Some Analytical Aspects of the Intermediation of Oil Surpluses by the Euro-Currency Market*

Without attempting to estimate the likely size of the combined current-account deficit of the oil-importing countries and of the contribution of the Euro-currency market towards financing it, this paper seeks to explore in some detail the economic implications of the Euro-currency market's potential intermediary rôle. The analysis will focus on credit and the money supply, the question of multiplier relationships, international liquidity and the problems for domestic and international monetary stability. Comparisons will be made both between the present situation and the situation existing before the oil price increase and between alternative ways of financing the deficit. In fact, one of the conclusions arrived at is that several of the general economic implications of financing the oil deficit through the Euro-currency market also hold good for financing through other channels.

For expository purposes it is necessary first of all to make a number of simplifying assumptions and to agree on some "shorthand" terminology. We have the following groups of countries: the oil-exporting countries (henceforth referred to as the OEX countries) and, as their counterpart, the oil-importing countries (OIM countries). Within the latter group we shall distinguish between the United States and the rest of the oil-importing countries (ROIM countries). It is assumed, moreover, that there is no flow of new official gold into the system, so that the current-account balances of the OIM countries and the OEX countries should add up to zero.

The increase in oil prices raises the import bill of the OIM countries. Part of the higher payments for imports will be offset

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by an induced expansion in exports to OEX countries. The remaining current-account deficit of the OIM countries will, throughout this paper, be called the "oil deficit" and the corresponding current surplus of the OEX countries the "oil surplus". Unless stated otherwise, it is assumed that without the oil deficits the current accounts of the individual OIM countries would be in balance. The foreign exchange receipts which accrue to the OEX countries from their oil surpluses will be called "oil funds". We shall disregard private earnings and assume that all these oil funds represent official money.

The OEX countries will use part of the oil funds to make direct investments in OIM countries; they will invest in those countries' long and short-term capital markets; they will lend to international official institutions; and they will lend directly to official agencies in OIM countries. The surpluses which remain after all these investment channels outside the Euro-currency market have been utilised will be called the "residual surplus" of the OEX countries. Correspondingly, as viewed from the side of the OIM countries, the deficit remaining to be financed after all channels other than the Euro-market have been utilised will be called their "residual deficit". In general, no distinction will be made here between official Euro-currency borrowing to finance the residual deficit and private borrowing by residents of the same country, i.e. between Euro-currency borrowing motivated directly by balance-of-payments considerations and other Euro-currency borrowing. Even recourse to the Euro-currency market by banks and private firms in the OIM countries will itself be governed largely by official policies in the field of exchange regulations, taxation, interest rates, quantitative credit controls, etc., and will therefore reflect in large measure the external financing requirements of those countries.

Two basic constellations are possible — perfect matching and mismatching. In the case of perfect matching the Euro-currency market distributes the oil funds stemming from the residual surplus of the OEX countries in such a way as to cover exactly the residual deficit of each individual OIM country. In the case of mismatching the flow of Euro-currency funds to some OIM countries exceeds their residual deficit while other OIM countries are not able to cover the whole of their residual deficit in the Euro-currency market.

I. Impact on Money and Credit

A. *Perfect matching*

As indicated above, if there is perfect matching the oil funds deposited in the Euro-currency market by the OEX countries are fully taken up by the deficit countries and exactly finance their residual deficit. Taking a single country X to stand for the whole group of OIM countries, let us assume that the increase in oil prices has raised that country's import bill by 100, that 30 of this amount is offset through an induced increase in exports and that 40 is financed outside the Euro-currency market. This leaves 30 to be covered by means of Euro-currency borrowing.

If no recourse were had to Euro-currency credit and if there were no alternative sources of additional external finance, country X would experience a net payments outflow and a decline in its official reserves at an annual rate of 30. In the absence of compensatory monetary action by the authorities this would entail a corresponding reduction in the economy's monetary base and a multiple contraction of the money supply. These things would be prevented by the Euro-currency borrowing.

