

RECYCLING OPEC SURPLUSES TO DEVELOPING COUNTRIES: PROBLEMS AND POSSIBILITIES

Graham Bird

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Recycling OPEC Surpluses to Developing Countries : Problems and Possibilities

by Graham Bird ¹ (University of Surrey)

The purpose of this article is to examine ways in which finance may be recycled from surplus to deficit countries. In any international financial system where the correction of balance of payments disequilibria is not instantaneous a recycling problem exists. Where the sizes of the disequilibria are small and adjustment to either a deficit or a surplus is reasonably rapid the problem need not be significant and may be fairly easily remedied by the activities of private international financial intermediaries or by the intervention of an official agency such as the International Monetary Fund. In circumstances other than these, however, recycling may become less manageable. In the latter years of the Bretton Woods system, for example, when adjustment was anything but rapid, recycling frequently occurred in the opposite direction to that required for narrow balance of payments reasons with capital moving from deficit to surplus countries in anticipation of a change in the relative price of currencies. Following the breakdown of the Bretton Woods system and the first massive increase in the price of oil in 1973, an important aspect of the recycling problem has been that of transferring financial resources from those OPEC countries with balance of payments surpluses to non oil developing countries with deficits. Although this paper concentrates on this aspect of the recycling problem many of the issues raised are of rather broader relevance.

Section 1 of the paper examines the need for recycling and the size of the problem. Section 2 discusses what has happened in the past, and analyses the factors that will determine the size of any future recycling problem. Section 3 discusses, in principle, ways in which the instruments of recycling

might be improved in order to encourage more to take place. Section 4 discusses whether the existing institutional framework is adequate to cope with the problem or whether significant changes are needed. It is not the purpose of the article to investigate how the price of oil is determined, though the proposals discussed could possibly exert an indirect influence on this. It is implicitly assumed throughout the article that the placement of OPEC funds is a largely economic phenomenon that may therefore be legitimately discussed in economic terms.

1. The Need for Recycling

In an important sense recycling never appears as an ex post problem since actual deficits do not go unfinanced and the revenue associated with surpluses is always used in some way. Instead the speed of adjustment and the sizes of deficits and surpluses change to comply with the recycling capacity of the international financial system. Merely to observe that deficits are financed then does not show that the associated level of recycling is in any way optimal. But what does the concept of an optimal level of recycling mean? This question may be approached in a number of stages. First, assume that the world may be divided into two groups of countries: a deficit group and a surplus group.² From the viewpoint of the deficit group there is a choice relating to the combination of adjustment speed and financing. The larger the extent to which the deficit is financed the less rapid need be the speed of adjustment. Assuming that the monetary authorities in deficit countries act as if to maximise inter-temporal satisfaction from consumption they will endeavour to equate the marginal rate of substitution between current and future consumption with the marginal rate of transformation between the sacrifice of current consumption (i.e. adjustment) and the sacrifice of future consumption (i.e. financing), and this will simultaneously define their optimum level of financing and adjustment speed.

Similarly from the viewpoint of surplus countries the optimum combination of adjustment speed and reserve accumulation will occur where the rate at which it is possible to convert future spending (i.e. reserves) into current spending (i.e. adjustment) is equal to the social discount rate.

The entire system will be in equilibrium and require zero recycling in the unlikely event that the optimum in each group of countries involves an infinite speed of adjustment combined with zero financing in the deficit group of countries and zero reserve accumulation in the surplus group. Assuming, however, that the respective optima actually involve some financing in deficit countries and some reserve accumulation in surplus countries two questions arise. First, do the demand for and supply of financing match, and, second, does the capital market operate in such a way as to facilitate the associated recycling? If the answers to both these questions are in the affirmative then the level of recycling may in a sense be viewed as optimal. What happens though if either the optimum deficit does not equal the optimum surplus, or the capital market does not bring about the required transfer of funds? One possibility is that the rate of interest associated with borrowing and lending will adjust so as to equate demand and supply. Thus in the case where initially the optimum deficit exceeds the optimum surplus the rate of interest will rise thereby encouraging deficit countries to substitute out of financing and surplus countries to substitute into reserve acquisition. Similarly where initially the optimum surplus exceeds the optimum deficit the rate of interest will fall. Through such interest rate changes the market will tend to maintain an equilibrium amount of recycling. Given an efficient recycling mechanism and assuming that balance of payments adjustment occurs exclusively through changes in the level of domestic expenditure, variations in the equilibrium amount of recycling will not exert any impact on the global level of economic activity since such variations will merely alter the distribution of a given level of aggregate expenditure between surplus and deficit countries. Thus an increase in the size of the optimum balance of payments

disequilibrium will tend to shift current expenditure towards deficit and away from surplus countries.³ Third party countries may, of course, not be indifferent as to the source of expenditure if the expenditure patterns of deficit and surplus countries differ.

