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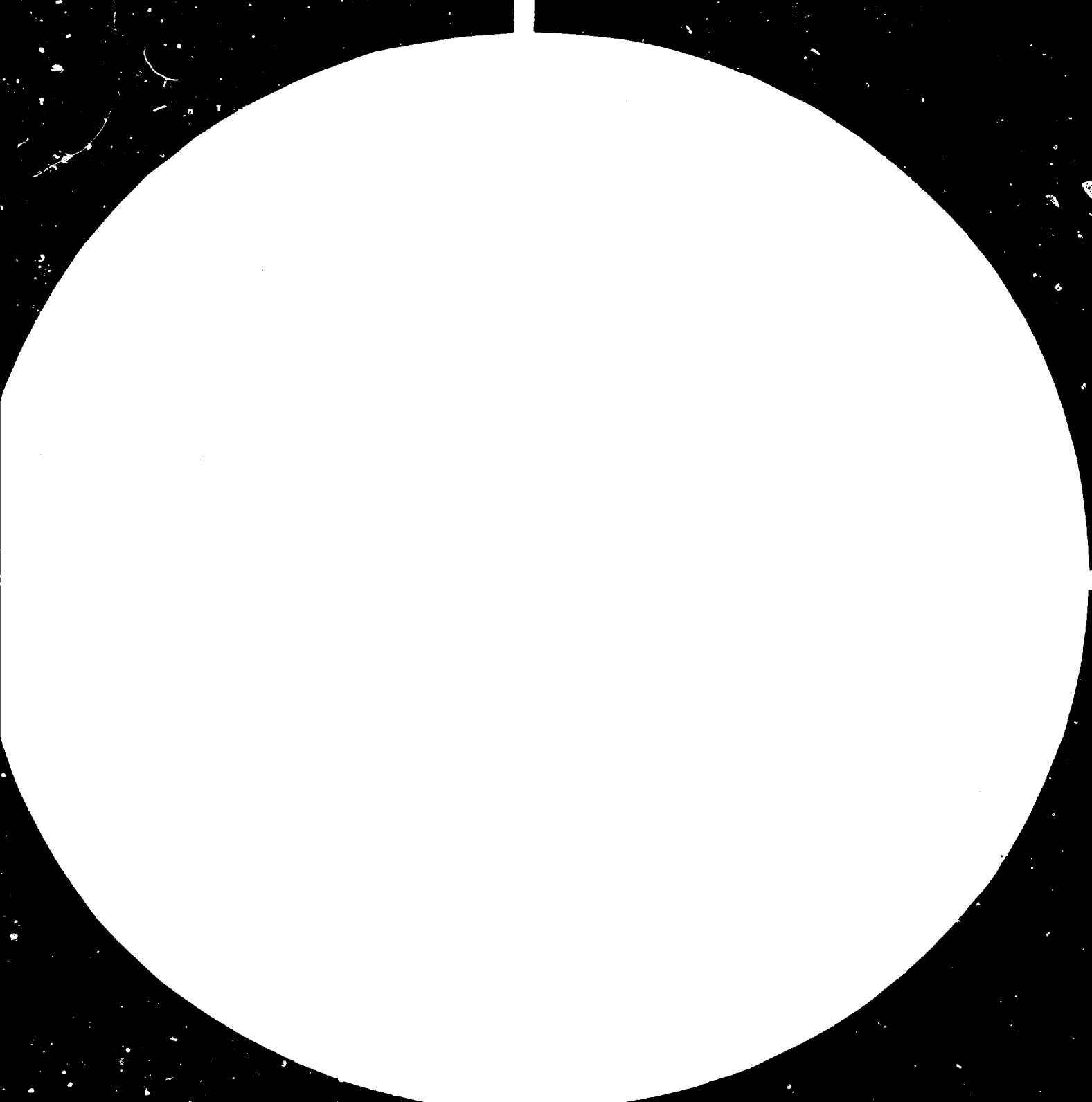
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INFORMATION PAPER
APPROPRIATE NON-CONCESSIONAL INDUSTRIAL
FINANCING FOR DEVELOPING COUNTRIES*

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I. INTRODUCTION¹

Developing countries (DC's) rely on external finance to a much greater extent than industrialized countries (IC's). At the present time, the total external debt and direct investment claims against DC's exceeds 25 percent of the GNP of these countries, compared to less than 10 percent for IC's. At the same time, the structure of DC external financing is shifting more and more toward private, non-specific claims, claims which bear commercial rates of interest but do not depend to any significant extent on the success of particular DC investments or of DC strategies in general. Thus, the existing pattern of external financing imposes virtually all of the risks of industrial development on DC borrowers, even though many of these risks are at least partially under the control of IC interests, and contributes nothing to the selection and execution of industrial development strategies. Further, given the predominantly floating-rate nature of this debt, it exposes DC borrowers to violent fluctuations in debt service as the result of conditions in external credit markets.