By way of illustration, let us assume that the increase in the oil price does not affect the level of domestic investment in country X and that the reduction in real income resulting from the deterioration in the country's terms of trade causes domestic consumption to fall by 30. This implies that the domestic supply of savings will contract by 70, i.e. by the difference between the increase in expenditure on imports and the decrease in expenditure on consumption. The decline in domestic consumption expenditure just offsets the induced increase in exports, so that aggregate domestic expenditure remains unchanged. In these circumstances the only thing that will happen is that, instead of being based on domestic savings, 70 of domestic capital formation will be based on foreign savings, 30 of which is received via the Euro-currency market while 40 enters the country in the form of other types of money or capital imports. In terms of money flows, the situation is that, instead of leaking out of the income circulation into domestic savings and being returned to it via financial asset creation and investment expenditure, the 70 leaves the domestic income circulation via increased payments for imports but comes

back by way of foreign purchases of domestic financial assets. There is no change in the size of the income circulation, nor in the money available to finance it. On the basis of the above assumptions the balance between the supply of and demand for money and savings remains unchanged and there is therefore no reason for a change in the average level of interest rates.

The answer to the question whether the growth of the consolidated balance sheet of the banks of country X will be affected depends on the form in which the 70 of foreign savings comes into the country. If the banks themselves take up or receive the funds from abroad (we may call this " case a ") the growth of their balance sheets will accelerate; the expansion of their liabilities to non-residents will accelerate by 70 while the slow-down in their liabilities to residents will be less than the decline of 70 in the domestic supply of savings since part of the flow from domestic savers to investors would in any case have taken place outside the banking system. For similar reasons, if the foreign borrowing is effected directly by the non-bank sector (" case b ") the growth in the banks' balance sheets will slow down, but by less than 70. In the real world the capital imports will, of course, take place in both forms and it is hard to predict what the net impact on the growth of the banks' balance sheet will be. The important point, however, is that while in both cases the volume of international credit goes up (i.e. by 70) there is no increase in credit to end-users. In " case a ", where the expansion in international credit will mainly take the form of interbank loans, there will be some increase in domestic bank credit to end-users (based on foreign deposits and loans) which is offset by a corresponding contraction in credits extended outside the banking system. In " case b ", by contrast, there is some disintermediation of the domestic banking system, with the decline in domestic bank credit being offset by a corresponding expansion in foreign credits to domestic end-users.

The general conclusion that the financing of the oil deficits via the Euro-currency market or through other forms of capital imports will not affect the total volume of credit to end-users while the volume of international credit will increase must, of course, be qualified if there are structural effects or secondary repercussions. We shall mention only some of the more relevant possibilities.

In case (b), where the foreign borrowing is effected directly by the end-users, a net expansionary effect may ensue because foreign credits may quite often escape reserve requirements, unlike credits

extended through the domestic banking system. Similarly, in case (a), where the foreign borrowing is effected by the banks, there may be a net expansionary or contractive effect if compulsory reserve ratios discriminate between liabilities to residents and those to non-residents or between liabilities in domestic and foreign currency. Moreover, the average maturity of liabilities to non-residents may be different from that of liabilities to residents; this may affect not only the level of required reserves but also the banks' own lending policies and the differential between long and short-term interest rates.

A net deflationary effect may result if the foreign borrowing is effected directly by the central bank of country X or by the Treasury, with the Treasury sterilising the proceeds from the sale of foreign exchange at the central bank. However, when the authorities set themselves certain money supply targets the target growth of the money supply will probably be assured in other ways.

On the other hand, mechanical adherence to certain strictly defined money supply targets may itself entail a net expansionary effect. As already explained the substitution of foreign savings for domestic savings may slow down the rate of growth of the banks' balance sheets and will certainly slow down the rate of growth of the banks' liabilities to residents. If they exclude liabilities to non-residents, it is therefore quite likely that the various statistical measures of the domestic money supply, especially M_2 and M_3, will slow down. However, if the authorities take compensatory action to maintain the target growth of the money supply the total (domestic plus foreign) supply of credit to domestic end-users will tend to go up and interest rates will tend to be lower.

