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COMPENSATORY FINANCING FOR EXPORT FLUCTUATIONS

1. Summary

1. Fluctuations in export earnings of developing countries, stemming primarily from short-run world price variations, can seriously disrupt the progress of development plans. Export declines may cause both unexpected shortage of foreign exchange for imported capital goods and unexpected loss of government revenues for development projects.

2. Four main proposals have been made to provide compensatory financing for developing countries experiencing short-run export fluctuations. The UN proposal envisions an automatic insurance scheme, with cash benefits financed largely by annual premiums, and a net flow of resources from developed to developing countries. The OAS proposal also provides automatic compensation, but in the form of repayable loans, so that financing can be by capital contributions largely from developed countries. The IMF is critical of any new automatic system, but has adopted a policy of special additional credits for developing countries experiencing export fluctuations, subject to consideration of all factors in a country's balance of payments situation. The Tunisian government also supports a discretionary loan system, but with allowance for variations in net invisibles and in import prices, and with a normal formula which would involve net resource transfers from developed to developing countries.

3. If the UN proposal had been in operation from 1952 to 1962, Uganda would have received benefits about twice her premiums, a ratio somewhat smaller than for all developing countries together, while Tanganyika and Kenya would have paid substantially as much as they received. If the OAS proposal had been in operation, all three countries would have obtained more stable export earnings, again with Uganda drawing most on the fund.

4. For twelve major agricultural products providing more than three-fourths of total exports for the three East African countries, fluctuations in value, quantity, and price can be compared. From 1952 to 1962 rising trends in quantity of exports in all three countries, and particularly Tanganyika and Kenya, would have limited the compensation for which they were eligible. If a system keyed solely to price fluctuations had been in operation, Tanganyika and Kenya would have received stabilization loans in the late fifties, and Uganda would have received greater support during those years.

5. An international system of compensatory financing should provide automatic compensation according to a simple formula. It should introduce a new element into international financial arrangements, which provides only a partial offest to export fluctuations, but which is a kin to contractual insurance.

6. A system in which compensation predominantly takes theform of repayable loans woul be more likely to constitute a net addition to present flows of financial aid, would be focused clearly on the distinctive problem of export stabilization, and would still be in the interest of developing countries which are relatively successful in attaining a rising trend of export earnings.

7. Such a compensation scheme should be financed by initial capital contributions from all participants, but with developing and centrally planned countries bearing the bulk of the cost of the new financial institution. In essence the system would be a once-for-all expansion of the world monetary base.

8. A fund in the order of \$3 to \$ 4 billion seems a reasonable objective. The contributions from developed and centrally planned countries are a matter for negotiation, but the allocation of contributions among developing countries would have to be largely in accordance with the value of exports covered.

9. It would be desirable if practicable to shift the basis of the system from fluctuations in value of all exports to fluctuations in prices of major primary products. Such a system would deal explicitly with the main source of difficulty for developing countries, would be a more comprehensive and flexible complement to present international commodity agreements, and above all would make the system more attractive to countries which succeed in attaining rising trends in export volume.

II. Export Fluctuations and Current Proposals for Compensatory Financing.

The central question to be considered in this paper is whether it would be adventageous for Uganda and her East African parteners to support any of the leading proposals designed to give financial compensation to developing countries faced with fluctuations of their export earnings.

A. Nature of the Problem

Fluctuations in export proceeds could arise from two distinguishable sources. They could occur because the volume of exports fluctuates while prices remain stable, or because the prices fluctuate with a constant or even steadily rising export volume. It is generally reorganized that for developing countries over the last decade, dependent as they are on exports of primary products, price fluctuations have been the largest source of fluctuations in export earnings.

Taking the world as a whole, price changes and quantity changes are interdependent, and we would expect that short-run price variations should usually offset partly or wholly variations in quantity of exportable commodities. Thus when there is a shortage of sugar in the world prices should rise by a certain amount and automatically have a stabilizing effect on export incomes of sugar exporters as a group. But in a situation where on country produces only a small proportion of the total world production, short-run price changes and changes in her own output are largely independent. Thus a reduction in her exportable quantity is consistent with falling world prices for her exports as well as with rising world prices. Price variations are as likely to intensify earnings fluctuations as to stabilize them.

The problem of export fluctuations is of course related to the problem of intermediate-run declining trends in the prices of primary commodities. But for analytical purposes the two problems ought to be distinguished, especially in considering remedies that could be applied. Fluctuations of export earnings around a trend pose a policy problem for developing countries irrespective of the direction of that trend. It must, however, be recognised that if the trend is downward stabilization of export earnings is all the more difficult.

For all countries fluctuations in export earnings are disturbing, but developing countries depend to a large extent on imported capital equipment for their development, and hence on planned growth of export earnings plus foreign borrowing to provide foreign exchange for these imports. An unexpected fall in exports is quite likely to compel an abrupt cut in imports of these goods, thus disrupting the entire sequence of the development

plan. The other items developing countries import are associated with their standard of living, and though declining incomes will tend to reduce them automatically to some extent in sympathy with export fluctuations, in a time of economic decline it is likely to be politically impossible to reduce them sufficiently to maintain capital goods imports as planned.

