X			X	X		

smooth income, shift risks, and shift responsibility on terms that are mutually advantageous to borrowers and lenders.

Lenders, of course, would like to see no repayments crises. However, the absence of such crises does not imply that the level or structure of financing has been appropriate. It may merely reflect good luck, an overly conservative use of external financing by borrowers, or such high penalties in the case of default that borrowers are forced to make overwhelmingly costly internal adjustments.

Borrowers, in contrast, would like to see financing that supports uninterrupted growth. However, when the fundamental circumstances of a country change for the worse, there is no economic way to maintain consumption at previous levels, and financing should not be expected to bridge the entire gap.

Even, the fact that repayments crises result in deadweight costs, costs borne by the borrower which are not offset by equivalent gains to the lender, is not necessarily a bad thing. In the absence of an international legal system with enforcement powers, no international financing would be possible without the existence of penalties in the case of default which, by definition, are deadweight losses.

A general test of the efficiency of international financing for LDCs is impossible since it would require knowing what would have taken place in its absence. However, it is possible to examine various dimensions of existing financing to see if it performs the services that it should. For example, do net financing flows adjust positively or negatively in line with the borrowing country's income and, hence, shift risks in a mutually beneficial way? Could alternative structures of finance allow borrowers to adjust to adverse developments in world capital markets or LDC economies with smaller deadweight costs?

There are four key reasons why the existing structure dominated by debt financing is less than ideal, even if inappropriate behavior by borrowers and lenders are ignored. Further, under existing institutional arrangements, such financing creates incentives for inappropriate choices on the part of both borrowers and lenders and may entail serious distributional consequences within borrowing or lending countries.

In this section, we discuss the reasons why debt finance cannot be expected to perform many of the functions desired of international finance for LDCs. In section III we discuss some of the reasons why debt financing may create incentives for inappropriate behavior by lenders and borrowers.

Structural Shortcomings of Loan Financing.

As noted in the the introduction, there are four key structural shortcomings of debt financing. Debt financing

- 1) entails variations in debt service requirements that only accidentally correspond to changes in borrowers' ability to service debt;
- 2) requires repayment regardless of the performance of borrowers' macroeconomies, programs, or projects, and hence, shifts risk only through default;
- 3) provides no stakeholdings in outcomes of borrowers' macroeconomies or specific projects or programs and, hence, does not shift any responsibility for program or project selection or management to suppliers of capital; and
- 4) concentrates the impact of default losses on a narrow segment of the world financial market, creating potential for system-wide impacts far out of proportion with the magnitude of the default.



We discuss each of these points below.

1. Debt service mismatch. Most LDCs experience fluctuations in revenues due to world economic cycles, shifts in the terms of trade, and domestic political and economic events. International finance provides a basis for smoothing national consumption over time through borrowing in periods of low income and replenishing reserves or repaying debt in periods of high income. However, if a country already has substantial external obligations, debt service requirements will magnify the volatility of national income available for consumption and force an even greater reliance on international finance in order to obtain the same smoothing over time. This effect of outstanding debt will be exacerbated to the extent that debt service requirements themselves vary perversely with national incomes, as appears to be the case at the present time.

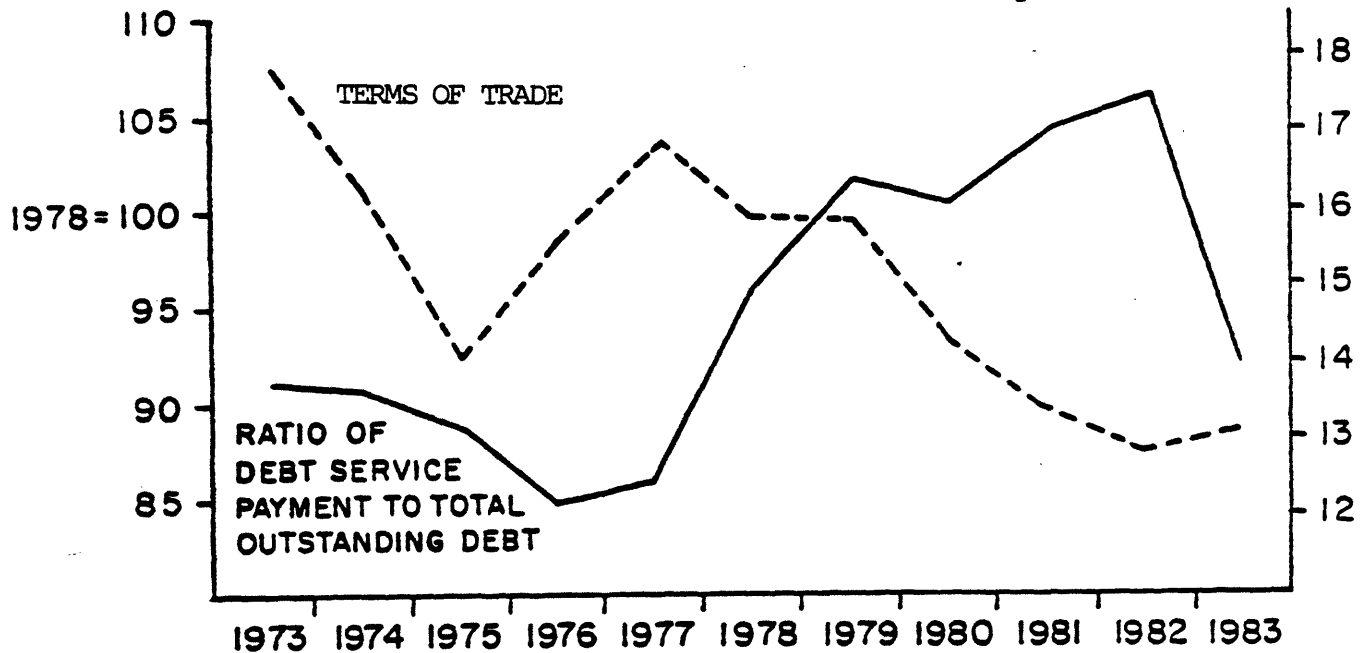
Most private international lending is at floating rates, and total debt service in any period consists of interest at the current short-term market rate (LIBOR) and the scheduled reduction in principal. As is well known, inflation tilts real debt service on any loan with a fixed nominal repayment schedule toward the present.<sup>9</sup> In other words, whenever nominal interest rates rise to reflect anticipated inflation, the effective maturity of an outstanding loan is decreased and the required repayments are accelerated. Changes in real interest rates, of course also change debt service requirements.