As a kind of footnote it may be added that it is sometimes argued that a net expansionary effect may result when there is a certain asymmetry in the behaviour of the monetary authorities, i.e. when they neutralise the tightening effect of the increased payments for imports but allow the expansionary effect of the foreign borrowing to operate to the full. However, this theory rests on the assumption that there is a lag between the payments for oil imports and the foreign borrowing undertaken to finance them; in fact, a lack of synchronisation of payments flows of this kind is likely to be of importance only in the early stage of the new oil price situation. In addition, such a theory of asymmetric behaviour on the part of the monetary authorities assumes that the growth of the money supply

is governed by accounting considerations rather than by monetary policy.

Finally, it must be stressed that, in contrast to the assumptions made on pages 203-204 above, it is quite likely that the oil price situation will affect the growth of money and credit indirectly through its repercussions on the level of economic activity and economic growth and through the stimulus it gives to inflation by way of cost and distribution effects. However, these developments are due to the higher cost of oil itself and not to the monetary implications of financing its balance-of-payments consequences via the Euro-currency market or other foreign borrowing.

Although the existence of contractive or expansionary monetary effects depends in large measure on the attitudes and reactions of the monetary authorities, the conclusion stands that covering the oil deficit by means of external borrowing will in general be neutral. Moreover, as the foregoing analysis makes clear, the monetary implications will be the same whether the funds are borrowed through the Euro-currency market or through other channels. In either case there will be an increase in international credit, while there will tend to be no change in the total supply of credit to non-bank end-users.

This is not to deny, of course, that there might be certain structural or secondary effects (along the lines sketched on pages 204-205 above) as a result of the existence of the Euro-currency market. For example, but for the Euro-currency market a larger part of the oil surpluses might be invested by the OEX countries in the security markets of country X or might be lent directly to that country's public sector. As a result of the existence of the Euro-currency market a larger part of the foreign borrowing might be effected through the banking sector, i.e. the volume of interbank credit is likely to expand, the average maturity of the debt may be shorter and the constraint exerted by external monetary conditions on domestic policy may be stronger.

B. *Mismatching*

The most important case of mismatching occurs when the flow of the oil funds to the United States is larger or smaller than that country's residual deficit.

Suppose, for example, that as a result of the Euro-banks having reached their credit limits vis-à-vis non-U.S. borrowers their investments in the United States exceed the residual U.S. deficit. This necessarily implies that there are not enough funds left in the Euro-currency market for the ROIM countries to finance their residual deficits. The ROIM countries will, therefore, have to draw on their reserves (we leave aside for the moment the possibility of the residual deficit being financed through borrowing in the United States) and, in the absence of compensatory monetary action by the authorities, the growth of credit and the domestic money supply in those countries will tend to slow down.

While the impact on the ROIM countries would clearly be a contractive one, the reserve-currency rôle of the dollar would prevent a corresponding expansionary effect from taking place in the United States. The ROIM countries would meet such part of their residual deficit as they were unable to finance through Euro-currency borrowing by drawing down their reserves, i.e. by handing over dollars to the OEX countries; the latter would deposit these dollars with the Euro-banks, which would leave and relend them in the United States. All that happens from the point of view of the U.S. financial system is that instead of the United States having liabilities to official holders in the ROIM countries it will now have liabilities to the Euro-banks. The U.S. official settlements balance will show a surplus, but there will be no effect on the U.S. monetary base or on total credit to end-users in the United States.