This paper outlines a series of steps that can be taken to improve industrial finance for Third World countries within the existing structure of financial institutions and global arrangements without a significant increase in the grant elements of such financing. This emphasis does not imply that increasing North to South transfers should not remain a major goal. Rather, it reflects our judgment that under current economic and political circumstances a major increase of North to South transfers, let alone the maintenance

¹ This report draws substantially on an earlier report prepared for UNIDO by the author and Philip Wellons, Lessard and Wellons [1979].

of transfers at existing real levels, is unlikely and our belief that the rapidly evolving commercial financial system can be exploited much more effectively by Third World countries than it has been to date.

Improvements in financing may include increases in the volume of financial flows, reductions in the cost of financing, or an improved matching of the characteristics of financing arrangements to the project being financed and to the overall condition of the country in which the project is located. We shall argue that many potential improvements in industrial finance lie in selecting appropriate financial arrangements for particular projects rather than from increasing the volume of financing or improving, in the sense of softening, the terms of particular financing arrangements.

The reason why we emphasize improvements arising from more appropriate matching of project, enterprise, and country characteristics are twofold. First, we believe that in general the volume of financing available to a particular country is constrained primarily by its ability to repay under various possible future scenarios rather than the general availability of financing. Developing countries, after all, represent a small part of a large and relatively competitive international capital market. Second, the cost of financing is dictated primarily by world macroeconomic circumstances over which developing countries have little or no influence. The competitiveness of capital markets provides for reasonable access to funds as long as industrial country governments do not successfully discriminate against foreign issues.

In some cases, improved matching is possible given the existing

array of financing arrangements and substitutions and, hence, require only that developing countries select financing arrangements appropriately. In others, it requires innovations in instruments or institutions or in the regulatory framework within which institutions operate.

An important feature of improvements arising from a better matching of financing arrangements with project, enterprise, or country characteristics is that such gains do not arise at the expense of the providers of finance. Thus they avoid the zero-sum bargaining situation characteristic of many North-South interactions. To seek such improvements, of course, does not rule out attempting to bargain for better terms or for changes in the international institutional framework. Further, it does not reduce the need for bargaining sophistication by Third World countries in order to obtain the best possible terms in any particular financing. In fact, since it increases the array of financing arrangements which must be evaluated in many instances, it increases the need for analytical and bargaining sophistication.

This paper is organized in six parts. Part II, which follows, describes the major types of possible industrial financing arrangements at the aggregate and project/enterprise specific levels and briefly reviews the current situation. Part III outlines criteria for defining appropriate financing arrangements for specific situations. Part IV discusses the implications of these criteria for appropriate non-specific financing and identifies a series of financial innovations that would allow more complete matching of financing and country characteristics than is currently possible.

Part V applies these criteria to project/enterprise-specific financing and again identifies a series of innovations which would allow improved matching of financing and project/enterprise characteristics. We emphasize project/enterprise-specific financing since it is more relevant to the type of projects considered by UNIDO and since it overlaps with contracting considerations that have been raised in particular Industry Consultations. Part VI briefly summarizes our analysis and conclusions.

II. VARIETIES OF INDUSTRIAL FINANCE

Industrial financing encompasses a wide variety of financial mechanisms that foster investment in industrial projects. These include supplier credits, commercial project financing, direct foreign investment in specific ventures, and international sovereign borrowing with no explicit linkages to any specific project or enterprise. As with all forms of finance, any of these arrangements provides funds at the outset of the arrangement in return for a promise to repay a particular amount in the future. This future promised repayment may or may not depend on the success of a particular project or enterprise and may or may not be subject to a significant risk that the promised payment will not be met. While the arrangements differ in a variety of dimensions, two are most important. These are the parties to the contract and the terms specifying the nature of the promised repayment.

Parties to the contract

All industrial financing involves the transfer of resources from

saving units -- households, firms, or governments -- to business firms. However, the chain of intermediation may differ substantially. The international link in the chain is of special importance, since it typically is critical in determining the nature of the overall financial arrangement.

This international link connects an international source of funds with the party obtaining international finance. International sources of funds include capital markets -- individuals or firms participating anonymously in fractional claims, banks and other private financial intermediaries, non-financial corporations, governments and their agencies, and multilateral agencies. Parties obtaining international finance include national governments and their agencies, local private financial intermediaries, local public financial intermediaries, international corporations with local operations, and local non-financial corporations. A few of the principal combinations of international sources and parties obtaining international finance are depicted in Figure 1.

The most important distinctions between the various intermediation chains is whether the party obtaining finance is the national government (or one of its agencies) or a specific project or enterprise. We refer to the former as non-specific financing, the latter as project or enterprise-specific financing. Non-specific financing in contrast to project or enterprise-specific financing maximizes local flexibility with regard to the use of funds, but it also rules out tying repayments to project or enterprise specific outcomes and, as a result, does not involve foreign claimants as stakeholders in a particular venture. As we shall see in the