In recent years, increases in interest rates have tended to coincide with decreases in the incomes of LDCs. Thus these countries have faced the highest

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<sup>9</sup> See, for example, Lessard and Wellons [1979], Kincaid [1981], and Goodman [1982].

debt service requirements precisely when they were least able to pay. In the current world recession, for example, real interest rates are at an all time high and nominal interest rates, which affect the time pattern of debt service requirements, remain at high levels. At the same time, export prices and volumes are dismal for most LDCs. This is clear from Figure 2 below.<sup>10</sup>



Terms of Trade Versus Debt Service  
Figure 2

Sources: IMF, World Economic Outlook, 1983. Terms of Trade exclude data for People's Republic of China prior to 1978. Debt ratio excludes data for People's Republic of China prior to 1977.

<sup>10</sup> From 1973 to 1983, for example, the correlation between the aggregate terms of trade for LDCs and debt service as a proportion of outstanding debt was  $-.61$ . (Debt service per dollar was calculated as LIBOR plus 0.14 on the assumption of seven year average maturity.) This correlation, based on eleven annual observations, is nearly significant at the 10 percent level. Major components of these two series, the relative price of primary commodities and LIBOR, are available with greater frequency. (The relative price of primary commodities is obtained by deflating the IMF index of dollar prices of primary commodities by the U.S. GNP deflator lagged by one period to reflect survey delays in the latter measure). The contemporaneous correlation over the same period is  $-0.42$ , significant at the .01 level, while the correlation of terms of trade with LIBOR with LIBOR lagged six months, which adjusts for the fact that interest payments are made in arrears, is  $-.53$ , also significant at the .01 level.

See IMF [1985] for further analyses along these lines.

In a world with perfect information and complete enforceability, the part of the perverse variation in debt service due to fluctuations in inflation would not be a problem. Claims would be rolled over unless the present value of a borrowing country's future net exports fell short of the present value of outstanding claims. In other words, illiquidity would never be an issue and the only risk would be that of insolvency. However, given limited information and enforceability, rolling over is not a sure thing, and the arbitrary shortening of maturities via increases in LIBOR, as well as the shortening of available maturities, can create problems for borrowers as well as for the system as a whole.

2. Limited risk sharing. Most commercial bank loans to LDCs (and all World Bank loans) involve explicit or implicit government guarantees. Thus, while the funds may be earmarked for a specific project or program, their repayment is not contingent on that project's outcome, and the risk of success or failure of the specific project or program is borne by the guarantor.

This nonspecific nature of bank credit has two effects. First, it trivializes the role of private banks and public institutions in project evaluation or oversight of national economic strategies. Since all claims are general obligations of the sovereign, a loan to a good project is no better than a loan used to acquire arms or maintain consumption in the face of a reversal in the terms of trade. This also has important behavioral implications, as we shall see in the following section. Second, and probably much more important, it means that within the present system risks inherent in projects or strategies are shifted only through nonperformance at the country level. This is a costly and inefficient mechanism, resulting in limited risk spreading. In fact, repeated assertions of bankers that few, if any, defaults

are imminent are clear evidence that the system provides little risk shifting, especially given the radical fluctuations in trade and other project and strategy-specific risks incurred by LDCs.

Ironically, much of the academic literature on external finance for LDCs stresses the strategic nature of risks of nonperformance, but downplays the issue of the extent to which the system succeeds in "passing through" exogenous risks faced by borrowers to investors with a comparative advantage in bearing such risks.<sup>11</sup> Thus, the reduction of risk in the system is seen largely as a search for mechanisms to enhance the enforceability of claims. Given the nonspecific nature of bank loans, this would effectively preclude the shifting of any exogenous risks.

Most credit to LDCs, whether provided by commercial banks, development banks including the World Bank, or export finance agencies of industrialized countries, require the explicit or implicit guarantee of the national government or central bank of the borrowing country.<sup>12</sup> As a result, the soundness of the loan depends primarily on the borrowing country's overall creditworthiness and not on the economics of any specific undertaking, or on the solidity of the project's private backers.

There is little true LDC project finance where lenders have recourse only to the cash flows of the project in question. World Bank project loans, for example, are all guaranteed by the national government. Although disbursement of funds may be tied to a particular undertaking, repayment of funds is a

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<sup>11</sup> See, for example, Eaton and Gersowitz [1981a, 1981b].