Export earnings also provide a large proportion of government revenues in many developing countries. They may do so directly in the form of export taxes on primary products or income taxes on large-scale producers. They may also do so indirectly when the revenue of the government derives mainly from import duties and excise duties, which react to changes in national income caused by export fluctuations. Therefore the government's ability to finance development projects out of current revenue is also dependent on exports. Export declines are likely to disrupt the budgetary process as well as foreign exchange availability.

B. Proposals for Compensatory Financing.

Various proposals have been made by different international bodies to establish systems of financial compensation for export fluctuations, and thus at least partly to stabilize export earnings for developing countries. Their main concern is to prevent abrupt shortfalls in export proceeds which are harmful to the success of development plans. While there are significant differences in their content, they have a common emphasis on short-run stabilization, and are not intended to do more than soften intermediate-term declines in a country's export proceeds. These can only be dealt with by structural changes within the country, or for a limited number of products by international commodity agreements.

Four of these proposals are compared in this paper. Table 1 provides a comparative summary of their main provisions with respect to defining an export shortfall, determining compensation, repayment conditions, financing, and estimated costs.

The first proposal is that made by a Committee of Experts appointed by the United Nations Secretary-General in 1960 to examine "the feasibility of establishing machinery, within the framework of the United Nations, designed to assist in offsetting the effects of large fluctuations in commodity prices on balances of payments, with special reference to compensatory fanancing......"(1)

In setting their standard, the UN experts considered that any shortfall in export earnings from a moving average of the previous three years should attract attention with a view to compensation. Their proposal was designed to have certain attributes of social insurance, notably a structure of premiums and benefits which would transfer resources from developed to underdeveloped countries. The fund was to be set up in the first instance by initial subscriptions to provide working capital, and then kept going by annual premiums assessed on member countries as a percentage of the value of their exports. Alternatively, for developed countries only, per capita income might be taken into account in assessing contributions.

Compensation would be paid out automatically to member countries to the value of 50% of any export shortfall beyond a certain minimum deduction, which might be set between 2½% and 10%.

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(1) U.N., International Compensation for Fluctuations in Commodity Trade, 1961.

In their Type I proposal, as with social insurance, such compensation would not be repaid. Annual premium deduction of 5%. in the order of 0.5% of exports would probably be needed, with a minimum deduction of 5%. If the UN Type I proposal had been in effect from 1953 to 1959, it would have had an average annual cost of $ 468 million, of which developing countries would have contributed $ 142 million and received $ 383 million.

The proposal of the Organization of American State defines shortfalls in the same way but the methods of compensation and financing are different.(2) Financing would be by initial contribution only, of which developed contribute two-thirds and waive benefits. Developing countries would be compensated to the extent of 67% of any shortfall as defined above, without a minimum deduction. Instead of annual premiums, the fund would be kept going by repayments; thus 67% of any surplus in future years must be applied to repayment of existing credits, and if any credits are outstanding for over three years, they must be paid off half in the fourth year and half in the fifth year regardless of the magnitude of shortfalls or surpluses. This proviso ensures that the fund will not run out of resources and also demonstrates that the function for which the fund was designed short-run stabilization. It is also proposed that a low rate of interest should be charged on outstanding credits to defray administrative costs. If the OAS scheme had operated from 1952-60, it would have paid average annual benefits to develop countries approximately the same as in the UN proposal, but of course all would have been repayable.

The International Monetary Fund takes exception with both the UN and OAS experts on the way they define a normal level of exports. On the basis of statistical calculations by their staff members, the IMF argues that a formula giving more weight to the current year (50%) and combining it with the previous two years (25% each) provides a more reliable estimate of a normal level of exports. In their view: "The fact that exports in any given year have been lower (or higher) than they were in preceding years is very often an indication of a downward (or upward) trend which may well persist for some years to come". (3)

More fundamentally, the IMF argues that a new automatic compensation scheme is neither necessary nor desirable. They present data suggesting that present reserves and IMF quotas are adequate to cover the maximum export fluctuations of the last decade for all but a few countries. They also contend that international credit should be extended only after considering all aspects of a country's balance of payments situation.

However, the IMF has at the same time announced a policy of greater readiness to extend credit to developing countries faced with export fluctuations - up to 25% beyond the country's normal use of its IMF quota. Like all IMF credits, such loans would depend on the IMF being satisfied that the member country is itself trying to cover the deficit, and is in addition making reasonable attempts to avoid long term declines in her export proceeds.

The proposals described so far limit export proceeds to merchandise items in the balance of payments. The proposal by the Tunisian Government, while retaining the idea of a moving-average norm, urges that export proceeds should allow for net invisible items, such as transport and insurance services,

(2) Organization of American States Final Report of the Group of Experts on the Stabilization of Export Receipts, May, 1962

(3) International Monetary Fund, Compensation Financing of Export Fluctuations. February, 1963.

tourism, foreign loan repayments, etc. (4) They argue that the movement of some of these invisibles is sometimes such as to nullify surpluses on merchandise account. They also propose that the purchasing power of exports should be taken into account, although they do not grapple with the difficult technical problem of determining changes in terms of trade.