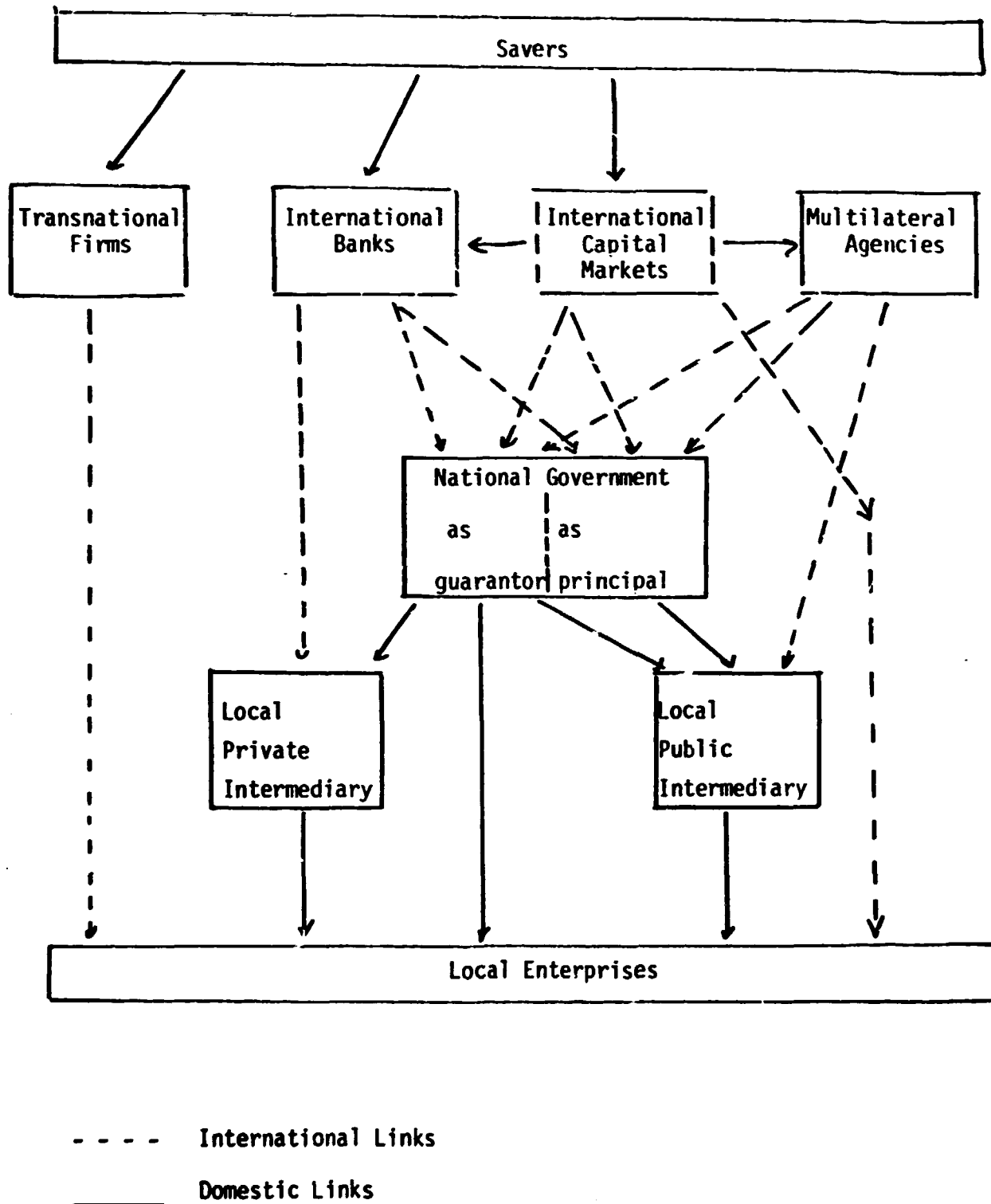


Figure 1

Alternative Financial Intermediation Chains

following section, this has many implications for the appropriateness of particular financing arrangements.

Many financing arrangements which appear to be project or enterprise specific are, in fact, non-specific in nature. This is because in many cases repayment is explicitly or implicitly guaranteed by the national government or central bank and, hence, is an obligation of that entity as far as the international source is concerned. Multilateral agencies typically make this a requirement of lending and international private banks frequently obtain guarantees as well.

Financing Terms

Finance is often equated with credit where the terms include an interest rate and a schedule of principal amortization which jointly determine required future repayments. The interest rate, in turn, reflects the numeraire currency or index and its anticipated appreciation or depreciation relative to other currencies. Further variations in terms include provisions regarding the claims of lenders in the case that promised repayments are not met and a series of controls over the behavior of the borrowing entity. However, a much wider array of arrangements exist and are regularly employed in industrial financing.

Perhaps the most critical distinction among alternative financing arrangements is whether the required future repayments are contingent on the project or enterprise's success. The polar extremes in this regard are equity financing, where the promised repayment is specified as a share of future earnings, and straight debt where the

promised payments bear no relation to project outcome.

The debt of a private corporation, of course, is contingent on the success of the enterprise to the extent that if the firm's cash flows fall below a certain level, it cannot make the promised payments, whereas guaranteed private debt or sovereign debt is subject only to the risk that the nation as a whole is unable or unwilling to meet its external obligations.

Given this wide array of terms, comparing the cost of alternative arrangements is difficult. Straight debt bears an explicit cost, the interest rate, which is reflected in the promised stream of future payments. Yet if there is any chance of default, the expected stream of payments is lower than the promised stream. With equity, there is no promised stream. The only relevant measure of the cost is the rate of return investors can expect to earn based on their estimates of the firm's future profitability. Thus, the rate that equates future expected payments with the funds provided at the outset is the most general measure of cost.