<sup>12</sup> Even in the case of loans to specific corporations or banks, government guarantees are often demanded. Even when these are not obtained, the national government is often forced to assume responsibility for the obligation in case of nonperformance by the borrower as was the case with Chile.

general obligation. The same is true of most commercial bank loans which, although possibly disbursed for specific projects, are, in fact, general obligations of the borrowing country.

Not only do most loans to LDCs involve general obligations of the borrowing countries, as noted in the previous section they also represent obligations that do not vary with the performance of the borrower's macroeconomy or its ability to service external debt. In essence, the bank contract says: "You will pay interest (at current market rate) plus 1/n of principal per year, regardless of your situation." It is true that through refinancings and reschedulings such debt repayment obligations are modified to reflect a country's situation, but such flexibility after the fact is not a very good substitute for flexibility before the fact since reschedulings are power plays that almost invariably result in deadweight costs.

3. Limited shifting of responsibility. In addition to not shifting specific risks from borrowing countries to lenders, this general obligation, noncontingent character of loans to LDCs implies that specific lenders have little or no stake in the success or failure of specific undertakings since their recovery of the amount lent depends only on borrowers' overall payment performance which, in turn, depends both on their overall ability to pay and the penalties they face if they do not.

Thus, the bank that lends money used to purchase armaments is in the same position as the bank that funds an industrial project with an economic return of 30 percent! Similarly, the bank and firm that engineer, construct, and finance a pipeline through credit stand to gain the same amount whether or not the ultimate petroleum discoveries are sufficient to justify constructing the pipeline.

This is in sharp contrast to contingent finance -- direct equity investment or quasi-equity investment such as production shares or incentive contracts -- where success of the project is critical to the recovery of funds by the financier. Clearly, in such cases, the financier will have strong interest in assuring that the project or program being financed is well conceived and executed. Further, to the extent that industrial country interests control outcomes critical to a program or project's success, forcing them to accept a stake will cause them to influence outcomes in ways that are favorable to the project.

The recent world-scale investments of automakers to manufacture components operations of automakers in LDCs are a clear example of this. One of the key risks facing such operations is increased protection of Northern markets in the form of tighter local value-added requirements. Given that firms will recover their investments in LDCs only if markets remain open for these products, they will lobby with their home governments to assure such continued access. If, in contrast, such plants had been constructed by LDC governments with bank financing, no one with political power in the industrialized countries would have the same interest, and the degree of protection probably would be higher.

The same goes for natural resource projects. If U.S. producers still maintained major equity or quasi-equity stakes in, say, Chilean copper mines, the array of lobbying pressures in the recent attempt by U.S. producers to limit access of foreign producers would have been shifted further in favor of imports.

4. Concentration of default impact. The fact that claims against LDCs are concentrated in commercial banks may lead to a magnification of the impact of nonperformance on the system, and on the continued availability of finance for

LDCs. While the aggregate volume of LDC claims is a small fraction of total world financial claims, it is large relative to the capitalization of the key banks. As of 1983, for example, loans to six developing countries accounted for more than 180 percent of the shareholders' equity of the nine major money-center banks in the United States.<sup>13</sup> However, for the same period they accounted for a much smaller fraction of the capitalizations of major regional banks, 47 percent, and by implication, for the rest of the U.S. banking system. In any case, LDC loans clearly loom large relative to the risk capital of the banks making those loans.

When LDC debt is viewed relative to the total value of financial claims outstanding in the world economy, though, they do not loom nearly as large. As of 1980, for example, the total market value of traded stocks and bonds in major markets was \$5,290 billion.<sup>14</sup> If bank loans, currency, and marketable real estate holdings were included, the total would easily exceed \$10,000 billion, placing total LDC obligations at well under ten percent. While this percentage is by no means trivial, it does suggest that the world financial system could absorb the loss of a significant proportion of claims on LDCs if the effects of such a loss were spread throughout the system.

In order to consider the impact of a major LDC default on the world financial system, it is useful to compare its potential magnitude with financial losses experienced in recent years. While a default of, say, \$250 billion is a very large amount, in aggregate it is small compared with the

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<sup>13</sup> The countries are Argentina, Brazil, Chile, Mexico, Venezuela, and Phillipines as reported by Bergsten, Cline, and Williamson [1984].

<sup>14</sup> Ibbotsen, Carr, and Robinson [1982].

total value of financial claims outstanding in and among market economies. Another comparison is with the observed variations in stock market values. In the U.S., during 1973 and 1974, share values fell by almost 40%, or roughly \$600 billion, yet the system did not collapse.<sup>15</sup>

A major default could force banks to limit additional credit or even to cease rolling over existing credits. Further, the exposure of banks to such events brings lender country authorities with their varying political agendas into debt renegotiations, perhaps further distorting the incentives facing private lenders.

### III. WHY HAS THIS INAPPROPRIATE PATTERN DEVELOPED AND WHY DOES IT PERSIST?

Thus far we have argued that the existing, debt-dominated structure of international finance for LDCs is inappropriate on several counts. A basic question that arises, then, is why this structure emerged and why it persists. If it is so inappropriate, why haven't financial markets and institutions produced innovations to overcome the limitations we have outlined?