The greater complexity of the Tunisian approach is related to their view that considerable discretion should be exercised by the agency administering the system. Other factors besides trade figures should be taken into account in deciding on the amount of compensation. These they refer to as "adventitious", cyclical or structural factors characterizing the shortfall country. After allowing for these factors, normally 75% of the shortfall should be compensated. Compensation should be in the form of a loan repayable in good years within the next three years. However, since a smaller proportion of any future surpluses, e.g. 50%, would be applied to loan repayment, and any credits outstanding for more than 3 years would be written off, the Tunisian proposal does imply a net drain on the fund. For the provisions indicated in Table I, the Tunisian scheme would cost about three-fiths as much as the UN proposal.

One final feature of the Tunisian proposal needs to be mentioned. This is the emphasis on the need for a high level of foreign exchange reserves for developing countries, in order to maintain confidence in their currency abroad and be able to attract foreign capital for development. This constraint would more or less rule out the possibility of running down reserves to meet unforeseen contingencies, and call for even greater reliance on the compensation system.

III Effects of Various Proposals on Uganda, Tanganyika and Kenya

Tables 2 to 5 show the effects of applying the UN and OAS proposals to the exports of the East African countries for the period 1952 to 1962. The results may be summarized as follows

A. UGANDA.

Under the UN proposals Uganda would have paid contributions amounting to £2.3 million and would have drawn benefits of the order of £4.6 million over the 11 year period (see Table 2). The ratio of benefits to contributions here works out at 2 to 1, which is attractive though still below the average of nearly 3 to 1 which the UN experts calculated for developing countries as a group from 1953 to 1959. More than half of the benefits would have been drawn in 1953 with smaller sums being received in 1960, 61 & 62.

Under the OAS proposals Uganda would have received stabilization credits in 1953 and 1954 of £6.4 million. During the next four years she would have paid them off. This would have had the effect of narrowing the range of variation in her export proceeds by about two-thirds over the period 1953 to 1958: £33.4 million to £45.9 million without compensation as compared to £38.5 million to £42.9. million with compensation.

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(4) Government of Tunisia, Instability in Commodity Trade and International Machinery for Compensatory Financing, UN document E/Conf. 46/PC/4, April, 1964.

After 1959 Uganda's exports proceeds began to fall continuosly to the end of the period mainly because of a downward trend in prices. This would have made Uganda more dependent on the fund, drawing credits to the tune of £7.3 million during those four years. These credits would of course have to be repaid in succeeding years, which might be readily accomplished if exports recovered, but which would be very difficult if they stayed depressed. (The OAS proposals stipulate that credits outstanding for more than three years must be repaid, half in the fourth year and half in the fifth year, even when a country is still experiencing shortfalls - though it may still draw new credits if eligible under the formula.)

B. TANGANYIKA

Tanganyika would have obtained compensation in 1953, 54 and 55 amounting in total to £2.3 million under the UN scheme but her contributions over the entire 11 - year period would have been nearly £2.4 million (see Table 3). This result is obtained because since 1955 Tanganyika has not had any shortfalls in her export proceeds, although there were fairly large fluctuations in the prices for her exports. Her rising volume of exports has offset short-run price declines. On the other hand since contributions are assessed on the basis of value of exports her contributions would have been virtually the same as for Uganda.

Under the OAS Scheme Tanganyika would have received credits for the same years, 1953, 54 and 55, totalling £6.2 million. She would have been able to pay off these credits entirely within the next two years - in fact £6.1 million in 1956 alone - because of a favourable upturn in her exports. Without such credits her exports would have ranged between £34.3 million and £44.8 million in the period 1953 to 1958, but with this scheme in operation the range would have been reduced to £36.0 to £39.0 million.

C. KENYA

Kenya would have participated least of all in either the UN or the OAS schemes, partly because of her smaller export value but mainly because of her comparatively stable and rising trend in exporrt earnings (see Table 4). Under the UN plan, she would have received benefits in 1953 and 1954 amounting to £1.7 million, against premiums over the 11 - year period of £1.6 million. Thus like Tanganyika she would have substantially broken even.

Under the OAS scheme she would have received credits in 1953 and 1954 amounting to £3.8 million, and been able to pay them off during the next two years. This would have approximately halved the range of her export proceeds variation; from £19.5 - £ 29.0 million without compensation to £21.4 - £26.5 million with compensation.

D. EAST AFRICA

To sum up, Uganda would have been a net gainer under the UN proposal, though less than the average for all developing countries as a group, while Tanganyika and Kenya would have approximately broken even. All three countries would have enjoyed more stable export earnings under the OAS scheme than without it, Uganda drawing most heavily on the fund, then Tanganyika, and then Kenya. Because of their comparatively favourable export trends, the three East African countries have greater interest in the stabilization aspect of an international compensation scheme than in net transfer of resources to lagging countries.