The Current Situation

As noted in the introduction, developing countries have come to rely increasingly on private sources for external financing and this private financing has become increasingly dominated by bank loans which are either explicitly or implicitly guaranteed by the borrowing country and hence represent aggregate, non-specific claims on the nation. The only other significant source of external finance is direct foreign investment, and its role appears to be diminishing relative to non-specific debt claims. This is shown in Table 1.

Table 1
External Financing of Developing Countries

	(Billions of current US\$ (%))			
	1973	1976	1980	1981
Long-Term Debt	97.3 (61.5)	176.5 (70.0)	370.1 (71.8)	425.2
-Official				
-Government	36.9	58.5	106.0	121.4
-Financial Inst.	12.2	22.7	49.8	58.6
-Private				
-Guaranteed				
-To Financial Institutions	13.1	39.2	112.8	127.9
-Other	13.8	18.0	33.3	38.4
-Not Guaranteed	21.4	37.5	68.2	79.0
Direct Foreign Investment	59.2 (38.5)	84.4 (30.0)	105.3 (22.2) ^{a/}	n.a.
Total	156.5 (100.0)	260.9 (100.0)	475.4 (100.0)	--

Sources: Debt - International Monetary Fund, World Economic Outlook, 1981

Direct foreign investment - K. Rillerbeck and V. Yasuni. "Private Direct Foreign Investment in Developing Countries" World Bank Staff Working Paper #348 July 1979. ^{a/}1981 estimated on basis of U.S. DFI as reported in U.S. Department of Commerce, Survey of Current Business, August 1981 assuming U.S. remains 50% of total as it has over last several years.

This structure of external finance undoubtedly reflects the relative availability and perceived low cost of bank credit. However, it also has several potential serious consequences. First, it means that DC's are dependent on a relatively concentrated, highly regulated source of finance that itself is vulnerable to DC defaults that involve complex political as well as commercial considerations. Second, given the overwhelming reliance of the international banking community on floating rate roll-over loans, where only the spread vis-a-vis the market interest rate is fixed over the the maturity of the loan, the real repayment stream associated with these loans is extremely volatile, increasing significantly the likelihood of distress or default on the part of borrowers. Third, given the aggregate nature of these claims, they provide only a minimal shifting of risk from DC's to world capital markets and then only through default with its attendant high dead-weight costs. Firstly, such aggregate claims do little to complete national financial markets.

III. CHARACTERISTICS OF APPROPRIATE FINANCING ARRANGEMENTS

There is no universally best set of financing arrangements. Rather, various arrangements are appropriate for differing sets of project/enterprise or country characteristics. The considerations which determine the appropriateness of a particular arrangement under particular circumstances include the extent to which it:

- 1) allocates external risks (e.g. technology and market

- prices) to those parties most able to bear them;
- 2) provides appropriate incentives for project selection and management;
 - 3) minimizes contracting costs and risks, i.e., reduces the cost or likelihood of unilateral behavior by either party which may be detrimental to the other party; and
 - 4) matches required payments with the repayment potential of the activity being financed.

These four considerations are overlapping and, in some cases, conflicting. Therefore, the choice of financing arrangements for particular situations will depend on the importance attached to each consideration in that instance.

A key factor that distinguishes these four considerations from the usual focus on bargaining is that each one represents areas where there is potential for mutually beneficial contract improvements (non-zero sum), in contrast to the zero-sum situation often posited. In the case of risk allocation, one party may be much more exposed to technological or price risks than the other and hence at a comparative disadvantage in bearing these risks. In this case, both parties can improve their position by agreeing on an appropriate distribution of risks among them. With managerial incentives the same holds since foreign contractors are used, in part, in order to provide technology and experience in scarce local supply. This implies that the local enterprise is not in a position to fully specify all actions by the contractors. In such cases, the prime assurance to the local enterprise that the project will be selected

and managed appropriately is to structure a contract whereby it is in the contractor's own interest to be sure that the project is designed and managed as the enterprise would if it had comparable information and experience. Matching repayments with the project's cash flows reduces the potential for financial distress and, perhaps, default on the part of the party obtaining the funds -- a clear benefit -- and yet benefits the source as well since it leads to a more secure arrangement. This consideration is closely related to that of minimizing contracting risks which is of mutual advantage since such risks typically reduce the total potential benefits of the project. While the government might potentially gain from unilateral action in the future, the contractor, recognizing the likelihood of such action, will demand compensation in the form of reduced investment, greater control over the project or government, or a higher promised payment.

Each of these considerations, and their interactions, are discussed below.

Allocating Risks

Virtually all economic activity involves risk-taking and international finance can play an important role in increasing developing countries' ability to take strategic risks. Any financing arrangement with promised repayments contingent on the success of a project/enterprise or on the value of some variable critical to the success of a project/enterprise or the country as a whole, such as a commodity price, will shift risk to the foreign party.

Financing arrangements which shift risk generally will cost more

in terms of the expected future repayments than arrangement with fixed promised repayments. However, if the foreign party has a comparative advantage in bearing a particular risk, the increased cost will be more than offset by the benefit of the reduced risk.