Quite clearly, there might be certain structural effects owing to the fact that the ROIM countries' official reserves are usually invested in U.S. Treasury bills, whereas the Euro-banks' claims on the United States consist mainly of interbank loans or credits to private U.S. non-bank corporations. Treasury bill yields would therefore tend to move upwards, while other interest rates would tend to ease. However, whether the change in the composition and direction of financial flows will affect the total supply of credit is hard to say; what can be said is that the net effect may be either contractive or expansionary and that it will tend to be of fairly small overall quantitative importance. (For a more detailed analysis of the various possibilities involved see pages 26-28 of the author's " Some Analytical Problems Relating to the Euro-currency Market ", published as No. 79 of Princeton University's Essays in International Finance).

Another possibility is that the United States has no residual deficit at all, that is to say that the direct placement of funds by the OEX countries in the United States is larger than the U.S. oil deficit. In that case, even if the Euro-banks were to use the whole supply of oil-dollars for purposes of lending outside the United States, this would not be sufficient to finance the ROIM countries' residual deficit and the activity of the Euro-banks could not fully offset the contractive monetary impact of the oil price situation. The analysis here is essentially the same as that outlined in the preceding paragraphs, with the difference that the U.S. financial system's liabilities to official holders in the ROIM countries will now be replaced by direct liabilities to official holders in the OEX countries and that the U.S. official settlements balance will therefore show no improvement.

Summing up, it can be said that if the U.S. take of oil funds, either via the Euro-market or directly from the OEX countries, is larger than the U.S. share of the oil deficit, the net result will tend to be contractionary since there will be no expansionary monetary impact in the United States whereas the growth of money and credit in the ROIM countries will tend to slow down.

The actual constraint exerted on the ROIM countries by their inability to finance the whole of their residual deficit in the Euro-currency market will, of course, depend on their access to other forms of additional finance, which in this context can only mean credit from the United States. If they can borrow just as easily in the United States as in the Euro-currency market the constraint will be rather small. In fact, there is theoretically no limit to the extent to which the United States could lend to the ROIM countries since, owing to the reserve-currency rôle of the dollar, such lending would have very little impact on the domestic monetary situation in the United States; nor would it give rise to a balance-of-payments problem. It is true that the U.S. financial system would show an increase in liabilities to foreign official holders; however, the counterpart would not be a reduction in liabilities to domestic holders but simply an increase in foreign claims. The impact on the U.S. official settlements balance would be negative since there would be no reduction in liabilities to the ROIM countries; however, this would not mean that there was an excess supply of dollars outside the United States, since in fact the ROIM countries would be deliberately trying to retain their dollar balances.

But in practice access to credit from the United States might not be so easy. Firstly, if credit is tight in that country U.S. banks might not be eager to lend abroad. Although total credit availability in the United States will in general not be affected by such lending, the individual bank which undertakes the lending will lose funds to the other banks and the U.S. money market. Secondly, if the Euro-banks, among which the branches of U.S. banks play an important rôle, were not willing to increase their credits to the ROIM countries because they had reached their self-imposed lending ceilings vis-à-vis that group of countries, the same would undoubtedly be true of banks in the United States. Thirdly, if for the reasons given under the two previous points the ROIM countries were unable to finance in the U.S. financial market such part of their residual deficit as they could cover in the Euro-market, they would have to borrow from the U.S. official sector. Such borrowing, however, would certainly not be automatic and might be hampered by various political considerations.

The opposite situation is also conceivable, though perhaps not very likely — i.e. where the flow of oil funds via the Euro-currency market to the United States is smaller than the U.S. residual deficit. This would necessarily mean that the ROIM countries were borrowing more than was needed to finance their residual deficits. Here the overall monetary impact would be an expansionary one. The reasoning is the same as in the preceding paragraphs, but with the signs reversed. A net expansionary impact in the ROIM countries associated with their official settlements surplus would not have as a counterpart a corresponding tightening effect in the United States. All that would happen from the point of view of the U.S. financial system is that part of the growth in liabilities to the Euro-banks and the OEX countries would be replaced by an increase in liabilities to official holders in the ROIM countries.

