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I. INTRODUCTION

The explosion of North-South finance -- largely in the form of commercial bank credit -- is well documented, as are the difficulties encountered by numerous developing country borrowers in servicing their debt. Less developed countries (LDCs) have come to rely on external finance to a much greater extent than industrialized countries (ICs). At the present time, the total external debt and direct investment claims against LDCs exceeds 25 percent of the GNP of these countries, compared to less than 10 percent for ICs.

The absolute growth in LDC external financing has been accompanied by substantial shifts in the composition of LDC obligations. The most striking change, documented in Table 1, is the increase in debt relative to direct foreign investment, the only significant category of risk financing for most LDCs. Total debt rose from 69 percent of total LDC obligations in 1973 to 83 percent in 1981. Further, short-term debt grew more quickly than long-term debt and debt from private sources, primarily commercial banks, outstripped official lending. However, this "privatization" on the lending side was not accompanied by a similar shift on the borrowing side. Rather, the proportion of long-term debt owed by or guaranteed by LDC governments rose from 74 to 79 percent.

Much of the present debate over measures to resolve the debt crisis is an exercise in assigning blame. Bankers are accused of overlending either because of misjudgments or the expectation that they will be bailed out of problems, borrowers of profligacy, and regulators simultaneously of imposing

insufficient discipline on borrowers and lenders and of being too callous toward LDCs. The general conclusion is that there has been "too much financing and too little adjustment." While this may be a correct assessment, it focuses entirely on the aggregate amount of North-South financing and not on its composition.

In this paper I argue that regardless of whether the aggregate amount of North-South finance is too large, its composition is structurally unsound and is likely to result in misjudgments and misbehavior on the part of lenders and borrowers.

There are several reasons why a financial system that relies overwhelmingly on bank credit is unlikely to be an ideal system in terms of world welfare.[1] These include:

1) it involves debt service patterns that vary perversely with LDCs' net foreign exchange earnings,

2) it shifts risks from LDCs to world capital markets only through default, and

3) it concentrates default risks in a few key financial institutions.

An understanding of the limitations of bank credit is crucial in sorting out the current crisis. More importantly, though, it provides a basis for gradually restructuring the system to reduce the likelihood of crises in the future and increase the mutual benefit of international finance. I outline specific measures which I believe would significantly improve North-South finance from the perspectives of both lenders and borrowers. Some of these

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1 This does not imply that bank finance is bad, only that a system less reliant on bank finance would be better. For an excellent discussion of the actual benefits that have resulted from the development of North-South finance, see Fishlow [1982].

Table 1

EXTERNAL FINANCING OF DEVELOPING COUNTRIES

Billions of US $ (%)

	1973	1977	1981
Short-term Debt	18.4 (9.7)	42.5 (12.3)	102.2 (15.3)
Long-term Debt	111.8 (59.0)	235.9 (68.2)	452.8 (67.9)
Official Sources			
-Gov't	37.3	67.6	108.6
-Financial Inst.	13.7	31.0	63.8
Private Sources			
Guaranteed			
-To Financial Institutions	17.3	59.1	144.5
-Other	14.2	26.8	39.2
Not Guaranteed	29.3	51.4	96.7
Direct Foreign Investment	59.2 (31.3)	67.4[a](19.5)	112.2[a](16.8)
Total	189.4 (100.0)	345.8 (100.0)	667.2(1000)

Sources

Debt - IMF, World Economic Outlook, 1983. Only non-oil developing countries

DFI - K. Billerbeck and Y. Yasugi, "Private Direct Foreign Investment in Developing Countries," World Bank Staff Working Paper #348, July 1979. a/1977 and 1982 DFI estimated on assumption that US remains 50% of total. See respectively, US DFI as reported in U.S. Department of Commerce, Survey of Current Business, August 1978 and August 1982.

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South finance from the perspectives of both lenders and borrowers. Some of these measures involve changes in patterns of bank finance while others require increased use of non-bank financing channels.