While the reasons for the emergence of general obligation, floating-rate bank debt as the dominant form of international finance for LDCs are myriad, five stand out. These are:

1. evolution in financial institutions and instruments in developed countries,

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<sup>15</sup> Even if the banking authorities of industrialized countries were to intervene quickly in order to avert any run on banks that might result from such a default, the distributional impact of a \$250 billion default on LDC debt would be quite different from that of a \$250 billion drop in equity values. The former would be covered primarily with an initial monetary expansion (a tax on money-fixed holdings) and a later requirement for higher general tax revenues, while the latter would involve a loss in savings for retirement, etc. which probably would have a smaller impact on output in industrialized countries. Further, there is no guarantee that banking authorities would, in fact, intervene to avoid a collapse of any element of the system.



- 2 borrower and lender myopia,
- 3 the assertion of sovereignty by borrowers in reaction to previous intrusive financing modes,
- 4 the relative enforceability of bank debt in the presence of sovereign risk and,
- 5 the role of the IMF and other multinational institutions in enforcing debt claims.

Each of these is discussed below.

#### Evolution of Financial Institutions and Instruments in Developed Countries

Over the period of greatest growth in LDC indebtedness, financial patterns within and among industrialized countries were experiencing major changes. Increased interest rate volatility led to a decoupling of the term of lending and the term for which interest rates were fixed. Floating rate credit under long-term credit lines or rollover agreements became the rule rather than the exception and in some countries, most notably the United Kingdom, fixed-rate instruments virtually disappeared.

This decoupling of interest rate and maturity allowed commercial banks to play a much more aggressive role in long-term finance, a fact that was further enhanced by the growth of offshore money-markets dominated by banks and the surge in funds placed with these institutions both on and offshore in the wake of OPEC's revenue windfall.

LDCs, in general, simply rode along with these changes. In the substantial list of financial innovations over the last decade, there are none that were motivated by the special needs of LDCs.<sup>16</sup> There are two reasons

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<sup>16</sup> For a discussion of recent financial innovations, see Dufey and Giddy [1981].

for this. First, LDCs remain small factors in the world financial markets. Total LDC obligations represent less than 10 percent of total outstanding financial obligations and closer to five percent if commercial real estate is included in the financial portfolio. Second, most financial institutions are inherently conservative and, as a result, will tend to introduce innovations in dealings with the most creditworthy borrowers, which LDCs have not been for some time.

However, changes in the structure of LDC obligations cannot be attributed entirely to a passive following of market developments. LDCs did shift much more to floating rate bank loans to a greater extent than private firms in industrialized countries, although not more than public borrowers in these countries. The comparison with private borrowers appears to be the more relevant one. Although LDC borrowing has largely been undertaken by governments or guaranteed by them, much of it has gone to finance parastatal enterprises<sup>17</sup> and for much of the remainder the government simply acts as a conduit to private firms or banks. This is in sharp contrast to European municipal governments, for example, whose offshore borrowing is largely to finance traditional infrastructure investments.

A comparison of LDC financing with that of private firms in industrialized countries shows that it involves a much higher proportion of debt financing. Firms in the United States have generally increased their reliance on debt finance over the last two decades, reaching a peak of 45 percent in the mid 1970's.<sup>18</sup> European firms made more use of debt, but again appeared to reach peak levels in the mid 1970s.

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<sup>17</sup> See Gillis, Jenkins, and Lessard [1982] for a discussion of the role of public enterprise finance in the total foreign borrowing of LDCs.

<sup>18</sup> Taggart [1983].

Borrower and Lender Myopia

Inappropriate Borrower Behavior. A major problem with debt financing is that when there is uncertainty regarding future returns from the investments being financed, its explicit cost relative to expected project returns is likely to overstate the desirability of borrowing in order to invest and, as a result, countries are likely to overborrow. Diaz Alejandro, for example, [1982] notes that given the real interest rates prevailing in the 1970's, "the price of either extravagance or sensible capital formation was low."

When trading off increased investment against future debt service obligations, countries should take into account the fact that investment returns will vary, but that debt will have to be serviced regardless of future income levels. Technically, this can be done by discounting the certainty equivalent of future benefits at the real interest rate on foreign borrowing. This certainty equivalent, though, will be strictly less than the expected value if swings in returns from the new investment contribute to the variance of national income. While real interest rates might have been low in the 1970s, the certainty equivalents of future project returns, especially for investments representing a "deepening" of exposure to a set of key risky variables affecting national income (e.g. OECD income-dependent manufactures for Brazil, oil for Mexico), should have been significantly lower than their expected values to reflect their national "systematic" risk. At the same time, the certainty equivalent of debt with LIBOR-linked payments would have exceeded that of riskless real debt since debt service on such obligations covary negatively with the export revenues of many LDC borrowers.

This potential borrower myopia will be reinforced if political leaders responsible for borrowing choices have relatively short time horizons. The

"time bomb" nature of bank credit, where the potential for a mismatch of incremental obligations with incremental earnings is substantial but largely unpredictable, makes it particularly inappropriate in political settings where decisionmakers cannot or do not take a long view.

A further problem that arises due to the general obligation nature of bank claims is that, within a decentralized system, borrowing units typically view only the explicit costs of funds while society at large bears the contingent future costs by providing an explicit or implicit guarantee. This is particularly serious in LDCs with large public enterprises which have been granted substantial autonomy, ostensibly in order to increase the quality of economic decision making by establishing clear responsibilities. This has been a major factor in the borrowing behavior of almost all countries facing debt servicing difficulties.<sup>19</sup>

Inappropriate Lender Behavior. Bankers have been accused of doing little analysis, but rather of following the pack and, as a result, lending too much to countries currently in favor and, too little to those out of favor. Whether this is true or not, there are at least two structural factors that predispose individual banks to behave this way, even if they are rational in microeconomic terms. Further, there are aspects of a bank's internal organization and reward structure that induce rational individuals to engage in behaviors which are not rational for the bank.