Finally, there is the possibility that, while the Euro-currency borrowing of the ROIM countries might equal their combined residual deficit, the intake of Euro-currency funds by individual ROIM countries may be larger or smaller than their residual deficit. The likelihood of this occurring is all the greater in view of the fact that there were very large balance-of-payments disequilibria between individual ROIM countries even before the oil price increase. The result of this will be an expansionary impact in the ROIM countries with a financing surplus, while in the other ROIM countries the

amount of Euro-currency finance obtainable will not be large enough to prevent the oil price situation from exerting a tightening monetary effect. Whether from a global point of view the actual outcome will on balance be neutral, expansionary or contractive will depend on the policies pursued by the monetary authorities in the individual ROIM countries. When the tightening effects of the official reserve losses in the deficit countries are neutralised and the external payments inflows give rise to an upward revision of the monetary growth targets in the surplus countries, the net effect will be an expansionary one, and vice versa. It is hard to say a priori which of the two outcomes is the more likely. On the one hand, it could be argued that, since the monetary aggregates will have to increase in any case, the undesirable domestic monetary repercussions of an external payments surplus are, from a technical point of view, easier to neutralise than those of a deficit. This would imply that the net impact will tend to be contractive. On the other hand, it could be maintained — and this argument is perhaps a weightier one — that politically it is much easier and normally more convenient to allow the growth of money and credit to exceed the target rates rather than to fall short of them. Concern for the unemployment rate might make it difficult politically to accept the contractive domestic monetary impact of an external payments deficit, particularly if it assumes very large proportions. Furthermore, a net expansionary effect may ensue when within the ROIM countries the surplus countries relend their reserve accruals to the deficit countries. Although this inter-central-bank lending will have no direct repercussions on the money supply of the countries concerned, it may somewhat reduce the need for a very restrictive monetary policy in the deficit countries whereas there would be no offsetting effect in the surplus countries.

To sum up this section, it can be said that whether there is a net expansionary or a net contractive impact depends above all on whether the flow of oil funds, directly or through the Euro-currency market, to the United States is smaller or larger than the U.S. residual deficit. Since the probability is that it will be larger, the conclusion which seems to emerge is that, even after the Euro-currency markets have shared out the oil money, the net monetary impact of the oil price situation will tend to be contractive. The actual outcome will naturally depend on the reactions and policies of the monetary authorities in the United States and in the ROIM countries.

Here again it should be emphasised that the analysis outlined in this section would be valid even if all the financial flows occurred outside the Euro-currency market. Nevertheless, the Euro-currency market makes one important difference: without the attraction of the Euro-currency market the direct flow of oil funds to the U.S. financial markets would probably be larger and, in order to obtain the same amount of financial accommodation, the ROIM countries as a group would probably be obliged to pursue a more restrictive domestic monetary policy.

The reader may well have noticed that despite the exchange rate regime currently operating the analysis has been conducted in terms of fixed exchange rates. The reason for this is that the present system of floating rates is a managed one and within the context of the oil price situation the emphasis must be on the management rather than on the floating. Floating downwards against the currencies of the OEX countries is obviously not an effective way for the OIM countries to get rid of their combined current-account deficit. Exchange rate adjustments between the OIM countries may be an important instrument in the longer run for bringing the distribution of oil deficits more into line with the financing possibilities, but in view of "J"-curve effects free day-to-day floating is certainly not an effective means of solving the external financing problems of individual ROIM countries.

II. The Question of Multiplier Effects

So far the analysis has been conducted on the assumption that the supply of new oil funds to the Euro-market is equal in size to the combined residual deficit of the OIM countries. Is this a realistic assumption, or will the relending of the oil funds by the Euro-banks give rise to a further expansion of their loanable funds?