However additional complications enter the analysis as a result of explicitly including the rate of interest to maintain equilibrium between the demand for finance (deficits) and the supply of finance (surpluses) since it has already been implicitly included as a determinant of individual countries' choices of the optimum combination of adjustment and financing and the implied optimum amount of recycling. In the context of individual deficit and surplus countries it was assumed that the rate of interest is exogenous. While this may be valid for individual countries it is clearly invalid in a global context where the rate of interest becomes endogenous. If individual borrowers and lenders are price takers with respect to the rate of interest the question reduces to one of selecting the optimum rate of interest. As noted above, variations in the rate do not affect world net worth since additional debt payments in one part of the system will be matched by equivalent additional receipts in another, but where, as is likely, borrowers and lenders are not perfectly symmetrical in their responses to interest rate changes it is unlikely that the world will be indifferent between various interest rate levels. Since there will be a range of equilibrium interest rates it emerges as illegitimate to define the optimum rate simply in terms of whether it is consistent with equilibrium. From amongst this range how can the optimum rate be selected? One approach would simply be to opt for the rate that maximizes world output and employment.

The above discussion implies a flexible rate of interest. In practice it is possible that it is insufficiently flexible either to establish or maintain equilibrium. Starting off from a situation where the target deficit exceeds the target surplus, either deficit countries will have to accept a smaller

deficit than they would ideally like or surplus countries will have to accept a larger surplus. Given the asymmetry of the international financial system which puts greater pressure on deficit countries to adjust than on surplus countries, the likelihood is that the effective constraint on the size of recycling will be the size of the target surplus. In this case, as well as in the case where the capital market performs an imperfect recycling function even though target deficits and surpluses are equal, the actual amount of recycling will tend to be sub-optimal.

The fundamental issue arising from the above discussion is whether the quantity of recycling alters to make consistent the balance of payments targets of different groups of countries or whether it is the ability to reach such targets which alters to be consistent with the capacity of the system to recycle. As already noted, published ex post balance of payments data do not enable this distinction to be made. Though no doubt some insight might be provided by building complex and elaborate models of deficit and surplus groups, these would need to allow for the fact that current expenditure might be on investment (i.e. future consumption), and that the response to disequilibria might take the form of variations in exchange rates and in rates of inflation. They would also require the measurement of variables that are notoriously difficult to measure such as the preferences of monetary authorities. It is not immediately obvious that the benefits from such an exercise would outweigh the costs. Some indication of the historical optimality of recycling may however be gleaned by evaluating the symptoms that might be expected to be associated with a sub-optimal level of recycling against the evidence. As implied earlier, these include an excessively rapid rate of adjustment in deficit countries, and a generally demand deflationary bias in the world economy. Table 1 shows that, apart from oil exporters, per capita growth rates for most countries fell in the period 1970-80 compared with 1960-70. Furthermore, considerable evidence has been collected by Dell and Lawrence⁴ to suggest that during the mid 1970s, and because of the unavailability of

financing, a number of low income countries had to undertake rapid adjustment with a marked adverse effect on economic welfare. Evidence presented by the OECD confirms that during the period 1970-78 fourteen low income countries and twelve middle income countries, excluding OPEC and the Newly Industrialised Countries, experienced a fall in their real per capita GNP.⁵ While it is true that such evidence may suggest an inequitable distribution of recycling rather than a sub-optimal total, it is consistent with sub-optimality. It is quite possible that larger balance of payments disequilibria and a larger amount of recycling would have generated a higher level of world economic welfare. 6

Table 1

<u>Rate of Growth of G.N.P. per head per cent per annum</u>		
	<u>1960-1970</u>	<u>1970-1980</u>
Low income oil exporters	1.6	0.9
Middle income oil importers	3.6	3.1
Industrialised countries	3.9	2.4
Oil exporters	2.8	3.5

Source: World Development Report, 1980, World Bank, August 1980, Table 2.8

2. Past Recycling Operations

Before examining ways in which a larger amount of recycling might be facilitated it is worthwhile taking a closer look at the ways in which recycling has actually been achieved in the period since 1973. The picture is summarized in Tables 2, 3 and 4. Table 2 provided information on the balance of payments position in OPEC, industrial and non oil developing countries during the 1970s and gives an idea of the size of the ex post recycling problem. It also shows how the nature of the recycling problem changed during the 1970s. Over the period 1974-78 the size of the OPEC

surplus fell dramatically, while at the same time industrial countries moved from deficit into surplus. The only consistent factor was the enduring deficit in non oil developing countries. The changes shown in Table 2 were brought about by an almost fivefold expansion in the nominal value of OPEC imports and a reduction in the growth of demand for oil imports in many industrial countries, excluding the United States. By 1980, however, following further increases in the price of oil the OPEC surplus had been re-established.