It may also be noted that the amount of compensation accruing to the East African countries would be reduced if East Africa joined these schemes as one block, except in those years when all the countries have a shortfall (see Table 5). This is because for the region as a whole surpluses in one country tend to offset shortfalls in another country thus rendering the whole region ineligible for compensation. Thus compensation would have been paid to East Africa under both schemes only in 1953 and 1954, and premiums would have exceeded benefits by about £0.6 million under the UN scheme. Of course for a stabilization plan like that of the OAS, reduced use of the international fund simply reflects the automatic stabilization resulting from the larger East African pool, but to enable each country to share in the same way in this automatic stabilization, compensatory loans within East Africa would also be needed.

E. DIFFERENCES IN FLUCTUATION OF EXPORT VALUES, QUANTITIES AND PRICES

Variations in export values can be considered to be the product of variations in quantities and variations in prices. It is awkward to make this distinction for the entire range of exports, because of difficulty in defining reasonably homogeneous units of quantity but it is practicable to do so for major primary products. For the three East African countries, we have used a list of twelve major agricultural exports, which together constitute at least three-fourths of total exports, for each country. Tables 6, 7 and 8 distinguish fluctuations of value, quantity, and price for this group of exports over the period 1952 to 1962, in each case compared to a moving average of the preceding three years.

It is clear that fluctuations in prices of primary exports have been more important in causing shortfalls in East Africa's export proceeds than fluctuations in quantity. This is particularly true in the case of Uganda (see Table 6), which has had a price shortfall greater than 5% in eight of the last ten years and has just managed to avoid bigger shortfalls in her export earnings by raising the quantity of her exports (except in 1953 and 1962). In addition to this downward trend in prices, in five of the six years in which Uganda's export value showed a shortfall eligible for compensation under the UN and OAS schemes, the principal cause was an above-average shortfall in price.

It also appears from Tables 7 and 8 that Tanganyika's and Kenya's export earnings would have shown larger and more frequent shortfalls except for the fact that quantity expansion offset the effects of price declines. Both Tanganyika and Kenya had more favorable quantity trends and less unfavorable price trends than did Uganda. However, in 1953, '54, and (for Tanganyika) '55, when they experienced shortfalls in export value eligible for compensation under the UN and OAS schemes, the principle cause was above-average price shortfalls. In 1957 and 1958 they also experienced price shortfalls greater than 5%, but these were offset by quantity expansion, so that neither country became eligible for compensation

If this post experience is any guide to the future, the East African countries would have distinctly greater interest in measures tied to price changes for their key primary exports (which after all comprise a large percentage of their total exports) than in measures tied to value of exports. If a system had been in operation which provided compensation whenever prices fell more than 5% below a moving-average norm, Uganda would have received larger benefits or loans in 1959, '60, and '61 than under the UN and OAS schemes, while Tanganyika and Kenya would have become eligible for benefits or loans in 1957 and 1958.

The UN mandate to the committee which investigated this problem implied that it was large fluctuations in commodity prices which were responsible for fluctuations in export earnings. Within the limitations of the vagaries of the weather and natural forces, developing countries can plan the volume of their exports, but with rare exceptions they cannot influence the price they receive. Thus there are also general grounds for feeling that price is the variable on which concerted international action were better concentrated.

IV. Desirable Features of an International System of Compensatory Financing

A. Automatic Compensation by Simple Formula

An international system of compensatory financing for export fluctuations should provide automatic compensation, as in the UN-OAS proposals, rather than discretionary compensation, as in IMF procedures and the Tunisia proposal. Such compensation would after all be only one element in the financial adjustments which a country experiencing export fluctuations would face. It would also have to draw on its regular foreign exchange reserves, which would raise the issue of appropriate policies to limit the drain, or obtain IMF credit, which would be subject to consideration of all aspects of its balance of payments position. An international compensation scheme, however, should introduce a new element, which would provide only a partial offset to export fluctuations, but which would be as close as possible to contractual insurance.

Correspondingly, the formula used to calculate compesation should be as simple as is consistent with the broad objectives of the system. Defining the norm from which fluctuations are calculated is the most difficult issue. Although most previous discussion has considered a moving average of the previous three years, the IMF has argued that a moving average including the current year and giving it considerable weight provides a demonstrably closer approximation to an "ideal" norm, a moving average centered on the current year. This is a technical question which might well be left to a committee of experts to settle on statistical grounds; presumably something resembling the IMF formula would turn out to be best. For simplicity, the coverage of the scheme should definitely be limited to merchandise exports, thus avoiding the great empirical difficulties in estimating invisibles reliably. Again for simplicity, it would be preferable not to introduce an adjustment for import prices. The UN experts note that a practicable adjustment would probably have to be applied uniformly (i.e. arbitrarily) for all countries, and the OAS experts in opposing such an adjustment point out that typically changes in import prices have been small compared to those in export prices. Finally, decisions on the minimum fluctuations covered, e.g. greater than 5%, and on the proportion of compensation, e.g. 50%, 67%, or 75% are essentially arbitrary, depending on what financial cost of the systme is internationally acceptable.