Here again it is useful to distinguish between perfect matching and the situation of asymmetry between residual deficits and Euro-currency inflows. In the case of perfect matching the Euro-currency borrowing just offsets the residual deficit and, as argued in the preceding section, there tends to be no change on balance in the growth of the money supply, in total credit to end-users or in official reserves. There is consequently no reason why there should be an increase in the supply of funds from these countries to the Euro-

currency market. On the contrary, owing to the reduction in real income and real savings there will tend to be — at least in real terms — a slow-down in the accumulation of financial assets by residents of the OIM countries, with the result that the increased supply of funds to the Euro-currency market by the OEX countries will be partly offset by a reduction in supplies from the OIM countries.

It is of course true that without the possibility of covering their residual deficits through foreign borrowing the ROIM countries would have to draw down their international reserves and the growth of money and credit would probably slow down considerably in those countries. The result would then undoubtedly be a sharp reduction in supplies of funds from these countries to the Euro-currency market. The financing of the residual deficit through the Euro-currency market or through other forms of foreign borrowing will prevent this, but it is extremely doubtful whether this preventive effect should be called a Euro-currency multiplier.

Finally, there is no denying that as a result of its direct impact on the rate of inflation (i.e. mainly through cost effects) the oil price situation might accelerate the growth of the Euro-currency market in nominal terms; on the other hand, if the oil price causes a contraction in world aggregate demand and the level of economic activity, the expansion of the market will tend to slow down in real terms. However, here again these effects are not related to the monetary implications of the financing of the oil deficits or to the intermediary rôle of the Euro-currency market.

We may add that claims that the intermediation of oil funds by the Euro-banks has a large multiplier effect are sometimes based on the argument that the dollars borrowed by the deficit countries in the Euro-currency market are returned to the OEX countries in the form of royalty and tax payments and are subsequently redeposited by the OEX countries in the Euro-currency market where they are lent once again to the deficit countries, and so on. It needs to be stressed, however, that this kind of circuit is not endogenous deposit or credit multiplication by the Euro-banks but simply represents the income circulation of money. The same phenomenon occurs in national economies when income-earners deposit their savings with the banks, which relend the funds to the business sector; the business sector then pays out the funds in the

form of wages, salaries and dividends to the income-earners, who redeposit part of the funds for saving purposes with the banks, and so forth. In the context of the oil price situation the OEX countries are the income-earners and savers and the OIM countries correspond to the business sector which borrows in order to be able to pay out the incomes.

Whereas in the case of perfect matching there would seem to be hardly any room for secondary expansion of the Euro-currency market, such effects may quite easily result when there are asymmetries, though these effects might be of a contractive rather than an expansionary nature.

Let us go back to the case in which the flow of oil funds to the United States is larger than the U.S. oil deficit. As already explained, this means that, short of borrowing from the United States, the ROIM countries will have to meet part of their residual deficit out of reserves. This may tend to slow down the growth of the Euro-banks' balance sheets in two ways. First, although the monetary authorities of the ROIM countries will probably offset to some extent the contractive monetary impact of their official settlements deficit, the reserve losses will generally impel them to allow some tightening of money and credit, and this would, of course, tend to slow down the flow of residents' funds to the Euro-currency market. In addition, the flow of private funds from the ROIM countries to the Euro-currency market in such a situation would be likely to be discouraged by exchange controls and other measures against capital outflows. Secondly, the monetary authorities of the ROIM countries may meet part of their reserve losses out of foreign exchange reserves held in the Euro-currency market.

Although both these reactions would reduce the growth of the Euro-currency market, they differ from each other in one important respect. The withdrawal of private funds from the Euro-currency market amounts to a capital inflow for the country whose residents withdraw the funds. It consequently has no effect on the size of the financing gap of the ROIM countries as a whole since the resultant reduction in the Euro-currency market's lending potential is matched by a reduction in those countries' combined residual deficit, and the whole contractive process stops there. When, however, official reserves are withdrawn from the Euro-currency market there is no offsetting reduction in the ROIM countries' residual deficit. The decrease in the Euro-currency market's lending potential would thus lead to a

further widening of the ROIM countries' external financial gap and accelerate their reserve losses and their consequent withdrawals from the Euro-currency market, and so on.