A perfectly rational bank may recognize that analysis will do it very little good and it pays to "lend with the pack" since 1) its risk of lending

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<sup>19</sup> See Gillis, Jenkins and Lessard [1982] and Baldwin, Lessard, and Mason [1983] for a discussion of inappropriate behaviors when central governments grant implicit guarantees to individual decision making units. Sachs and Cooper [1984] provide further reasons why the explicit cost of foreign borrowing to private borrowers will understate its cost to society.

to a particular country bears little or no relation to the quality of the projects it finances and 2) its risk depends in large part on the behavior of lenders of last resort, including its own central bank and the International Monetary Fund. In fact, its behavior will be very similar to that of the manager of PEMEX, Pertamina, or any other major "autonomous" public borrower who is entitled to write his own guarantee -- in this case a put option to the lender of last resort on the loan .

Within banks, loan officers may have fairly short horizons and may be biased to overlend to risky cases if they generate substantial fee income. The fact that there is no secondary market for most loans, and that loans are not marked to market even when there is such a market, postpones the day of reckoning and increases the likelihood of such behavior.<sup>20</sup>

#### Assertion of Economic Sovereignty by LDCs

The increased availability of general obligation debt finance allowed LDCs much greater control over externally-financed activities than hitherto had been the case. Direct foreign investment, the major alternative form of external finance available to LDCs, involves the intrusion into the local economy and political system of foreign economic actors. In many cases these intrusions either were or were viewed as a continuation of colonial or imperial patterns of foreign control with its perceived unfair distribution of economic gains.

The other major source of finance was bilateral government aid or loans from the World Bank or regional development banks. The former typically carried its own economic and political strings, while the latter typically was

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<sup>20</sup> See Herring and Guttentag [1984] for a much more extensive discussion of these issues.

restricted to projects favored by the institutions in question. Bank financing allowed LDC governments much greater leeway and in many cases made possible the financing of large parastatal organizations.

#### Sovereign Risk and the Relative Enforceability of Bank Debt

Sovereign risk is a key obstacle to international financing of any kind. It is the result of the limited enforceability of contracts with sovereigns, coupled with the discretionary powers of sovereigns. Any contract that bridges two jurisdictions requires that both sovereigns agree, explicitly or tacitly, to enforce the contract within their legal systems. Thus, whether the contract directly involves a sovereign or not, the sovereign will enter as a key element in its enforceability.

Contracts with sovereigns are difficult to enforce since, clearly, a sovereign may reject a claim against it within its own territory. Further, courts typically will not recognize a claim against a foreign sovereign because of the doctrine of sovereign immunity.<sup>21</sup> However, even when such courts do accept jurisdiction over foreign claims, the remedies that can be applied are limited. In the absence of an invasion to seize a country's assets, claims can only be exercised against assets present in the court's jurisdiction. Thus, liquidation is not an option as it is with private borrowers.

Even when the contract is with a private agent within the foreign country, many of the same obstacles to enforcement are present. In order to enforce the claims within the borrower's home country, the claimant must be granted

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<sup>21</sup> Sovereign immunity has been rolled back significantly in recent years. Courts in the U.K. have allowed claims against sovereigns where the contracts were for commercial purposes, and the U.S. Foreign Sovereign Immunity Act of 1976 removed immunity for sovereign's commercial transactions.

access to the legal system. Judgements outside of the agent's home country are again limited to assets that can be seized within those jurisdictions.

Problems arising from this limited enforceability are further complicated by the fact that governments have a great deal of discretion regarding policy choices that influence their own influence ability to meet any particular set of obligations, as well as that of domestic firms or banks. Many of these policies are matters that could not be deemed a breach of contract, such as shifts in monetary policy, limits on exchange remittances, changes in competition policy, changes in taxes, and so on.

Sovereign risk is likely to be a larger factor in the international financing of LDCs than in transactions among industrialized countries for three reasons. First, because of the limited development of LDCs' domestic financial systems, there is less scope for domestic financial intermediation and at least some of the savings-investment process is externalized, with a substantial fraction of the assets of the wealthiest individuals being held outside of the country and new funds being brought in through foreign loans.<sup>22</sup> Second, because of their greater likelihood of being "out of step" with the world economy, either in terms of growth prospects or risk exposures, LDCs typically are more dependent on external finance and, hence, more affected by obstacles to international transactions. Third, because of the often greater participation of the government in the national economy, coupled with the lesser degree of institutionalization of domestic financial and industrial interests, the governments of many LDCs exercise greater

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<sup>22</sup> In fact, it is now believed that the acquisition of foreign assets by wealthy individuals in several key Latin American countries equalled or exceeded the increase in the external, general obligation borrowings of these countries.

discretion over the course of the economy and of factors determining the value of various claims on the economy.

Thus the ability of the government to influence outcomes, termed moral hazard in the economic risk sharing literature, coupled with limited ability to impose legal sanctions on nonperformance, means that contracts with LDCs have little economic value unless they are self-enforcing; that is, unless it is in the self-interest of the contracting parties to honor it them under virtually all circumstances.