B. Predominantly Loans

All things considered, a system in which compensation predominantly takes the form of repayable loans is preferable, as in the OAS proposal, the IMF procedures, and (in principle if not entirely in practice) the Tunisia proposal. Repayment should be similarly automatic, whenever export earnings rise above the moving-average norm, and should be calculated symmetrically with the loans. This point may be somewhat surprising, since at first thought a system involving non-repayable grants, and hence a continuing annual transfer of resources from developed and centrally planned economies to developing economies, as in the UN Type I proposal, seems preferable. Such a system would have several drawbacks, however. Continuing annual costs to developed and centrally planned countries would probably in large part divert financial aid from present channels into the new one, so that the system would constitute only a small net increase in assistance, if any. A good case can be made that aid received via the new channel would contribute less to development, because it might be used for income stabilization rather than development investment, because as an exceptional receipt it might be used outside the normal programming procedures, and because its allocation among countries would be quite independent of the effectiveness of national planning. Such a system would also shift the emphasis from the strongest distinctive argument for compensatory financing - the need for stabolization of export earnings of countries in the midst of a multi-year development program. Instead it would mix stabilization and aid considerations. Strictly from a tactical standpoint, such a system would be less likely to receive international agreement.

Moreover, those developing countries which are comparatively successful in attaining a rising trend of export earnings would not share proportionately in the benefits from the continuing resource transfers, but would still have something to gain from a straight-forward stabilization scheme. As shown in Part III, Tanganyika and Kenya would have paid approximately as much in annual premiums as they received in benefits if the UN Type I scheme had been in operation from 1952 to 1962, because the fluctuations which they experienced were superimposed on a comparatively favourable rising trend of exports. Uganda's benefits would have been about twice her annual premiums, which is still somewhat less than the ratio for all developing countries as a group. However, Uganda's unfavourable past trend in export revenue was due largely to price declines, while volume still expanded; if future price trends are less unfavorable, as now seems likely, her future trend in export revenue will probably be more similar to Tanganyika and Kenya. At the same time, all three East African countries would have gained greater stability from a loan scheme of the OAS type - Uganda from loans in 1953-54, repaid in 1955-58, and from loans in 1959-62, to be repaid in the future; Tanganyika from loans in 1953-55, repaid in 1956-57; and Kenya from loans 1953-54, repaid in 1955-56. While we have made such calculations only for the three East African countries, a number of other African countries at a relatively low stage of development have also attained comparatively favorable export trends, and hence would not share proportionately in benefits from a system of continuing resource transfers.

In contrast, a system in which compensation predominantly takes the form of repayable loans would be more likely to constitute a net addition to present flows of financial aid (see section C), would be focused clearly on the distinctive need of developing countries for stabilization of their export earnings, and would still be in the interest of countries which are relatively successful in attaining a rising trend of export earnings, yet are troubled by export fluctuations.

Only one modification of the loan principle seems desirable. Credits still outstanding after a certain number of years, say three to five, because a country's export earnings have never recovered above the moving-average norm sufficiently to require repayment, might well be written off, as in the Tunisia proposal. This proviso would lead to a net transfer of resources to those few countries with the worst export trends, which would be small in the aggregate but which could be justified on equity grounds. If necessary, and depending on the administrative arrangements, this cancellation might be to some extent discretionary. For reasons indicated above, it seems unlikely that the East African countries would in future be in this situation, but their contribution to its cost would also be very small.

C. Financing by Initial Capital Contributions.

The compensation scheme should be financed entirely by initial capital contributions from all participants, as in the OAS proposal and in the present IMF. The bulk of the capital contributions should come from the developed countries and the centrally planned countries, and they should waive their claims for stabilization loans, as in the OAS proposal. Thus all countries would make a once-for-all decision about participating, and would not be faced with an annual problem of deciding whether it was worthwhile. The developed countries and the centrally planned countries would clearly be asked to establish a new form of financial assistance for developing countries, designed to meet the distinctive problem of export fluctuation. However, as once-for-all capital contributions to meet a new problem, there would be a good chance that such assistance would not simply divert present financial aid from existing channels, but would be a net addition to international support for developing countries.

In essence a compensation system financed in this way would be an expansion of the world monetary base through joint extension of credit by all the participants, largely of course by the developed and centrally planned countries. It would be analogous to the recent general increase of quotas in the IMF. As the system went into operation and outstanding loans increased, there would be a net transfer of real resources to developing countries. As outstanding loans leveled off, however, the net transfer of real resources would cease and the world monetary base would simply be enlarged by the amount of the loans. If the proviso about writing off credits not repayable within three to five years were included, there would of course also be a continuing small net transfer of resources to those developing countries with the worst export trends, and a small continuing leakage of the initial capital contributions out of the fund. It would presumably be desirable in any event to

arrange for international reconsideration of the provisions of the compensation system after a period of experience with it, say five or ten years. Consideration of additional capital contributions at that time, both to expand the fund and to replace any leakage, could well be treated as part of the long-run problem of expanding the world monetary base.

Note that the above financial analysis does assume that future export trends and fluctuations of the developing countries will not be substantially different in character from the experience of the fifties and early sixties. If there were a much stronger negative trend in export prices, outstanding loans would tend to continue to rise rather than to stabilize, and the fund would be depleted. If there were a strong positive trend in export prices, loans would tend to be repaid, and the fund would become inactive. However, the assumption that future trends will not be markedly worse, and that there will continue to be considerable diversity among commodities and from year to year, is a quite reasonable one.