Table 2

<u>Balance of Payments on current account : Surplus (+) and Deficits (-)</u>			
\$billion			
	<u>Oil exporting countries</u>	<u>Industrial countries*</u>	<u>Non oil LDCs</u>
1973	+6.6	+18.2	-11.3
1974	+67.8	-13.2	-36.9
1975	+35.0	+16.2	-45.8
1976	+40.0	-2.1	-32.1
1977	+31.7	-5.1	-28.0
1978	+5.0	+30.8	-36.2
1979	+68.4	-10.6	-54.9
1980	+115.0	-51.5	-68.0

* excludes "official transfers"

Source: IMF, World Economic Outlook, Table 11, Washington D.C., May 1980.

Tables 3 and 4 provide information, from the demand side, concerning the ways in which recycling to the non oil LDCs has been achieved. The principal channels of recycling emerge as having been the private Eurocurrency market, various forms of bilateral or multilateral aid and the IMF. Apart from the possible sub-optimal level of recycling there are other reasons to believe that the mechanisms by which recycling has been achieved are unsatisfactory from the viewpoint of both lenders and borrowers.

Table 3

The financing of non-oil developing country deficits in the 1970s

\$billion

	1973	1974	1975	1976	1977	1978	1979	1980
<u>Need for Finance:</u>								
1. Current a/c deficit	11.3	36.9	45.8	32.1	28.0	36.2	54.9	68.0
2. Accumulation of reserves	9.7	2.1	-2.0	12.8	12.0	18.0	11.6	8.5
3. TOTAL financial requirements = 1 + 2	21.0	39.0	43.8	44.9	40.0	54.2	66.5	76.5
<u>Sources of finance:</u>								
4. Financing through transactions that do not affect net debt position (1)	9.2	12.2	11.4	11.7	13.6	15.3	19.4	20.5
5. Net long term borrowing - official	5.5	9.6	11.4	10.2	14.4	16.3	15.9	19.1
6. Net long term borrowing - private	6.4	9.6	14.9	17.2	17.0	21.0	26.2	26.9
7. IMF credit and short term borrowing from other monetary authorities	0.3	1.6	2.4	4.3	0.5	0.7	0.7	1.8
8. Other short term borrowing and errors and omissions	-0.4	5.5	3.7	2.5	-5.5	0.9	4.3	8.7

Source: World Economic Outlook, op cit. Table 19.

- (1) Includes net direct investment, unrequited transfers received by governments, SDR allocations and valuation adjustments.

Table 4

<u>Significance of Various Sources of Finance for Non-oil Developing Countries (in per cent)</u>			
	1973	1975	1980
1. Direct investment and other non-debt affecting transfers	43.8	26.0	26.8
2. Net long term borrowing - official	26.2	26.0	25.0
3. Net long term borrowing - private, of which	30.5	34.0	35.2
- financial institutions	19.0	21.0	21.2
- bond issues	2.4	0.5	
- suppliers credit	1.9	2.5	14.0
- other sources	7.1	5.5	
4. Use of Fund credit and borrowing from other monetary authorities	1.4	5.5	2.1
5. Other short term borrowing and errors of omissions	-0.2	8.4	13.1

Sources: World Economic Outlook, op cit, Table 19.

Note: Figures may not sum to 100 because of rounding.

Eurocurrency lending is short term in nature and has been heavily concentrated in only a few of the more creditworthy developing countries. In 1979 low income developing countries received less than 2 per cent of total Eurocurrency credits. Indeed for the large majority of non oil developing countries the conclusion may be reached that the private sector has been an insignificant source of finance. Even for those LDCs that have attracted commercial finance the continuing availability and price of it has been uncertain.

Table 5

Aid flows to developing countries and multilateral institutions 1975-1979

(billions of dollars)

Country Group	1975	1978	1979(a)
DAC (b) (as percentage of GNP)	13.8 (.36)	20.0 (.35)	22.3 (.34)
OPEC (as percentage of GNP)	5.5 (2.71)	4.3 (1.35)	4.7 (1.28)
Centrally planned economies and other (c)	0.6	1.1	1.0
TOTAL	19.9	25.4	28.0

(a) Preliminary figures

(b) Reporting by DAC members has changed to a uniform system (see the technical notes for Table 16 of the World Development Indicators). Under the old system of reporting, the 1975 figure was \$13.6 billion, the 1978 figure \$18.3 billion.

(c) Includes OECD countries that are not members of DAC.

Source: World Development Report, 1980, World Bank, August 1980, Table 3.6.

Similarly a comparison between Tables 5 and 1 shows that OPEC aid has only made a relatively small contribution to the recycling process even though when expressed as a proportion of GNP and by comparison with DAC flows OPEC aid performance has in general been good. Again, however, the distribution of OPEC aid has been skewed in favour of a limited number of Arab and Muslim countries.