Recognition of these two considerations has led academics who study international financing arrangements to focus on determinants of self-enforceability and, hence, the supply of loans.<sup>23</sup> While these models explain much of what has happened, they often have been interpreted to imply that LDCs are "dishonest" borrowers that "plan" to default on their obligations. A more neutral interpretation is that LDCs are a moral, economically-rational actors who recognize that there will be circumstances under which it will not be in their best interest to meet their obligations.

Factors Giving Rise to Self-Enforceability. Since self-enforceability requires that the (present discounted) economic value to a borrower of meeting its obligations must be equal or greater than the present value of not meeting them, it is most likely to hold for countries that would suffer a great deal if they did not pay, and be least likely for those facing negligible penalties. The principal penalties that can be imposed on a sovereign, or that a sovereign cannot avoid having imposed on private firms operating within its jurisdiction, are the withholding of future finance and the blocking of commercial transactions that would put national assets at risk of seizure.

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<sup>23</sup> See, for example, Eaton and Gersowitz [1981a, 1981b] and Sachs and Cohen [1982].



The cost of these sanctions to a borrower, of course, depends on the importance of future trade and finance to the country in question. Eaton and Gersowitz show that countries with volatile incomes may be more creditworthy than those with more stable incomes since, although their ability to pay would be lower under certain circumstances than countries with more stable incomes, their willingness to pay would be greater, precisely since their income variability makes foreign financing highly desirable. Sachs and Cohen show that countries with export-oriented development strategies are more creditworthy, not because they are somehow sounder and more stable than other countries, but because they are dependent on continued world trade in order to maintain their standard of living.

The extensive defaults of Latin American countries in the 1930s can easily be explained from this perspective. Because of the world depression, the trade of these countries and, hence their ability to service their debts, fell drastically. However, loss of markets for their products also removed the penalties that normally would have been associated with such default, thus reducing their willingness to pay. While it is hard to distinguish between ability and willingness in the event of nonperformance, it is useful to think of ability as being reflected in current cash flows (liquidity) and willingness in present value terms (insolvency).

The Comparative Advantage of Banks in Creating Self-Enforcing Contracts.

When there are few external sanctions that can be imposed, it is well known that contract enforceability is greatest when there recurring transactions and, as a result, nonperformance on any one contract will lead to a loss of many subsequent ones. In such cases a party to a contract, say an LDC borrower, builds a reputation over time by honoring its commitments and must weigh the loss of this reputation and its impact on future borrowings against the benefit of defaulting.

The concentration of claims against LDCs in relatively few banks implies that ongoing trade and finance will involve a fairly steady stream of transactions and, hence, high implicit costs to nonperformance. In contrast, a firm with a one-shot investment or a group of bondholders might have much less of a continuing relationship and as a result, a weaker position. Sovereign guarantees for credits to private borrowers within LDCs further reinforce this point, since they increase the continuity of transactions involving the sovereign.<sup>24</sup>

Since the enforceability of international financial claims against LDCs depends upon sanctions that would be imposed on their future trade or finance in the case of default, it depends upon the potential for a collective response by lenders. Since all bank debt of a given country involves the same type of general obligations, there is little conflict of interest among banks. Further, the banks themselves have evolved collaborative mechanisms in the case of repayments crises to minimize any playing off of one bank against another by the borrower and to maximize the sanctions that would be imposed in case of nonperformance.

It would be much harder for holders of other types of claims on LDCs to create and maintain such mechanisms for several reasons. First, with different types of claims, actions that result in nonperformance on one would not necessarily result in nonperformance on others. This is illustrated in

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<sup>24</sup> Commercial banks, because of the sanctions they can bring to bear on specific borrowers, have at times forced countries to make good on nonperforming loans to private firms or banks even when there was no explicit government guarantee. In some cases, the governments in question assumed the loans; in other they put into place special policies, such as dual exchange rates, that had the effect of transferring resources to the firms to allow them to meet their external obligations.

Figure 3 below which shows which type of discretionary government actions could result in losses on various types of claims.

The Role of the IMF and other Multilateral Institutions in the Enforcement of Debt Claims.

The comparative advantage of banks in enforcing contracts with LDC borrowers is further strengthened by the role of the International Monetary Fund and, to a lesser degree, the World Bank. Both institutions have leverage because they represent a continuing source of finance and because they play a special role in signaling to other financial institutions whether or not to cut off lending to a particular country.<sup>25</sup> Due to the more complex nature of direct foreign investment, or even portfolio investment, private providers of these types of finance do not obtain similar help in the enforcement of their claims.<sup>26</sup> In fact, the measures imposed by the IMF in conjunction with commercial banks often have the effect of imposing losses on claims denominated in the local currency claims against local private firms, or equity in many forms in order to increase the ability of the debtor country to meet its external, foreign-currency, general obligations. Thus it is not surprising that the structure of international financing for LDC has shifted towards general obligation to sovereign lending.

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<sup>25</sup> In fact, the rapid movement of the World Bank toward structural assistance loans in the face of declining project lending possibilities can be interpreted as a move to maintain self-enforceability by holding out future net lending as a reward to countries that meet their current obligations.

<sup>26</sup> The U.S. and various other investor countries attempt to impose sanctions in the case of expropriation of direct holdings. However, these mechanisms typically are not very effective because of the difficulty of determining damages and assigning fault, and hence, obtaining the collective response required to make the penalties effective.