The opposite effects will be produced when the flow of Euro-currency funds to the ROIM countries is larger than their residual deficit, i.e. when the United States receives less than its share of the oil funds. In that case the reserves and the money supply in the ROIM countries will tend to go up and there is likely to be some secondary expansion of the market. If that secondary expansion partly takes the form of official deposits in the Euro-currency market by the ROIM countries, not only will the volume of Euro-currency credit widen but there will also be an excess of Euro-currency finance over actual borrowing requirements to finance the oil deficit.

Since, as already indicated, the likelihood is that the volume of oil funds received by the United States will be larger than its oil deficit, it would appear that the growth of the Euro-currency market will, if anything, be slowed down by secondary contractive effects. On the other hand, it is worth repeating that the existence of the Euro-currency market has probably made it easier for the ROIM countries to compete for their share of the oil funds and has therefore tended to reduce the surplus of funds going to the United States. Apart from this latter effect the results would be the same if the oil deficits were financed outside the Euro-currency market: as the reader can easily check for himself by going through the argument, there would be some secondary repercussions on the Euro-currency market. It is therefore doubtful whether it is at all meaningful in this context to speak of "Euro-currency" multiplier effects.

Secondary effects may of course also occur when the ROIM countries' aggregate receipts of oil funds are equal to their combined oil deficit but individual countries within the group have offsetting financing surpluses and shortfalls. It is quite conceivable, for example, that the less-developed of the ROIM countries (let us call them the LROIM countries) may not be able to finance their oil deficit and may have to draw on their reserves while in the developed ROIM countries (DROIM countries) the inflow of oil funds exceeds the oil deficit and reserves go up. Since on past experience the marginal propensity of the LROIM countries to invest their official reserves in the Euro-currency market seems to be much higher than that of the DROIM countries, the net result would be a withdrawal of official deposits from the Euro-currency market, thus leading to a

further aggravation of the LROIM countries' financing problems and further withdrawals from the Euro-currency market, and so forth.

It is sometimes argued that the growth of the Euro-currency market arising from the intermediation of oil funds is coming on top of a rapid expansion of the market and is therefore accentuating its inflationary influence. However, even if it were true that the impact of the market was inflationary before the new oil price situation, this would not alter the validity of the above conclusions. Financing the oil deficits is not inflationary in itself and, for the reasons set out here and in the preceding section, the acceleration of the market's growth on that score will, if anything, run parallel with a reduction in its inflationary force. Furthermore, the growth of the non-oil business of the market will tend to slow down as a result of the oil price situation.

To conclude this section we should perhaps mention that the only genuine kind of endogenous Euro-currency multiplier effects would occur if the Euro-banks used the funds received from the OEX countries partly for lending to the OEX countries themselves. The resultant acceleration in the OEX countries' reserve accruals would tend to give rise to a second-round increase in Euro-currency deposits, etc. Although in the recent past the OEX countries have been of some importance as borrowers of Euro-currency funds, it is doubtful whether this chain of events will be of any major quantitative importance in the period ahead. Moreover, any inflationary effects that such a multiplier process had would be limited to the OEX countries themselves.

III. Effects on Official Reserves

Assuming that the accumulation of foreign assets by the OEX countries is counted as official reserves,[1] the oil price situation will of course give rise to an acceleration in the growth of international reserves. Even in the extreme case in which the OEX countries invested all of their new funds in the United States, with the ROIM countries financing their deficits out of reserves, the statistical increase in world official reserves would be equal to the total oil deficit minus the ROIM countries' share in that deficit; in other words, it would

[1] For the sake of simplicity we shall leave out of account here purchases of real estate and other forms of direct investment by the OEX countries.

be equal to the oil deficit of the United States. If, on the other hand, the OEX countries placed the whole of their oil surplus outside the United States, i.e. in the ROIM countries, world reserves would go up by the amount of the global oil deficit plus the U.S. share in it. In reality the actual outcome will of course lie between these two extremes, but only if the flow of oil funds to the United States exactly matches the U.S. share in the oil deficit will the increase in world official reserves be equal to the global oil deficit, and even then only on the assumption that there is no official lending between OIM countries. Any such official inter-country lending would lead to a corresponding increase in global reserves provided that the lending country counted its claims under its reserves.