The overall contribution of the IMF to the recycling of OPEC surpluses has in quantitative terms been very small even though a limited number of developing countries have drawn relatively large amounts from the Fund. Many developing countries have been reluctant to turn to the Fund because of what they see as the inappropriateness of the specific form of conditionality to which they would become subjected. This reflects the Fund as a short term balance of

payments stabilization agency while developing countries tend to see their problems as being of a longer term and structural nature.

So much for the past; the future size of any recycling problem cannot be estimated with any significant degree of confidence since it depends on a number of imponderables such as the real and relative price of oil, the short and long run price and income elasticities of demand for oil, the nature of the macroeconomic policies that are pursued in the major industrial countries and the associated level of world economic activity, and the degree to which oil producing countries expand imports. However, on the assumptions first, that the real price of oil does not drop much below its 1980 level, second, that OPEC countries are either unwilling or unable to expand imports at a rate as rapid as that achieved during the 1970s and, third, that the demand for oil remains approximately constant or falls only gradually either because of a shift towards rather more expansionary macroeconomic policies in an attempt to reduce unemployment, or because of a failure to conserve energy or to develop alternative energy sources, it seems unlikely that the need for recycling will disappear. The existence of a continuing and large OPEC surplus combined with unwillingness amongst developed countries to accept anything other than a short run deficit implies a continuing and large deficit for the non oil developing countries and a continuing need for recycling. In the light of the deficiencies associated with current recycling mechanisms which seem unlikely to be remedied,⁷ attention needs to be focussed on ways in which such mechanisms might be improved. In order to ensure the acceptance of reforms, however, they need to confer benefits on both parties involved in the recycling process, borrowers and lenders.

3. A New Instrument for Recycling

Current recycling mechanisms seem to be deficient in a number of ways. This section examines the possibility of devising a new recycling instrument with

features that would make it attractive to both potential borrowers and lenders and might therefore be expected to facilitate recycling. Given the long term and structural nature of their balance of payments and development problems, non oil developing countries would no doubt prefer to borrow on a long term programme basis rather than the short term basis on which most of their current borrowing is undertaken. Apart from this, many of the debt problems faced by certain non oil developing countries are more a function of the short term maturity of the debt and the frequently variable interest rate rather than the level of debt itself. Short maturity need not necessarily constitute a problem if the debt may be rolled over on constant terms, but a roll over exercise may be taken as an opportunity to make the terms of a loan harsher either by raising the rate of interest or the degree of effective policy conditionality or both. Short maturities by their very nature also increase the extent of uncertainty to which borrowing countries are exposed, both with respect to the availability as well as the cost of finance. Increasing uncertainty can hardly fail to exert an adverse effect on the ability of potential borrowers to plan economic development. From the borrower's point of view then a system based on short term credits is inherently unstable.

In an environment of high and, more significantly, variable inflation the attraction of short term contracts to lenders is, of course, not difficult to see. Broadly speaking short term loans enable the nominal interest rate to be adjusted to compensate for the effects of unexpected inflation. Considerations of both return and risk will mean that lenders will favour short term lending over long term lending for as long as the nominal interest rate is invariant throughout the duration of the contract. With a fixed nominal interest rate and an accelerating rate of inflation the real rate of interest will clearly fall, while with a variable rate of inflation it will vary. To encourage surplus countries to lend long term some form of index linking is therefore almost certainly required. This could be achieved by tying the nominal rate of return to an index of world inflation.⁸ Guaranteeing a fixed real rate of

return to lenders may be the price that borrowers have to pay in order to induce the long term lending that would be more appropriate for them. A question is whether deficit countries would regard this as a price worth paying. There are reasons to believe that they may well do. Not least because it is a price that they may effectively already be paying for short term loans which in other respects they regard as inferior. What the actual real rate of interest would need to be would depend on the strength of demand for finance in deficit countries as well as the supply of finance made available by surplus countries, but it might be expected to be considerably below the real marginal productivity of capital in developing countries.

Another aspect of lenders' risk in international deals involves possible variations in the relative price of the currency in which the deal is denominated. A lender will tend to lose if the currency of denomination is subject to depreciation. An individual surplus country may endeavour to cover this risk by ensuring that total lending is denominated in a range of currencies, though this may involve the acceptance of a lower overall rate of return. Alternatively, any bias in the currency denomination of loans may be made to match a similar bias in the pattern of payments obligations for which imports may be taken as a proxy. Except to the extent that receipts and payments may be unsynchronised inter-temporally, the problem of exchange risk will evaporate if all lending and importing is conducted in the same currency or similar specific currency amounts. To bring such a situation about in circumstances where, for reasons other than the minimisation of exchange risk it would not be chosen, would involve surplus countries in a loss of economic welfare either by having to adopt a non optimal pattern of imports or a lower overall rate of return on investments. For surplus countries that have a geographically diversified pattern of imports the problem of exchange risk may become quite significant. Since the ability of surplus countries freely to choose the currency denomination of their lending is constrained by the willingness of other countries to allow

their currencies to be used as reserve currencies a question arises as to whether the problem of exchange risk may be dealt with in some other way.