The reason why the cost of risk-bearing finance is greater than that of riskless or nearly riskless credit is because investors individually and in the aggregate prefer relatively sure returns to highly uncertain returns and hence demand a premium — an adjustment in the expected return — for bearing risk. However, theory and evidence also show that this premium depends on the riskiness of a particular investment as a constituent of an investor's total portfolio. To the extent that some of the risks of a particular enterprise or project are not common to all economic activity, the so-called systematic risk of claims against that project will be less than their total risk. Thus, the risk premium will depend not only on the riskiness of the investment in question, but also on the extent to which its risks are common to other activities included in the investor's portfolio.

Countries, like individuals, are likely to be risk-averse. Therefore, they will demand a premium for bearing risk and, hence, will place a lower value on an activity with an uncertain future payoff with a given expected value than on an activity which will yield the same amount for sure. However, they will be concerned only with uncertainty at the national level, i.e. the contribution of the activity in question to the uncertainty of aggregate national income. In other words, only those risks which cannot be eliminated through diversification will have a negative impact on national

welfare.

To the extent that some of the risk of a particular activity which is not diversifiable within a particular country is diversifiable in an international context, its value will be greater abroad than domestically. Thus the country in question will gain from financing arrangements that shift risk abroad.

The principle of diversification is quite straightforward and extremely powerful. When two or more uncertain future cash flows are combined, the variability of the combined cash flows is less than that of the weighted average of the individual flows to the extent the individual flows are less than perfectly correlated, that is, to the extent to which they do not vary exactly in tandem.

While there are certain risks which apply to all activities which are directly or indirectly integrated into the world economy, such as that of a major world recession, the vast majority of risks which affect specific projects are at least in part diversifiable on a national level and to a greater extent internationally. For example, the risks of price fluctuations for certain key commodities only in small part reflect variations in world economic activity. They also reflect industry specific factors such as increased competition from substitutes or major shifts in supply due to new capacity or supply interruptions.

The internal growth of developing country markets is linked in part to aggregate world activity, but to a much greater extent depends on domestic political and economic factors. Even manufactured exports to industrialized countries, which would appear to be closely linked to aggregate activity, will demonstrate a sub-

stantial degree of independence since much of the variation for specific projects will reflect competitive considerations, the quality of management of export-oriented activities, and a host of other distinguishing factors.

From a national perspective, the importance of shifting risk through financing depends upon the strength of the comparative advantage of foreign sources of finance in bearing particular risks. This comparative advantage is most pronounced when a particular activity is a dominant factor in the local economy but plays only a minor role in the world economy. DC's that are dependent on one or a few commodities are the clearest examples, but those that seek to establish world-scale industrial activities that are large relative to the national economy also can gain substantially.

From the perspective of the individual enterprise, the advantage of risk shifting may be even greater. This is because financial markets and/or fiscal mechanisms for spreading risks within the local economy are often very incomplete.

Private entrepreneurs or managers of public enterprises will be limited in their ability to take on economic risks by their existing capital and the diversification of risks will be limited to the extent that firms diversify their own real activities. In fact conglomerate business groups substitute for capital market mechanisms in a large number of developing countries with private industrial structures.

A limited capacity for domestic risk spreading will result in higher required returns for risky undertakings than would otherwise be the case which will be incorporated in the cost of production. If

domestic production is protected, this cost will in large extent be passed on to consumers. However, if local firms must compete with transnational corporations (TNC's) in the local markets, they will be at a disadvantage because of the higher domestic cost of risk bearing and thus will bear these costs. Further, if the products must compete internationally, the costs will be borne primarily by domestic factor inputs.

Thus, where there is a limited capacity for domestic risk shifting, international flows of risk capital serve two functions. They will narrow the gap between domestic private and social risk perspectives and they will reduce the cost of bearing the risks which cannot be eliminated at a national level.

Providing Appropriate Incentives

The desirability of structuring financing in order to provide suppliers of funds with a stake in the appropriate selection and management of industrial projects depends on the extent to which they have some comparative advantage in these activities. This is likely to be the case whenever foreign suppliers possess a significant technological advantage or where the success of the project depends heavily on access to and success in foreign markets. It also will be true in cases where projects' success is largely a function of external political or economic circumstances over which foreign supplies of funds have some control.

Project risks can be reduced by assigning them to those countries (firms or financial institutions) with the greatest potential to control or manage them. The desirability of reducing risk through

providing incentives for proper project selection and management is self-evident. The ability to do so depends on the extent to which the risks inherent in particular economic activities are, in fact, controllable. Natural disasters or weather fluctuations are beyond the control of all parties, although their potential impact may be mitigated by proper activity design and management. Fluctuations in world economic activity, in contrast, are at best partially controllable by major industrial countries and not at all by developing countries. Risks of particular changes in world economic relationships which impinge on particular developing country industrialization strategies, such as increased protectionism, are controllable to a greater extent by industrialized countries, although even they are constrained by political realities. Risks associated with strategy selection, design, and management are manageable to a considerable extent by the parties responsible for these activities. Risks associated with internal conditions in developing countries are most directly controllable by DC governments, although they face numerous constraints on their power as well. Risks of commodity price fluctuations are controllable to some extent by producer associations or powerful producers in some cases, and virtually uncontrollable in others. Clearly, there exist many differences in the degree to which given risks are manageable and, thus, with regard to which entities can best manage them.