The paper is organized in five sections. Part II, which follows, outlines the potential gains from international finance if it is structured appropriately. Part III explores the extent to which bank credit is likely to lead to these gains even if the behavior of lenders and borrowers is totally rational. Part IV explores the further departures from the ideal that arise with foolish or myopic behavior on the part of either party. Part V traces out several alternatives which could lead to greater mutual benefit.

II. THEORETICAL GAINS FROM INTERNATIONAL FINANCE

Countries -- or citizens of countries -- exchange financial claims for the same reasons as individuals within a single economy. They do so in order to take advantage of differences in investment opportunities, income profiles over time, risks inherent in their initial endowments and the activities they undertake, and tolerances for bearing risks.

Economic welfare, employing Pareto's criterion, is maximized when there is no way to improve the situation of one party -- borrower, lender, or currency-holder or taxpayer who stand behind a lender of last resort -- without imposing costs on another. Thus, welfare will not be maximized if the exchange of financial claims is incomplete or if it is accompanied by substantial deadweight costs --costs borne by one party which do not result in corresponding gains to the other.

A complete welfare criterion will take into account the distribution of costs and benefits within countries as well as their distribution among countries. In most of the following discussion, though, I will focus on the distribution among countries, implicitly assuming that national authorities

act on behalf of their citizens and that nations possess efficient mechanisms for dealing with the internal distributional effects of external financial transactions.

Shifting Consumption Over Time

Most of the literature on international finance has focused on the role of finance in shifting consumption over time. Those societies which, in the aggregate, have a strong preference for present versus future consumption--because of anticipated income growth through existing investment opportunities or because current income is abnormally and unexpectedly low--will borrow from others. Similarly, those with less of a preference for current as opposed to future income--due to mature intertemporal income profiles or transitory booms in income--will lend. Countries well endowed with capital relative to labor and other factors will lend, thus aiding the international equalization of factor costs.

For those societies whose differing time preferences result from major shifts in demography or investment opportunities, the resulting borrowing or lending may persist for a generation or more. To the extent that the different preferences derive from temporary fluctuations in income, though, the borrowing or lending will be transitory.

Allocating Risks

Grubel [1958], drawing on the seminal work of Markowitz [1952] and Tobin [1956], showed that a major potential gain from "financial trade" was the reduction in the aggregate risks borne in the world economy as a result of diversification.

These concepts have been incorporated in general equilibrium models of international capital markets by Solnik [1973], Grauer, Litzenberger, and

Stehle [1976] and Stulz [1981]. A key result of these models is that the best of all worlds is when the consumption of all nations (individuals) is perfectly correlated over time.[2] As long as national incomes, and hence potential consumption, are less than perfectly correlated, there exist opportunities for mutually beneficial financial exchanges.

Completing Domestic Markets

To the extent that domestic financial markets are incomplete or imperfect and, as a result, households within a single country cannot achieve a locally optimal distribution of consumption across time and states of nature, international finance may play the further role of completing these markets. Thus, the gains from international financial exchanges may be even greater than those due solely to improvements in aggregate consumption patterns.

Factors Determining the Magnitude of Potential Gains

The magnitude of potential gains from international financial interchange depends on the extent of imbalance between the time profiles of expected income and the less than perfect correlations among variances in income and, hence, the potential improvement in consumption paths made possible by international finance. With respect to time transfer alone, the differences will be greatest for countries that are significantly out of step with the world economy in terms of time profiles of expected income--the core OPEC countries and countries with newly discovered wealth or investment

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2 This point follows from the underlying models of Merton [1973] and Breeden [1979] in which individuals maximize their utilities of consumption over time.

opportunities, such as Mexico in 1978 or, perhaps, China today--or for countries with transitory economic difficulties which may include more mature economies with long-term prospects in step with the world economy as well as those countries on different time paths.