In principle there are two ways in which the problem can be remedied. The first, as discussed above, is to express individual contracts in individual currencies but to hold a blend of loans denominated in different currencies. A surplus country would thereby effectively have its lending denominated in a basket of currencies and, as a result, the exchange risk of total lending would fall below the average exchange risk associated with each individual loan. The simpler alternative is initially to express all loans in terms of the average value of a basket of currencies. The international community already possesses the Special Drawing Right which does have its value determined by the average value of five currencies: the dollar, the pound sterling, the franc, the mark and the yen. The question from the viewpoint of OPEC investors is then whether the weights attached to these currencies in calculating the value of SDRs match the relative importance of the currencies in the import pattern of OPEC. Some indication is given by Tables 6 and 7. Table 6 gives the SDR weighting scheme and Table 7 shows the nominal month to month instability in the currencies of the countries with which OPEC trades (weighted separately by imports and by total trade) as against the SDR and the dollar over the period 1973-79. It is clear that the SDR gives much greater exchange rate stability than the dollar in every instance.

Table 6

	Weighting systems in currency baskets			
	Original SDR	Old SDR (1977-80)	New SDR (1981)	ECU
US Dollar	100	33	42	0
German Mark	0	12.5	19	33
British Pound	0	7.5	13	13
French Franc	0	7.5	13	20
Japanese Yen	0	7.5	13	0
Others	0	32	0	33
	100	100	100	100

Source: IMF Survey (various)

Table 7

Short term instability of OPEC trading partners' exchange rates
(import and trade-weighted), vis-a-vis SDR, ECU and US Dollar, 1973-79.

April 1973 to June 1979 inclusive

	<u>SDR*</u>		<u>ECU</u>		<u>US Dollar</u>	
	<u>IMPORT</u>	<u>TRADE</u>	<u>IMPORT</u>	<u>TRADE</u>	<u>IMPORT</u>	<u>TRADE</u>
Saudi Arabia	0.5	1.8	7.9	5.2	14.8	21.4
Kuwait	3.8	3.4	6.0	6.6	25.9	24.4
Iraq	2.3	1.3	3.6	8.0	24.7	14.3
UAE	3.6	4.3	4.5	4.5	26.7	28.7
Iran	3.1	2.8	4.4	4.2	25.9	25.3
Libya	6.3	1.1	1.4	4.9	34.6	18.3
Nigeria	4.5	0.3	1.3	6.3	31.4	15.0

Instability is measured as the standard error (squared) of an exponential trend fitted to monthly observations on effective exchange rates. This instability measure was then decomposed into:

- (i) that part which would have occurred if a peg had been retained vis-a-vis each of the possible numeraires (SDR, ECU, dollar) and
- (ii) the rest

The former, which is what is recorded here, therefore describes the degree of effective exchange rate instability which is attributable to fluctuations between the other currencies in the relevant basket (import or trade weighted) and the numeraire.

* The SDR basket employed for this calculation is that which was in force in the 1977-80 period.

Source: These data were calculated by David Brodsky and Gary Sampson of UNCTAD for UNDP/UNCTAD Project INT/75/015.

Alternatives to the SDR as a medium of account might be the European currency unit or the specific baskets against which some individual OPEC countries peg their own exchange rates. However, in terms of minimising exchange rate instability Table 7 also shows that the ECU is generally inferior to the SDR. This is clearly the case for Saudi Arabia, Kuwait, Iraq, the UAE and Iran which together account for the vast majority of the OPEC surplus, while in the cases of Nigeria and Libya the relative stability of the two baskets depends on which weighting scheme is used; with import weighting the ECU is more stable than the SDR while with total trade weighting the SDR is more stable.

To a considerable extent Table 7 probably overstates the exchange risk gain from SDR denomination since it measures short run instability whereas it has already been established that developing countries would prefer long term loans for which exchange rate instability may well be less. It remains true, however, that exchange rate movements do occur over the long run and that the denomination of long term assets in SDRs would therefore serve to reduce the exchange risk associated with such lending.⁹

The above analysis has in effect defined the key features of a new recycling instrument; it is a long term bond with a maturity of perhaps fifty years, denominated in SDRs and yielding a guaranteed real rate of return. However, a number of questions remain to be answered. First, what would be the institutional arrangements under which the bond would be issued? Second, how could the problems facing low income and uncreditworthy countries be remedied? It is to these questions that the next section is addressed.