Matching Repayments. As noted earlier, the volume of financing obtained by developing countries is largely constrained by the

ability of these countries to repay under alternative sets of circumstances. Further, the desirability of any particular financing arrangement depends on the potential difficulty in making the promised payments. The more closely repayments are matched with expected foreign exchange proceeds available for debt service at an aggregate level or enterprise/project cash flows at a disaggregated level, the less the potential difficulty in repaying a given amount.

The importance of this consideration depends a great deal on the flexibility of the country's external financial situation and the volatility of its net foreign exchange receipts.

Minimizing Contracting Risks

A major impediment to international finance is the existence of sovereign or political risk. In the case of sovereign credit, this risk takes the form of a risk of rescheduling or outright default. In the case of enterprise-specific finance not guaranteed by the state, it encompasses the overall transfer risk plus a host of policy risks which jeopardize the firms' cash flows.

The existence of sovereign or political risk is likely to increase the cost of foreign finance and limit its availability. This is true even if cost is appropriately defined as expected cost, i.e. the cost implied by the promised payments less the anticipated defaults. One reason for this is that it is often nearly impossible to distinguish between bad luck and bad management in the case of default and, as a result, contracts are viable only when there are significant perceived penalties to default in the form of credit or trade sanctions.

Financing arrangements that increase the ability of countries or firms to make the promised payments under various circumstances, such as those that shift key risks to providers of finance or match repayments closely with expected proceeds, reduce the likelihood of default and the associated penalties and, hence, also reduce the significant costs of "financial distress" incurred by countries or firms seeking to avoid default under difficult circumstances.

Financing arrangements that provide a clearer distinction between bad luck and bad management also will increase the viability of international finance.

IV. MEASURES TO IMPROVE NON-SPECIFIC INTERNATIONAL FINANCE

Non-specific financing arrangements for industrial development are undistinguishable from non-specific financing for any other purpose. Thus, our comments apply to DC's total, external, aggregate-level finance. There are two dimensions in which major improvements appear possible. The first is an improvement in the time pattern of debt service, the second the shifting of specific risks via aggregate financial measures.

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 is 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 on the outstanding rollover loan, whereby the borrower pays interest in each period keyed to principal 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.* 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. In 1981, for example, the volume of international trade measured in real terms fell slightly while debt service rose substantially, primarily due to an increase in market interest rates. This acceleration of real repayments would not be a problem if lenders recognized that a large part of the interest payment is a reduction in real principal and automatically re-lent this amount. This doesn't appear to be the case,

*See, for example, Lessard and Wellons [1979] and Kincaid [1981]

though, as net private financial transfers to DC's generally fall as interest payments rise. In other words, precisely when the capacity to pay is smallest, the debt service requirements are greatest. A number of developing countries have encountered substantial difficulty in meeting repayment obligations and a number appear to be in extremely dangerous situations. The problem is likely to be even more serious in the future since the World Bank has joined private lenders in charging floating rates on its loans.*

This problem can be ameliorated in several ways. The first and simplest is for major international lenders, perhaps led by the World Bank, to adopt debt service formulae that call for roughly constant real debt service. One way to do this would be for them to lend at a floating rate, but compute debt service in the first year of the loan so that the total loan would be amortized over its maturity of, say, 10 years at a rate of 10%. Since this rate would not even cover the interest due at current rates, the shortfall would be automatically rolled over and a new payment would be computed so as to amortize the new principal balance over the remaining nine years of 10 percent. The same procedure would take place in each year of the loan and, as a result, loan payments would rise in nominal terms by the difference between the rate used to compute the payments and the rate actually charged on the loan. **The payments would vary somewhat over time due to fluctuations in the real interest rate, but much less than with present arrangements.

*New York Times, July 4, 1982, "World Bank Plans Variable Interest."

**The scheme is identical to the constant payment factor mortgage suggested by Modigliani and Lessard [1975]. See Goodman [1982] for a recent variant.

An alternative which would provide for even smoother real payments is a price level index-linked loan.* 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 and the pricing of the bonds. If price levels for one or several industrialized countries were used, different borrowers would want different base currencies or combinations of currencies. It is possible, however, that a large number of DC's would find a standard combination — such as a price-level adjusted SDR —

*For recent discussion, see Williamson [1981].

attractive. It is unlikely that DC borrower interest alone would justify this innovation, but such an instrument might also serve the needs of OPEC surplus countries concerned with maintaining the purchasing power of their external claims.

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 downturns in world economic networks, decreases in the relative prices of key exports or increases in the relative prices of energy or other key imports, or of purely local economic difficulties.

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 or 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.

Increased flexibility along various dimensions would help DC's 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.

Shifting Risk through Non-specificity

While non-specificity 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. They are of particular interest since they involve mechanisms which have not been employed to any significant extent in North-North transactions and hence call for new instruments or institutions.

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. Even as they increase the domestic value added of exports based on these commodities, the commodity component

will remain a significant element in total revenues and, in many cases, an even larger element in terms of its contribution to the over-all variability of export proceeds.