When both time and states of nature (such as energy prices, terms of trade, and levels of world economic activity) are considered, the role of finance in spreading risks in order to minimize their differential impact comes into play. A case in point is radically different impacts of changes in energy prices on various countries. A fall in prices benefits importers like Brazil and India, but harms exporters including Mexico, Nigeria, and Venezuela. Clearly, a set of financial contracts that redistributes this risk among exporters and importers would be of mutual benefit.

In general, the gains from international risk shifting are substantially greater for LDCs than for ICs. This is borne out by estimates of the correlations between economic activity in LDCs and the world economy based on share prices, reported by Lessard [1973], Errunza [1977], and Errunza and Rosenberg [1983].

Endogenous Risks as a Limiting Factor A major factor limiting the actual benefits resulting from international finance is that the risks to be shifted include endogenous elements such as the quality of national economic management as well as exogenous elements including natural calamities and, in the case of price takers in world markets, shifts in terms of trade. Thus, it is impossible to define enforceable contracts which shift all risks. Some risks must be retained by those parties with control over outcomes or, alternatively, deadweight penalties must be imposed in the case of self-serving nonperformance. Further, contracts are likely to require costly

monitoring and enforcement.[3] Thus, there will be less exchange of claims than would be optimal if all risks were exogenous to the parties to the transactions.

III STRUCTURAL LIMITATIONS OF BANK FINANCE

The question of whether bank finance is good finance in a Paretian sense depends on the extent to which it enables borrowers to exploit investment opportunities, smooth income, and shift risks on terms that are mutually advantageous to borrowers and lenders. Most existing analyses, in contrast, are one-sided.

Bank finance is judged to be good from a lender perspective if major repayment crises are avoided. From the borrower perspective, in contrast, it is good if it supports uninterrupted LDC growth.

However, LDC nonperformance is not a welfare loss resulting from the use of international finance if the probability of such an outcome was properly assessed ex ante, properly incorporated in the pricing of such finance, and if the nonperformance does not result in the imposition of significant deadweight costs on the borrower. Further, the absence of rescheduling or default does not mean that the borrower has avoided deadweight costs associated with the specific terms of its external financing. On the other hand, the notion that finance should enable borrowers to avoid adjustment to changes in external or internal circumstances is equally naive.

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[3] This problem is analogous to the shareholder-manager agency problem discussed by Jensen and Meckling [1976], Fama [1980] and others.

A general test of the welfare benefits of North-South finance is impossible since it would require the knowledge of what would have taken place in the absence of such finance. However, it is possible to determine if net financial flows covary positively or negatively with national income and, hence, shift risks in a mutually beneficial way. Further, it is possible to determine if, given the structure of finance, adverse developments in world capital markets or LDC economies might result in deadweight costs, costs to one party which are not offset by corresponding gains to the other.

Bank finance is unlikely to be an ideal system in terms of world welfare for several reasons. As noted in the introduction, these include 1) perverse variability of debt service, 2) the absence of risk shifting except through default, and 3) the concentration of default risk in a narrow sector of the total financial system. Each of these is discussed below.

Perverse Variability of Debt Service Obligations

Most less developed countries 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 replenishment of reserves or repayment of 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 at the scheduled reduction in principal. As is well-known, if the combined stream of interest and principal payments on a loan is level in nominal terms, it will be tilted towards the present in real terms as a function of inflation.[4] In other words, whenever nominal interest rates rise, the effective maturity of an outstanding loan is decreased and the required repayments are accelerated. Thus, even if interest rates do not vary, current financial arrangements are inappropriate at high levels of interest rates and inflation.

Interest rates, of course, do vary and the interaction between fluctuations in the incomes of less developed countries and their debt service requirements have been quite severe. 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 -.51 . 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.[5] Their contemporaneous correlation over the same period is -.42, significant at the .01 level, while the correlation 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.