4. Method of Issue and Institutional Arrangements

While non oil, deficit, developing countries would prefer to borrow long term rather than short term, Table 4 confirms they have had singularly little success in realising this objective. Bond issues by LDCs totalled only \$3.9 billion in 1979 and these were highly concentrated in a very narrow range of higher income LDCs. International capital markets abound in regulations and developing countries have encountered immense problems in gaining access to them.¹⁰ There seems little reason to suppose that the international capital market will provide long term recycling in the future unless changes are made. Part of the problem no doubt results from the risk as perceived by surplus countries in lending on a long term basis to one individual developing country. In order to reduce this aspect of risk a case may be made for bonds to be issued by a group of developing countries.¹¹ Acting in groups, developing countries may find it both easier and cheaper to borrow since the risk facing lenders would tend to be reduced. There are a number of criteria upon which the grouping of borrowing countries could be organised. In principle, if the aim is to reduce lenders' risk it should be so arranged as to maximise the degree of negative correlation between instabilities in individual members of the group. In practice, membership could be organised on the basis of existing or proposed free trade areas or customs unions amongst developing countries. Alternatively, the participation of individual developing countries in a joint bond issue could be left rather more open. However, it seems likely that some constraints on participation would be required. For instance, the objective of risk spreading would require that the extent of participation by any individual country in any specific bond issue should be limited. Limitation could be achieved by not permitting any borrower a larger share of an individual bond issue than some multiple of its share of the combined national incomes of all potential participating countries. Over-borrowing by any individual country could be limited by not permitting participation by countries with high debt service obligations in relation

to either GDP or exports unless for the specific purpose of funding shorter term debt, which in itself could be a very useful exercise. An individual deficit country's potential borrowing capacity under the new scheme would therefore vary inversely with its existing debt service ratio and its existing level of debt, and positively with its growth rate of exports or GDP. Since such limitations on participation would have the effect of reducing the supply of and increasing the demand for bonds, they would unambiguously lower the rate of interest as compared with a situation where no limitations were imposed. Their effect on the quantity of bonds issued would be indeterminate and would depend on whether the supply or demand effect were to be greater. If the expansionary effect on demand exceeded the contractionary effect on supply the quantity of bonds issued would rise.

A similar combined effect of lowering the rate of interest and increasing the quantity of bonds issued might be achieved through offering lenders an additional guarantee against default since this would tend to raise the demand for bonds.¹² However, guarantees raise a number of issues. What form would they take? How would they be financed and would they generate extra finance or simply use up finance that would otherwise have been lent directly? If guarantees were used to provide full backing for all loans it may indeed be found that finance that would have gone into direct lending instead goes into financing the guarantees; assuming that not all guarantees are called on, the short term impact would then be to reduce the total flow of finance to developing countries. The picture would be different if guarantees were only to be partial and if finance were to be held to cover only a proportion of total guarantee obligations. The finance required to meet guarantee obligations could be provided by contributions as a form of aid, or through international policy such as the selling off of IMF gold.

Alternatively they could be financed by lenders effectively receiving a lower interest rate than borrowers are effectively paying. This latter option could involve either lenders financing a guarantee fund, in which case they would in essence be purchasing a reduction in risk and more narrowly fixing the parameters of their loans in exchange for a lower rate of return¹³ or it could involve borrowers providing the finance much as in the form of paying an insurance premium in exchange for insurance cover.¹⁴

In any case, a prior and open question is whether any form of guarantee would be necessary to ensure the success of an LDC bond issue; after all the principal purpose behind a group issue is precisely to reduce lenders' perceived risk. Certainly guarantees would reduce the risk still further and if risk proves to be the effective constraint on lending they may be necessary. Whether they are or not may, of course, depend on the nature and perceived creditworthiness of the countries forming the borrowing group. There are a number of possibilities. First, lenders may simply not be prepared to lend to countries that they regard as uncreditworthy either individually or as part of a group. In these circumstances the group borrowing scheme though still useful to creditworthy or marginally creditworthy borrowers as well as to lenders would be of little use to uncreditworthy countries. Second, lenders may be prepared to lend to some countries as part of a group without requiring guarantees that they would not have been prepared to lend to individually provided that those countries regarded as uncreditworthy did not constitute more than a certain proportion of the group. Third, lenders might only be prepared to lend to such countries, even as part of a group, if guarantees were to be provided. Of course, even if guarantees are unnecessary in the sense that surplus countries would be prepared to lend without them, their existence may still induce a larger flow of loans than would otherwise occur.