Figure 3

Types of Nonperformance by Type of Claim

Type of Risk	Type of External Claim					
	Foreign Currency Government External	Home Currency Government Debt	Foreign Currency Private Debt	Home Currency Debt Issued by Private Firm	Portfolio Equity in Local Private Firm	Direct Equity in Foreign Controlled Local Firm
Gov't default on external claims	X	X	X	X	X	X
Exchange controls		X	X	X	X	X
Inflation/ Devaluation		X	X	X	X	X
Adverse changes in fiscal policy		X	X	X	X	X
Credit controls				X	X	X
Changes in limits on foreign ownership					?	X
Limits on behavior of foreign controlled firms						X

Source: Lessard, Eckaus, Bollier, and Kahn [1983].

IV. MEASURES TO INCREASE THE EFFICIENCY OF INTERNATIONAL FINANCE FOR LDCs<sup>27</sup>

Some of the limitations of the current system can be addressed by innovation and change within the banking system as it now organized, while others require increased development of alternative institutions or instruments, or substantial changes in banking itself. I outline what I consider to be the most important changes below.

Modifications in Bank Financing

Smoothing Real Debt Service Patterns. The problem of the perverse variability of debt service could be ameliorated in several ways. The first and simplest is for major international lenders to adopt debt service formulae that call for roughly constant real debt service.<sup>28</sup>

An alternative which would provide for even smoother real payments, since it locks in real interest rates, is a price level index-linked loan.<sup>29</sup> With such a loan, a real rate of interest would be contractually fixed, but the outstanding principal would be adjusted periodically for changes in some general price index.

A major issue with index-linked debt is the choice of the index, since different borrowers would want different base currencies or combinations of currencies. It is possible, however, that a large number of LDCs would find a standard combination--such as a price-level claims denominated in SDRs -- attractive.

Increasing Repayment Flexibility. While the above measures would go a long way toward reducing the negative impacts of credit market fluctuations on

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<sup>27</sup> This section draws substantially on Lessard and Wellons [1979]

<sup>28</sup> See, for example, Goodman [1982].

<sup>29</sup> For a recent discussion, see Williamson [1981].

LDC debt service requirements, they do not provide these borrowers with a safety valve in the case of difficulties resulting from world economic downturns, shifts in terms of trade or of local economic conditions.

The IMF already addresses this issue with its Compensatory Financing Facility, (CFF) but commercial finance typically provides no flexibility. Totally flexible repayment terms on long-term debt are out of the question since loans would no longer be enforceable. However, if the flexibility were limited in nature, it might be acceptable to lenders. An example of such a mechanism would be a bond of Eurocredit with a normal repayment schedule calling for equal payments of principal in each year, but with a provision that in one year the borrowing country could opt to repay some lesser amount, subject to provisions for catching up in future years. In essence, such a bond would provide a degree of automatic refinancing at the borrower's discretion.

A bond with the timing of repayments linked to trade flows is another variation on this theme. In order to be enforceable, repayments under such a contract would have to be linked to some aggregate trade measure, exogenous to the borrower in question. Bailey [1983] has suggested linking repayments to a country's own net exports, and Diaz-Alejandro [1984] suggests an expanded CFF to deal with this problem.

Increased flexibility along various dimensions would help LDCs cope with specific risks, but only by postponing repayment obligations. Many risks, however, are not cyclical in nature but represent permanent changes in the value of existing resources and facilities. In such cases, postponing payments will simply compound the problem. In contrast, financing arrangements which explicitly shift risk are viable whether or not these risks are cyclical.

Increased Risk-bearing with General Obligation Financing. While general obligation financing cannot, by definition, shift the risks of particular projects or enterprises to foreign providers of finance, it can be employed to lay off certain risks that affect the economy as a whole. Two specific innovations deserve particular attention. They are (a) commodity-price linked securities, and (b) trade-linked securities. Both deal with narrowly defined sets of risks relevant at a national as well as an enterprise level.

Many developing countries depend, and will continue to depend, upon a small number of primary product exports as their major sources of foreign exchange earnings. Such countries could issue commodity-linked bonds. In addition to shifting some of the LDCs' basic exposure, such instruments should reduce contracting risks since they are narrowly drawn and primarily shift risks that are outside the control of the borrower. Of course investors would still face the risk of default, but this risk is not likely to be any greater than that of straight bonds.

Increased Nonrecourse Financing. The general obligation of most bank financing is a major structural flaw in the existing system and gives rise to many of its behavioral anomalies. Increased nonrecourse lending would provide lenders with more incentives to do proper analysis and would reduce the likelihood of borrowing errors resulting from decentralized decision making. There are, however, several obstacles to such a shift. First, it is unlikely that individual banks would wish to give up their general claims without compensation in some form. Here the World Bank might play a role by facilitating project loans and providing, for example, completion guarantees in return for an increased flow of true project finance. Similarly, the Controller of the Currency could create a separate classification for project loans with escrowed export proceeds.

A more difficult issue is whether a country could default on a money-fixed project loan without jeopardizing its overall credit standing, i.e., whether it could obtain true nonrecourse financing. I believe, that in most cases it would be extremely unlikely, and that nonrecourse financing is most likely to be viable where instruments that share directly in project outcomes are employed.

#### Increased Role of Non-Bank Institutions

Increased Project-Specific Risk Capital. International financing at a project or enterprise level is likely to be superior to nonspecific financing--especially debt--if some of the risks entailed could be borne more easily by foreign than local investors, or if it is important to provide foreigners with a stake in the project or enterprise's success due to their role in providing technology or market access.