In a world with perfect information and complete enforceability, this perverse variation in debt service 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

4 See, for example, Lessard and Wellons [1979] and Kincaid [1981].
5 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 laggged by one period to reflect survey delays in the latter measure.

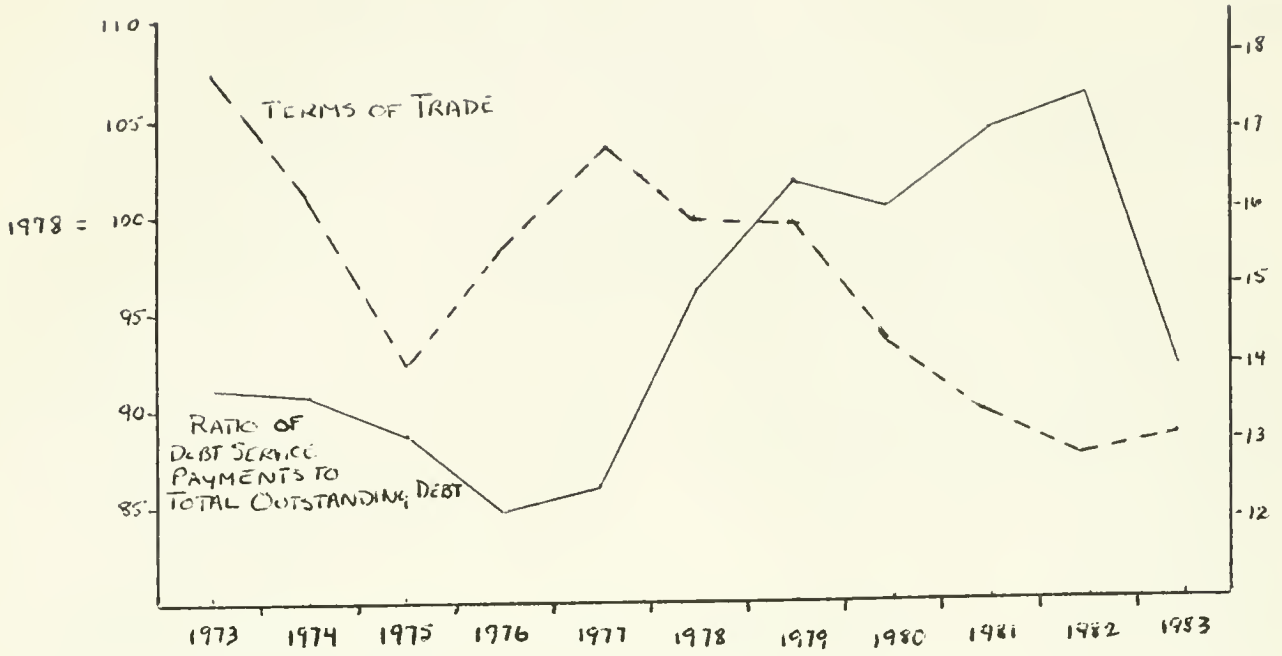
words, illiquidity would never be an issue and the only risk would be that of insolvency. However, given limited information and enforceability, rolling over is not a sure thing and the arbitrary shortening of maturities via increases in LIBOR as well as the shortening of available maturities can create problems for borrowers as well as for the system as a whole.

Nonspecific Nature of Bank Lending

Most commercial bank lending 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, given the fungibility of claims, a loan to a good project is no better than a loan used to acquire arms or maintain consumption in the face of a reverse 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. This must be a costly and inefficient mechanism, resulting in limited risk spreading. In fact, the repeated assertions of bankers that few if any defaults are imminent is clear evidence that the system provides little risk shifting, especially given the radical fluctuations in terms of trade and other project or strategy-specific risks incurred by LDC's.

Ironically, much of the academic literature on North-South finance stresses the strategic nature of risks of nonperformance, but downplays the



Terms of Trade Versus Debt Service
Figure 1
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 Rapublic of China prior to 1977.