The most promising mechanisms for most countries heavily dependent on a small set of products appear to be commodity-linked bonds that are narrowly-drawn contracts which shift only the risks of commodity price fluctuations, risks which by and large are outside their control. Thus they also reduce contracting risks. This is an advantage from the producer countries' viewpoint not only because it reduces the cost of finance but also because it allows them to shift risk without shifting control. From a capital market perspective, these instruments could provide an attractive return for the risks they involve. Investors would still face the risk that the Government might default on the contract, but this risk is not likely to be any greater than that of straight bonds.

Developing countries which choose industrialization strategies premised on a significant volume of manufactured exports are exposed to fluctuations in export revenues due to fluctuations in aggregate world economic activity, changes in the conditions of international trade including industrialized country protectionism, and changes in competition from other exporters. However, to a large extent, fluctuations in trade volume also will depend on factors over which the developing country has at least nominal control. These include the whole array of domestic economic policies which alter the competitiveness of exports as well as strategic and tactical choices made regarding exports. As a result, it is difficult to envisage

non-concessional aggregate financial mechanisms which would shift the risks of trade fluctuations to outsiders on terms acceptable to the developing country.

One possible innovation would be a trade-linked bond, but its terms would have to be drawn very narrowly to make it acceptable to foreign investors in the absence of substantial direct control over export activities. A trade-linked bond could carry provisions similar to a cumulative preferred share in which investors would be entitled to a particular periodic cash payment (which could be a dividend, interest, or principal payment depending on the specific contractual vehicle) as long as it did not exceed a specific proportion of the country's export proceeds of particular products to particular countries. Any shortfall would be carried forward at a commercial rate of interest, but its repayment would fall under the same constraint.

The obvious complexity of such a contract as well as the numerous mechanisms for the issuing country to violate the spirit of the contract without legally defaulting suggest that it is a highly unlikely prospect on a stand-alone basis. However, it might be feasible as part of a new (or expanded) international financial intermediary involving some degree of multilateral industrialized country concessionary support.

V. MEASURES TO IMPROVE PROJECT OR ENTERPRISE LEVEL FINANCING

International financing at a project or enterprise level is likely to be superior to non-specific 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. As noted earlier, foreign suppliers of finance are likely to have a comparative advantage in bearing key risks whenever these risks loom large in the local economy and/or whenever the local capital market or social system for spreading risk is incomplete.

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. 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, exchange rate policy, and so forth. 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, such as Mexico's Petrobonds, is even more narrowly defined and, hence, requires less foreign control. Of course, it requires the existence of a widely tradable commodity for which an external price is readily available. Further, it does not provide foreign investors with much 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."

In addition to the aggregate risks of fluctuating commodity prices and trade volumes, most developing countries are at risk with regard to the selection and execution of particular commercial strategies as well as the design and operation of specific industrial facilities. Such risks should be allocated in a way to provide incentives to perform on the part of foreign advisors or suppliers and, in the case

of large-scale ventures, or ventures exposed to certain risks that cut across a large segment of the national economy, to take advantage of the greater ability to diversify these risks internationally.

Direct foreign investment, of course, performs this function since the parties responsible for the choice and operation of the facility as well as the selection and execution of strategy are directly at risk. However, open-ended direct foreign investment is not a feasible strategy for activities undertaken by the public sector. Further, even for private activities it may be undesirable if there are significant differences between the private and social costs and benefits of the activity in question or if DFI terms are viewed as unfair because of the market power of TNC's. Finally, even if DFI is acceptable and feasible, a developing country might want to acquire technology or management from non-TNC sources, the East and South as well as smaller firms from the North, and as a result requires an alternative mechanism.

Portfolio investment serves to transfer risk but is relevant only in those economies with a large domestic private sector and a well-developed capital market. Further, it does little with respect to managerial incentives since no managerial contract is involved.

This problem of incentives has received widespread recognition and a variety of different mechanisms have been proposed to deal with it. Many of these take the form of performance guarantees provided by suppliers and backed by performance bonds or by private or government-backed insurance mechanisms performing the same function. Such mechanisms can play an important role and have received considerable attention in various industry consultations. However,

they cannot provide a complete solution in those cases where precise performance requirements cannot be spelled out in advance or where those factors relevant to the project's success which are under the supplier's control are intertwined with factors under the country's control. Such cases call for financial mechanisms which put the foreign suppliers of technology, management, or capital goods at risk in the sense of sharing in some specified measure of the project's performance.

Quasi-equity financing arrangements such as production shares often provide a desirable compromise between 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.

Such quasi-equity flows, along with possible increases in portfolio equity investment, could be of particular importance to developing countries which assign a major role in industrialization to private enterprise. If domestically-based firms are to take an increasing role, they must have access to mechanisms to benefit from the international distribution of risks along the same lines as their major competitors in home and world markets, the transnationals. In the absence of such steps, TNC's will continue to have an advantage which can be offset only through restrictions on their operations which may slow and distort the over-all process of industrial development and which will limit the socially desirable effect of international risk spreading.