D. Size of Fund and Allocation of Contributions.

It would be in the interest of the developing countries to have the fund as large as can be internationally agreed. The liberality of the formula for calculating loans depends directly on the size of the fund. On the basis of the various illustrative calculations given for the UN, OAS, and Tunisia proposals, a fund in the order of $3 to $4 billion seems a reasonable objective.

The allocation of contributions among developing countries would have to be largely in accordance with the value of exports covered, as in the UN proposal, in order to make voluntary accession to the plan workable. It would not be possible to diverge sharply from this criterion, as appears to be implied in the Tunisia proposal, without running the risk that a number of countries might prefer not to participate. However, any weight given to GDP per capita, as a limited adjustment to the criterion of export value, would be favorable to lower-stage developing countries, such as most of those in Africa.

The allocation of contributions among developed and centrally planned countries, as well as their overall share of the fund, is strictly a bargaining question. An overall share of two-thirds, as in the OAS proposal, to three-quarters, as (approximately) in the UN proposal, seems reasonable. Apart from international equity, an overall share of this magnitude would be important to make voluntary accession attractive to every developing country, even those with the most favorable prospective export trends. The allocation of this overall share among countries is arbitrary, but as a joint system of international assistance it might be practicable to follow the UN contribution system, which tends to relfect GDP per capita rather than trade value.

E. Value of Exports vs. Prices of Primary Exports.

It would be desirable if practicable to shift the basis for an international compensation system from fluctuations in the value of all exports to the effect of fluctuations in prices of major primary products on export earnings. Most of the argument supporting the need for compensatory financing points to price fluctuations as the main source of difficulty for countries embarked on multi-year development programs. A development plan typically relies upon a certain trend in volume of primary exports, and though year-to-year weather variations affect particular crops and may in especially bad years reduce the overall volume of exports, the greatest source of instability disrupting the plan is typically fluctuations in world market prices.

Individual commodity agreements may serve to deal with this instability, as well as to try to raise the average price of the product covered. But the administrative problems of such agreements are so complex that few have been adopted, and they tend to introduce rigidities in marketing arrangements which hamper prospective new suppliers. An international compensation system dealing with fluctuations in prices of major primary products would be an alternative to individual commodity agreements, with respect to their stabilization objective, and would have the advantages of being more comprehensive and more flexible in operation.

Above all, a compensation system keyed to price fluctuations would deal with the factor affecting export earnings which is not (with rare exceptions) under the control of an individual country, separating it from a factor which is under the country's control, the physical volume of exports. In particular, such a system would compensate all developing countries similarly for price fluctuations, and would not tend to give greater benefits to countries with sluggish trends in export volume than to countries which succeed in attaining rising trends in export volume. As shown in Part III, Tanganyika and Kenya would have received stabilization loans from a system keyed to price fluctuations in 1957 and 1958, even though their expanding export volume would have made them ineligible for loans keyed to value of exports. Uganda would have received larger loans in 1959-60-61 from a system keyed to price fluctuations, and thus would have retained more of the gain from her expanding export volume.

It is true that a compensation system distinguishing price changes from volume changes would be intrinsically more complicated, and the practicability of a suitable automatic formula needs to be explored further. But it ought to be possible to define a practicable formula along the following lines: (a) Define a list of primary products to be covered, comprising in principle all products on which any developing countries are significantly dependent for export earnings. (b) Establish a procedure for obtaining representative prices of these products in world markets, or in some cases regional markets relevant to certain groups of countries. (c) Annually calculate an index for each product comparing a moving-average norm of prices in previous years with its current price. (d) For each country multiply

these indexes by the appropriate current values of exports of the various products, and calculate the difference between the total value at the moving-average prices and at the current prices. This difference - the gain or loss due price fluctuations on the current export volume - would be the basis for determining stabilization loans. The main technical problems would be obtaining consistent classification of products in the export data of all participating countries, and defining an acceptable set of representative prices.

It should also be recognized that initial contributions to a compensation system dealing with price fluctuations would have to be larger than one dealing with export revenues, since the general upward trend in export quantities would not hold down the calculated shortfalls. But a system limited substantially to repayable loans would still tend to stabilize at only a small net transfer of resources out of the fund.

Basing compensatory financing on prices of primary exports should not of course be interpreted as restraining the efforts of developing countries to industrialize and to diversify their exports. Such a system would simply recognize that for the immediate future earnings from primary exports are crucial for most developing countries, and that only for such relatively homogeneous products it is practicable to distinguish the price fluctuations - the main source of difficulty - from factors under each country's control. Stabilization of earnings from primary exports would contribute directly to more effective planning of the entire development process.

TABLE 1 — Comparison of Four Schemes for Compensatory Financing of Export Fluctuations.