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.[6] Thus, the reduction of risks in the system is seen largely as the 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.

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[6] See, for example, Eaton and Gersowitz [1981a, 1981b].

The Concentration of Claims in Commercial Banks

The fact that claims against DC's 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 LDC's. 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.

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 North-South debt negotiations, perhaps further distorting the incentives facing industrial private lenders.

IV. BEHAVIORAL LIMITS TO THE WELFARE CONTRIBUTION OF INTERNATIONAL BANK FINANCE

In the previous section, I outlined several structural problems with bank finance that limit its welfare contribution. In this section I focus on the behavior of lenders and borrowers within the existing system as a further possible limiting factor. While the distinction between structure and behavior is somewhat artificial, it does highlight the possible benefits of better management as well as the likelihood of such improvements in contrast to improvements requiring a reduced or altered role for commercial banks.

We begin our discussion with potential inappropriate behavior by borrowers, then turn to the lenders.

Inappropriate Borrower Behavior

A major implication of the nonspecific nature of bank credit coupled with the substantial penalties imposed on borrowers in the event of nonperformance is that the explicit cost of bank credit is likely to be a misleading indicator of its desirability and, as a result, countries are

likely to overborrow. Diaz Alejandro [1982] notes, for example, that given the real interest rates prevailing in the 1970's, "the price of either extravagance or sensible capital formation was low."

The appropriate tradeoff between current consumption or investment and future debt service obligations can be characterized in "money space" 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 of these benefits if they covary positively with national income.[7] While real interest rates might have been low, 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 debt since LIBOR varies slightly 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.

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[7] See, for example, Leland [1982] in his comment on Wilson [1982].

A further problem that arises due to the nonspecific 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.[8]

Inappropriate Lender Behavior

Bankers have been accused of doing little analysis but rather following the pack and, as a result, lending too much to countries currently in favor, too little to those out of favor. Whether this is true or not, there are at least two structural factors which predispose individual banks to behave this way even if they are rational in microeconomic terms. Further, there are aspects of banks' 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 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 their own central banks and the International Monetary Fund. In fact, its behavior will be very similar to

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[8] 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.

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 on the loan to the lender of last resort.

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.

V. MEASURES TO INCREASE THE WELFARE CONTRIBUTION OF NORTH-SOUTH FINANCE [9]

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.

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.[10]

An alternative which would provide for even smoother real payments since it locks in real interest rates, is a price level index-linked loan.[11]

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9 This section draws substantially on Lessard and Wellons [1979]

10 See, for example, Goodman [1982].

11 For a recent discussion, see Williamson [1981].

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 LDC's would find a standard combination--such as a price-level adjusted SDR--attractive.

Increasing Repayment Flexibility

While the above measures would go a long way toward reducing the negative impacts of credit market fluctuations on DC debt service requirements, they do not provide DC's 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 finance scheme, 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, but this would involve substantial moral hazard since it would reduce a country's incentive to increase exports.

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. Financing arrangements which explicitly shift risk, in contrast, are viable whether or not these risks are cyclical.

Increased Risk-bearing Nonspecific Finance

While nonspecific finance 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 that are 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 which 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 nonspecific nature 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 or true project finance. Similary, 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 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 North to South risk transfers 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.[12] 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 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,

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12 See Blitzer, Lessard, and Paddock [1983], for an in-depth discussion of the various alternatives.

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.

VI. SUMMARY AND CONCLUSIONS

The structure of LDC external finances is dangerously tilted toward nonspecific bank credit which exposes LDCs to volatile repayment requirements and plays no role in shifting specific risks to world financial markets or in providing suppliers of finance with a stake in the proper selection and management of specific undertakings. However, 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 LDC's 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.

All four steps have the quality that they can result in gains for LDCs without requiring that industrial countries bear offsetting losses. Thus, they free up the South's "bargaining capital" for dealing with issues which are inevitably of a more zero-sum nature.

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