In those few developing countries with well organized and

relatively active local capital markets, the simplest mechanism to increase portfolio equity flows is to open local capital markets to foreign investors. This has been resisted in most cases on a variety of grounds including a fear of "hot money" flows which might destabilize either the local capital markets or the foreign exchange markets, desires to limit the foreign control of local industry, and desires to preserve investment opportunities for local investors. The first two objections are undoubtedly valid in part, but often are drastically overstated. The third is more complex and subtle. It is true that limiting capital inflows preserves investment opportunities for local capital. However, it should be recognized that while it protects local capital, it is a tax on locally-owned industry and a source of protection or advantage for MNC's relative to local firms.

The questions of market impact and foreign control can be dealt with to a large extent by regulating the magnitude and timing of inward portfolio investment and limiting the percentage ownership of any particular firm's shares by a single investor and/or by foreign investors in aggregate. Such measures are common even among industrialized countries, although substantial efforts are underway to liberalize North-North portfolio flows. It would appear desirable for developing countries with a private market orientation to adopt a common policy or code of conduct towards foreign portfolio investment. Such a policy would avoid competition among developing countries for such flows and, as a result, improve the terms of these flows. It also could serve as a common code of foreign investor rights and obligations which would increase the credibility of such arrangements to foreign investors.

An alternative mechanism which performs a similar role is for developing country firms to list their shares on major industrialized country stock exchanges. This also would require changes in developing country policies and regulations in many cases, but would clearly put developing country firms able to avail themselves of this mechanism on a more equal financial footing with TNC's. However, it is relevant only to those firms which are large enough to justify the initial costs of gaining a market following and promise a sufficient volume of trading to justify foreign listing. It would not benefit the large majority of developing country firms and, unless accompanied by mechanisms providing them with similar advantages, would discriminate against them in favor of the larger firms. Further, it would tend to shift underwriting and trading activity abroad and, as a result, it might hamper the development of domestic capital markets.

Two new financial institutions to facilitate portfolio flows also merit consideration. One is an investment trust based in a single developing country, such as the recently launched Mexico Fund, which would allow foreign investors to participate in a selected set of local securities without the necessity of allowing them direct access to the local capital markets. The other is the international investment trust proposed by the International Finance Corporation and others which would provide investors with an internationally diversified package of developing country securities. On the positive side, either mechanism would allow developing countries to more easily control the nature and volume of foreign portfolio investment flows. Further, these institutions could to some extent

make up for a relative lack of development of local capital markets. On the negative side, however, both mechanisms impose an additional layer of intermediation which might cause more problems than it would solve and which is likely to reduce rather than increase foreign investor confidence. In particular, if either type of trust is subject to national or multinational political control, its securities are likely to be perceived as carrying more political risks than the underlying assets.

A compromise proposal which would provide many of the same advantages to developing countries without some of the same drawbacks from the perspective of investors would be a national or international regulatory framework under which private financial institutions would create trusts or mutual funds whose shares could be sold to foreign investors. Such a framework should be based on the co-operation of industrialized country agencies charged with investor protection and developing country authorities responsible for capital market and foreign exchange policies. It would allow far greater investor flexibility than publicly-sponsored national or international trusts, but greater developing country control over foreign investment than would be the case if broad direct access to local markets was allowed. Any of these mechanisms for increasing portfolio equity flows must be accompanied by measures to develop viable local capital markets. The prospect of substantial international flows, though, might serve to spur such developments. Of course, direct foreign investment will continue to play an important role.

Most of the measures described are aimed at improving North-South

financing arrangement flows but would tend to attract South-South flows as well. However, the South-South case differs in that flows are likely to be limited by controls on outward investments as well as on inward investment. A strong case can be made to developing country Governments that allowing a greater interchange of risk capital flows will be mutually beneficial. An especially important point in this regard is that risk capital flows, in contrast to flows of debt capital, can lead to major benefits even if inward and outward flows balance out, in other words, even without net transfers of resources. This recognition, coupled with the need to strengthen the risk capital base of local firms in order to allow them to grow more rapidly in their home markets or expand on a South-South basis, could open the door for South-South co-operation.

One mechanism which has been proposed and studied in depth is a regional investment fund which would allow private investors based in developing countries to participate in the growth of firms based in other countries of the region. As with funds aimed at increasing North-South flows, it has negative as well as positive aspects. A regional investment union, which would allow the formation of private investment vehicles under regional regulations including investor protection provisions but also allowing Governments some control over the volume and nature of portfolio investment flows would appear to offer an attractive compromise. Its attractiveness to public authorities would be greatly increased if it were coupled with mechanisms to liberalize regional direct investment flows through the formation of regionally chartered corporations. The investment union would provide the capital market base for these firms.

VI. SUMMARY AND CONCLUSIONS

The structure of DC external finances is dangerously tilted toward non-specific private credit which exposes DC's 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 non-specific credit can be reduced through innovation in the repayment pattern on floating rate debt. Now that the World Bank has shifted to floating rates, it should take the lead in such innovation in order to live up to its role as a development finance institution.

Second, to the extent that a DC's activities are substantially concentrated in a few sectors, non-specific financing arrangements should be exploited to shift risks such as commodity price or trade fluctuations to world financial markets. The petrobonds issued by Mexico are examples of such instruments.

Third, DC's 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 control.

Fourth, those countries relying on private enterprise for a major share of industrial development should take steps to increase the flow of foreign portfolio investment to local firms.

All four steps have the quality that they can result in gains for DC's 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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