The above discussion introduces certain distributional aspects of an LDC group bond issue and it is worthwhile to examine these in a little more detail. Assume for simplicity that non oil developing countries may be divided into those that are seen as commercially creditworthy and those that are not although, of course, the dividing line is not in fact as clear cut as this. Assume further that non creditworthy countries may be subdivided into those where a relatively high prospective rate of return is combined with an unacceptably high level of risk and those where the prospective rate of return is low. Any scheme which involves a commercial interest rate will be of little assistance to the last category of countries since what they need is concessionary finance. Participation by these countries in a joint bond issue would therefore depend first on the willingness of lenders to lend to a group of which they were members and second on the willingness of other borrowers to subsidise their debt service payments. Even excluding these low return countries, however, a joint bond issue would tend to involve cross subsidisation from the more creditworthy to the less creditworthy members of the borrowing group, since participation by the less creditworthy, higher risk countries would push the rate of interest above what it would have been had the group consisted solely of the more creditworthy developing countries. Considerations of this nature imply that borrowing groups may have to consist of countries possessing a similar degree of creditworthiness; unless the more creditworthy are prepared, for humanitarian, political or economic reasons, to aid the less creditworthy by effectively transferring some of their own creditworthiness. One reason why they may be prepared to do so would be in an attempt to expand export markets. Furthermore, if the joint borrowing scheme was the only form of lending that offered guarantees even the more creditworthy borrowers could find it easier and/or cheaper to borrow as a member of a group comprising less creditworthy countries than individually.

Even though the constraints on participation will limit it, the possibility of default by borrowing countries remains. Although the lenders' risk in the case of default may be covered by guarantees the question of how the borrowing group of countries would deal with it still has to be answered. There are a number of possibilities. First, defaulters could be barred from future participation in bond issues until they have settled their obligations with the guarantee fund. However, this would have the effect of shutting off one important source of finance for countries that would tend to be in great financial need, for reasons of liquidity if nothing else. A more attractive alternative may then be to make future participation conditional on the acceptance of certain domestic policies. Although defaulters may not welcome conditionality they might find it more acceptable where it is designed and imposed by other developing countries than where it is imposed by an international agency dominated by developed countries. A final alternative would be available if the guarantee fund were to be financed by contributions from the borrowing countries themselves. Since borrowers are in essence taking out insurance against their own default, this could be discouraged by raising the insurance premium of a defaulting member. Providing that the scheme does not create a positive incentive to default, which would clearly ruin its long term viability, there seems little reason to believe that default cannot be adequately handled. A more intransigent default problem, however, may exist with regards low productivity countries, but as already noted, such countries may in any case be unsuitable participants in a scheme which is based on commercial criteria.

A final point relates to the institutional arrangements under which a joint LDC bond issue might be organised. It seems unlikely that informal and ad hoc negotiations between individual developing countries would constitute the ideal solution, since there is little reason to believe that the resultant grouping would be consistent with the theoretical guidelines for

their composition. The identification of groups and the selection of the countries to be involved in any particular bond issue might therefore more appropriately be undertaken by some form of central agency, to which interested parties would apply. What form should this central agency take? In principle the functions of the agency could be performed by an existing institution such as the IMF¹⁵ or the World Bank. But it may turn out that these institutions are insufficiently flexible to accommodate an essentially new and different role and therefore a new institution may be required. This new institution could include or exclude developed countries. An institution with exclusive LDC membership may be more attractive to developing countries but may also make the associated bonds less attractive to potential lenders, even though the institution would not be directly responsible for the related payments and obligations and would simply be co-ordinating the activities of individual participating countries as well as organising the guarantee fund if this were to be included in the scheme. If, however, OPEC claims of solidarity with the rest of the Third World are real, exclusive LDC membership need not constitute a problem.

5. Concluding Remarks

The main conclusion of this paper is that the introduction of index linked long term bonds denominated in SDRs and issued jointly by groups of developing countries under the auspices of an international agency could facilitate the recycling of oil revenues from OPEC countries to non oil developing countries.¹⁶ OPEC lenders would benefit inasmuch as their oil revenues would simultaneously be earning a guaranteed real rate of return at low risk and assisting development;¹⁷ while non oil developing countries would benefit from the increased and reasonably assured supply of long term programme capital. The world as a whole would benefit from the greater international stability that is associated with long term as opposed to short term lending, and from the higher levels of output and employment that

would be associated with a more efficient recycling mechanism as well as from the reduced incentive for oil producers to keep oil in ground.¹⁸

Even the non creditworthy non oil developing countries that may be less likely to benefit directly from the issue of the new bonds might benefit indirectly from the increase in aggregate financial flows to developing countries either through induced trade effects or through a redistribution of concessionary finance towards them.