The two primary existing mechanisms for international risk transfers between LDCs and World Capital markets are direct foreign investment and portfolio investment in equity. Both mechanisms penetrate the national economy and involve substantial enforcement difficulties and compliance costs. Simpler, more narrowly defined, risk shifting devices are likely to be superior.

Consider alternative arrangements that may be used for financing the development of the oil reserves of a country which will be a significant oil exporter.<sup>30</sup> If a significant fraction of the production will be used in the domestic market, a major risk associated with direct or portfolio equity investment in the development of local oil production will be the pricing of the output in the domestic market. However, this pricing is a political

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<sup>30</sup> See Blitzer, Lessard, and Paddock [1983], for an in-depth discussion of the various alternatives.



outcome and is likely to be influenced by the foreign ownership of the oil company. Further, the profits of the domestic oil company are likely to be affected by a wide variety of local political choices, including labor policy, tax policy and exchange rate policy. As a result, foreign investors are unlikely to get involved unless they have considerable control over the domestic situation--costly meddling from the perspective of the developing country in which the investment takes place. Portfolio investors are unlikely to be involved at all unless there is a highly institutionalized domestic capital market which provides a set of national "bedfellows" to protect the interest of foreign shareholders.

A production share is a less complex instrument which avoids many of the risks in the hands of the domestic government and yet provides a mechanism to lay off market price risks on a world economy. Nevertheless, it also involves an element of control which, from the perspective of the domestic government, may be undesirable. A commodity-linked bond is even more narrowly defined and, hence, need not be tied to a specific project. Of course, it requires the existence of a widely traded commodity for which an external price is readily available. Further, it does not provide foreign investors with much of a stake in the national elements of the project's success, e.g., those associated with the discovery of oil, the development itself, and the management of the facilities once "on stream."

Quasi-equity financing arrangements such as production shares often provide a desirable compromise between debt instruments which provide foreigners with no stake in local operations, direct equity investment where foreigners assume total control, and portfolio foreign investment in the equity of local firms which require that significant institutional preconditions are met.

Changes in the Role of Multilateral Financial Institutions

One of the key reasons why general obligation debt has emerged as the dominant form of international financing for LDCs is that it is supported by the current institutional framework, including the IMF and the World Bank.

The role of one or both of these institutions should be broadened to provide increased support for various forms of contingent financing along the lines that they already provide for general obligation debt financing. This could be done, for example, by having the World Bank exact borrower government guarantees of compliance with the terms of a particular contingent contract instead of guarantees of fixed payments irrespective of project outcomes. The World Bank, in turn, might guarantee the same performance to third parties. This would be an important step in increasing the flow of project financing and hence, increasing the degree to which both commercial risk and responsibility are shifted from LDCs to firms and financial institutions with a comparative advantage in bearing these risks.

An even stronger step for these institutions would be to formally cofinance or otherwise lend their support for the enforcement of only those claims they deemed appropriate both in amount and form. Both measures should be given serious consideration.

V. SUMMARY AND CONCLUSIONS

International finance plays an important role for LDCs. It allows them to invest in attractive investments that they otherwise would have to forego or postpone, to shift income over time, to smooth out sharp fluctuations in income, and to lay off risk in accordance with comparative advantage in risk bearing. However, it clearly can have significant negative impacts, leading to onerous debt service requirements at times of great economic stress.

The key theme developed in this paper is that the current structure of international finance for LDCs, primarily general obligation bank debt, does not provide many of the most important potential advantages of international finance and significantly increases the likelihood of costly debt crises. The current LDC debt crisis is not just the result of bad luck with the world economy or of overborrowing by LDCs, but of a badly flawed structure of international finance that should have been expected to give rise to such a crisis.

Bank debt results in debt service requirements that bear a perverse relationship to LDCs' ability to service debt. It fails to shift risk to world financial markets in line with comparative advantage and, consequently, fails to shift responsibility for the selection and management of investments as well. Finally, it concentrates the risk of default in major commercial banks that represent a small fraction of world financial markets and, as a result, increases the possibility that an LDC debt crisis will become a world debt crisis.

Merely recognizing that the existing structure of international finance is flawed, though, will not result in the required changes. Bank debt has come to dominate the external financing of LDCs for many reasons including LDCs' own desire to minimize foreign involvement in their own economies and the role played by the IMF and the World Bank, among others, in enforcing LDCs' general obligations, but not project or program contingent finance. Concerted action on the part of borrowers, lenders, and the multilateral intermediaries is required. Fortunately, significant changes in this structure are feasible within the existing institutional structure without an increased flow of concessional finance.

First, the volatility of debt service on nonspecific credit can be reduced through innovation in the repayment pattern on floating rate debt. Now that the World Bank is shifting to floating rates, it should take the lead in such innovation. Further, the IMF could insist that commercial banks adapt similar measures as part of any rescheduling agreement. Second, the ex ante flexibility of debt service should be increased to avoid the inevitable costly after-the-fact changes in debt terms while still maintaining discipline and appropriate incentives.

Third, to the extent that an LDCs activities are substantially concentrated in a few sectors, nonspecific financing arrangements should be exploited to shift risks such as commodity price or trade fluctuations to world financial markets.

Fourth, LDCs should shift to project or enterprise-specific financing in those cases where it is important to shift key risks and/or provide foreign suppliers of funds with a stake in project outcomes in order to insure that they aid in project selection and management. The feasibility of project or enterprise financing can be increased by designing quasi-equity investments which expose foreign investors to a limited range of risks and, hence, reduce the required degree of foreign capital.

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