	United Nations Exports [a]	Organization of A. States [b]	International Monetary Fund [c]	Tunisia [d]
1. Definition of export shortfall.	Merchandise exports more than 5% below average of previous three years	Merchandise exports below average of previous three years.	Merchandise exports below average of current (weight 50% and two previous years	Merchandise exports plus net invisibles, adjusted for import prices, more than 5% below average of previous three years, allowing for "adventitious factors".
2. Nature of compensation.	Automatic payment of 50% of shortfall	Automatic loan of 67% shortfall.	Discretionary loan normally up to 25% of IMF quota, supplementing regular IMF loans & reserves.	Discretionary loan about 75% of shortfall, allowing for "adventitious factors".
3. Repayment conditions.	Not repaid	Repayment 67% of excess over 3-year average, plus half of all credit outstanding over three years.	Repayment according to regular IMF procedures.	Repayment 50% of excess over 105% of 3 yrs average; credits might be written off after three years.
4. Financing.	Initial subscription plus annual premiums based on exports (orGDP for developed countries); developed contribute about 70% and receive about 20%	Initial capital only; developed countries contribute 67% and waive benefits.	No special financing.	Initial subscription plus annual premiums based on unspecified combination of net income export dependence, export instability
5. Calculated gross cost of benefits [e] (mil $)	1953-59: $2684 UDC 595 Dev. 3279 Total (468 per yr.) (383 for UDC)	1952-60: $3291 UDC - Dev. 3291 Total (366 per yr.)	Not comparable.	1953-60: ? UDC ? Dev. 4905 Total (614 per yr.)
6. Net cost [e] (mil.$)	Same as gross	Initial capital $1800; maximum credit outstanding 1952-60 $1441		$2260 (282 per yr)

TABLE 2.

UGANDA: POSSIBLE BENEFITS FROM OAS & UN PROPOSALS

Year	Export Value ('000)	3-year moving average	Deviation (£ 000)	Deviation %	OAS Compensation[a]	UN Compensation[a]	UN Contribution[b]
1949	23,433						
1950	28,669						
1951	41,197						
1952	47,223	33,100	14,123	+43			
1953	33,379	41,030	-7,651	-19	5,100	2,800	
1954	40,575	42,600	-2,025	- 5	1,350		
1955	41,902	40,392	+1,510	+ 4	-1,006		
1956	40,416	38,619	+1,799	+ 5	-1,200		
1957	45,857	40,965	+4,892	+12	-3,262		
1958	45,409	42,726	+2,683	+ 6	- 982		
1959	42,091	43,895	-1,804	- 4	+1,202		
1960	41,588	44,452	-2,864	- 6	+1,910	321	
1961	39,195	43,029	-3,834	- 9	+2,556	842	
1962	37,635	40,958	-3,323	- 8	+1,615	638	
TOTAL:					7,283[c]	4,601	2,276

Notes: a. See Table 1 for formula used.

b. Based on 0.5% of export value, as indicated in UN report, for scheme with 5% deduction.

c. Maximum cumulative credit received.

TABLE 3.

TANGANYIKA - POSSIBLE BENEFITS FROM OAS & UN PROPOSALS.

Year	Export Value (£'000)	3-year Moving Average	Deviation (£000)	Deviation %	OAS Compensation[a]	UN Compensation[a]	UN Contribution[b]
1949	19,233						
1950	23,768						
1951	39,343						
1952	47,020	27,448	+19,572	+71			
1953	34,545	36,710	- 2,165	- 6	1,444	1,115	
1954	36,251	40,303	- 4,052	-10	2,702	1,019	
1955	36,188	39,272	- 3,084	- 8	2,056	1,120	
1956	44,805	35,661	+ 9,144	+26	-6,096		
1957	39,431	39,081	+ 350	+ 1	- 106		
1958	41,707	40,141	+ 1,566	+ 4			
1959	45,287	41,981	+ 3,306	+ 8			
1960	54,854	42,142	+12,712	+29			
1961	48,667	47,283	+ 1,384	+ 3			
1962	51,241	49,603	+ 1,639	+ 3			
TOTAL:					6,202[c]	2,254	2,399

Notes: See Table 2.

TABLE 4.

KENYA - POSSIBLE BENEFITS FROM OAS & UN PROPOSALS

Year	Export Value (£'000)	3-Year Moving Average	Deviation (£ 000)	Deviation %	OAS Compensation[a]	UN Compensation[a]	UN Contribution[b]
1949	10,964						
1950	17,182						
1951	24,068						
1952	25,792	17,405	8,387	+48			
1953	19,521	22,347	-2,826	-13	1,884	855	
1954	20,360	23,127	-2,867	-12	1,912	856	
1955	25,667	21,858	+3,809	+17	-1,270		
1956	28,983	21,816	+7,167	+33	-2,526		
1957	26,361	24,970	+1,391	+ 6			
1958	29,300	27,004	+2,296	+ 9			
1959	33,306	28,215	+5,091	+ 18			
1960	35,191	29,656	+5,535	+19			
1961	35,326	32,599	+2,727	+ 8			
1962	37,913	34,608	+3,305	+10			
Total					3,796	1,711	1,588

Notes: See Table 2.

TABLE 5.