Notes

1. In places this paper draws on ideas discussed at a workshop on International Financial Co-operation held at the Centre for Research on the New International Economic Order, Queen Elizabeth House, Oxford, in February 1981. Participants at the workshop, however, in no way bear responsibility for the views expressed here. Neither do David Hawdon, Colin Robinson, Chris Rowland and Paul Stevens, to whom thanks are due for helpful comments on an earlier draft of the paper.
2. For the purpose of this paper the deficit group is taken to be made up of the non oil developing countries while OPEC is taken to represent the surplus group. This may not be a completely realistic assumption since many members of OPEC have experienced payments deficits. In reality the surplus group may contain relatively few countries, with Saudi Arabia being the prime example.
3. The geographic location of expenditure may have an effect on its overall level if the values of expenditure multipliers vary between countries.
4. Sidney Dell and Roger Lawrence, The Balance of Payments Adjustment Process in Developing Countries, Pergamon, 1980.
5. OECD Development Co-operation, 1980 Review, November 1980, Table 11.2.
6. However, care needs to be exercised with this symptomatic approach to assessing the adequacy of recycling since it is not based on a rigorous economic model, symptoms may have been caused by factors other than the ones to which they are loosely attributed and different symptoms may appear to point simultaneously in opposite directions.
7. For a discussion of future prospects for recycling through the Eurocurrency market, see Graham Bird 'Financing Balance of Payments Deficits in Developing Countries: The Roles of the Official and Private Sectors and the Scope for Co-operation Between Them', Third World Quarterly, July 1981.
8. This index could be compiled in a number of ways; it could be based on the prices of the world's traded goods; or take the form of a weighted average of consumer price indices or wholesale price indices in major industrial countries (such as those represented in the SDR basket); alternatively the index could be tailor made to duplicate the import pattern of lenders, thus stabilising the purchasing power of their investment income in terms of imported goods.
9. See G.K. Helleiner, 'Foreign Exchange Risk and the Recycling Problem' paper prepared for a workshop on International Financial Co-operation held at The Centre for Research on the New International Economic Order, Queen Elizabeth House, Oxford, in February 1981, for a fuller discussion of exchange risk as it applies to the question of recycling.

10. See, for instance, World Development Report, 1980 pp 27 and 28. The existence of regulations may be explained in terms of an attempt by host countries to provide balance of payments protection as well as in terms of the perception of risk by the financial authorities of the countries in which the markets are located.
11. The concept of group borrowing by developing countries has been mentioned briefly elsewhere, see Graham Bird, 'Commercial Borrowing by Less Developed Countries', Third World Quarterly, April 1980, and has been discussed more fully by John Williamson, 'The Why and How of Funding LDC Debt', a paper prepared for a workshop on International Financial Co-operation held at the Centre for Research on the New International Economic Order, Queen Elizabeth House, Oxford, February 1981. Williamson's paper also rigorously examines some of the other issues treated here.
12. However, if borrowers financed the guarantees themselves it could also reduce the supply of bonds.
13. OPEC might find this an attractive method of giving aid, though the aid content associated with lenders financing the guarantee fund would rely on them not demanding an equivalently higher rate of return on their loans. Similarly, the real cost to borrowers of financing guarantees might be zero or even negative if their existence induced a significant expansion in the demand for bonds or meant that lenders were prepared to accept a relatively significant reduction in the rate of interest on the bonds.
14. There is the possibility that a guarantee fund will be subject to economies of scale if the size of defaults rises less rapidly than the volume of lending. Assuming, however, that the contributions to the fund grow in proportion to loans, the size of the fund at any one time will vary inversely with the number of defaults. A related problem is that the fewer are the defaults the larger will be the size of the fund's resources but the smaller will be the need for it, while the larger and more frequent are the defaults the smaller will be the fund's resources, but the larger will be the need for it. The problem is one of short term instability since over time and since defaulters will be repaying their drawings, the size of the fund should expand.
15. It seems likely that in the near future and for reasons of its own internal liquidity the IMF will be forced to borrow from private capital markets in order to finance its own activities. Although inasmuch as it may attract OPEC lenders such borrowing would bring about a recycling of OPEC surpluses, the implied recycling mechanism would differ significantly from the one envisaged in this paper. The role of the IMF would be much greater quite possibly involving both direct guarantees and maturity transformation. The ultimate borrowers would borrow by drawing on the IMF in the conventional fashion and as a result the finance available to them would be short term and in part conditional. Thus although IMF bonds denominated in SDRs and possibly involving an indexed rate of interest might prove attractive to OPEC lenders they would have a number of shortcomings from the viewpoint of non oil developing country borrowers. In any case political divisions within the IMF might encourage developing countries to establish their own agency.

16. It may be noted that the three key aspects of the bonds are independent of each other. Furthermore it may be remembered that the proposals put forward in this article are not specific to the recycling of an OPEC surplus but apply fairly generally to the problem of recycling irrespective of the identity of the deficit and surplus countries.
17. It could be argued, however, that surplus countries may continue to prefer short term borrowing if either the surpluses themselves are regarded as short term or low absorptive capacity is seen as a short term phenomenon.
18. In this connection the availability of the bonds could influence both the price of oil and the size of the targeted OPEC surplus.