EAST AFRICA - POSSIBLE BENEFITS FROM OAS & UN PROPOSALS.

Year	Export Value (£'000)	3-Year Moving Average	Deviation (£ 000)	Deviation %	OAS Compensation[a]	UN Compensation[a]	UN Contribution[b]
1949	53,630						
1950	69,619						
1951	110,608						
1952	120,035	77,952	+42,083	+53.9			
1953	87,445	100,087	-12,642	-12.6	8,428	3,819	
1954	97,086	106,029	- 8,943	- 8.4	5,962	1,821	
1955	103,757	101,522	2,235	+ 2.2	-1,490		
1956	114,206	96,096	18,110	+18.8	+12.074		
1957	111,649	105,016	6,633	+ 6.3	+ 826		
1958	116,416	109,871	6,545	+ 6.0			
1959	120,684	114,090	6,594	+ 5.8			
1960	131,633	116,250	15,383	+13.2			
1961	123,188	122,911	277	+ .2			
1962	126.789	125,168	1,621	+ 1.2			
TOTAL					14,390[c]	5,640	6,263

Notes: See Table 2.

TABLE 6.

UGANDA: FLUCTUATION OF VALUE, QUANTITY, AND PRICE OF 12 MAJOR AGRICULTURAL EXPORTS[a].

Year	Value (£ 000)	Value at 1960-62 Prices	"Prices" Index (2 ÷ 3)	Deviation from 3-Year Moving Average (%)		
				Value	Quantity	Price
1949	20,921	22,347	94			
1950	25,774	21,621	119			
1951	43,738	23,353	187			
1952	43,249	24,156	179	+ 43	- 8	+ 35
1953	29,407	21,767	135	- 22	- 6	- 17
1954	36,582	25,909	141	- 6	+12	- 16
1955	38,733	27,015	143	+ 6	+13	- 6
1956	36,991	28,437	130	+ 6	+14	- 7
1957	41,102	29,743	138	+ 10	+10	- 0
1958	40,848	31,425	130	+ 5	+11	- 5
1959	36,266	32,466	112	- 9	+ 9	- 16
1960	35,056	35,202	100	- 11	+13	- 21
1961	33,458	33,856	99	- 11	+ 2	- 13
1962	32,018	31,364	102	- 9	- 7	- 2

Notes: a. The 12 major products, in order of value for all East Africa, are cotton, sisal, arabica coffee, robusta coffee, tea, meat, hides and skins, pyrethrum, cashew nuts, groundnuts, wattle bark and extract, and maize. in 1960-62, they were 78.7% of East African exports, 84.9% of Uganda's, 74.0% of T nganyika's and 78.5% of Kenys's

TABLE 7.

TANGANYIKA: FLUCTUATION OF VALUE, QUANTITY, AND PRICE OF 12 MAJOR AGRICULTURAL EXPORTS[a].

Year	Value (£.000)	Value at 1960-62 Prices	"Prices" Index (2 ÷ 3)	Deviation from 3-Year Moving Average		
				Value	Quantity	Price
1949	15,559	16,084	97			
1950	18,601	15,680	119			
1951	33,933	18,407	184			
1952	35,607	22,039	162	+ 57	+ 32	+ 22
1953	26,972	22,526	120	- 8	+ 20	- 23
1954	27,934	24,281	115	- 13	+ 16	- 26
1955	26,800	26,159	102	- 11	+ 14	- 23
1956	33,742	31,328	108	+ 24	+ 29	- 4
1957	28,247	29,170	97	- 4	+ 7	- 10
1958	29,680	32,466	91	- 0	+ 12	- 11
1959	32,142	33,663	95	+ 5	+ 9	- 4
1960	40,444	38,850	104	+ 35	+ 22	+ 11
1961	34,833	35,438	98	+ 2	+ 1	+ 1
1962	37,876	38,864	97	+ 6	+ 8	- 2

Notes: a. See Table 6.

TABLE 8 .

KENYA: FLUCTUATION OF VALUE, QUANTITY AND PRICE OF 12 MAJOR AGRICULTURAL EXPORTS[a].

Year	Value £000	Value at 1960-62	"Prices" Index (2 ÷ 3)	Deviation from 3-Year Moving Average (%)		
				Value	Quantity	Price
1949	8,304	13,685	61			
1950	13,331	12,864	104			
1951	18,184	12,996	140			
1952	20,023	16,683	120	+ 51	+ 27	+ 8
1953	14,880	14,055	106	- 13	- 1	- 12
1954	15,642	14,365	109	- 12	- 1	- 11
1955	21,293	18,301	116	+ 26	+ 22	+ 4
1956	23,773	20,385	117	+ 35	+ 31	+ 6
1957	21,429	20,313	105	+ 6	+ 17	- 8
1958	23,617	24,071	98	+ 7	+ 22	- 13
1959	26,648	25,288	105	+ 16	+ 17	- 2
1960	28,308	28,294	100	+ 18	+ 22	- 3
1961	27,690	28,782	96	+ 5	+ 11	- 5
1962	29,858	28,641	104	+ 8	+ 4	+ 4

Notes: a. See Table 6.