Finally, we must allow for second-round effects. If the investments of the OEX countries in the United States are larger than the U.S. oil deficit the ROIM countries will probably finance some of their resultant reserve losses out of reserves placed in the Euro-currency market. This will reduce the Euro-banks' lending potential and thereby entail a further drain on the ROIM countries' reserves, and so on. In these circumstances it is even conceivable in theory that the oil price increase will lead to a decline in global reserves. This would be the outcome, for example, if the OEX countries invested the whole of their surpluses in the United States and if the induced withdrawals of reserves from the Euro-currency market by the ROIM countries were larger than the U.S. share in the oil deficit. In practice, however, this would hardly be likely to arise because the ROIM countries could almost certainly not afford reserve losses on that scale and would try to finance their oil deficit in large part through borrowing from the United States.

Summing up, it can be said that the oil price increases will undoubtedly lead to an increase in global reserves. Provided that the OEX countries' placements in the United States, either, directly or through the Euro-currency market, exceed the U.S. share of the oil deficit, however, reserves will tend to go up by less than the oil surpluses of the OEX countries. Moreover, the distribution of the reserve growth will be very uneven. More than the whole of it will probably be accounted for by the OEX countries while the reserves of the ROIM countries will tend to decline, which implies that the concept of global reserves will no longer be a very meaningful one.

It is doubtful in fact whether it makes very much sense to count the growth in the OEX countries' foreign assets as a corresponding

increase in world official reserves and international liquidity — as seems to be the general practice and as we have done in the discussion in this section — even if all these official assets were invested in fairly liquid forms. If official international reserves are defined as official foreign assets that are held against the contingency of temporary external payments shortfalls and for the purpose of underpinning confidence in the country's currency, then this definition certainly does not cover the overwhelming proportion of the foreign assets accumulated by the OEX countries. These assets mainly have the character of investments whose chief purpose is to provide the holder country with a maximum flow of income (either in the form of interest earnings or capital gains), even if for risk or interest rate reasons the funds are to a large extent invested in short-term forms.

Moreover, irrespective of whether they are invested in long or short-term forms, in the foreseeable future there is no prospect whatsoever of the total amount of these assets ever being reduced. Unlike the reserve increase of other countries, the foreign asset accumulation by some of the major OEX countries is irreversible.

In order to measure the growth of global reserves and to evaluate the need for further reserve creation, it would therefore seem advisable to count only part of the OEX countries' foreign assets as international reserves, perhaps only that part which does not exceed a certain percentage of their yearly imports. Applying that kind of criterion, it will be clear from the foregoing analysis that it is far from certain that the new oil price situation will cause an expansion in global reserves except in its initial stage. And even if it does so, the lopsidedness of the increase as well as the rapid growth of the foreign indebtedness of the ROIM countries might be used as an argument in favour of accelerating rather than slowing down the creation of additional reserves.

Furthermore, it is not only the concept of global liquidity but also the traditional measures of external payments disequilibria, such as the official settlements balance, which have lost a good deal of their meaning. Since — at any rate in the more immediate future — the OIM countries will not be able to adjust away their combined current-account deficit vis-à-vis the OEX countries, they will have to regard themselves as being in balance-of-payments equilibrium when this current deficit is financed by means of long and short-term credits from the OEX countries, either directly or through the Euro-currency market. Although this borrowing from the OEX countries may

show up as an official settlements deficit, any attempts by individual OIM countries to eliminate this "deficit" by balancing their current account would only increase the difficulties for the other OIM countries.

To illustrate the very limited value of the official settlements concept, let us take the United States and compare two types of situation. In the first the OEX countries place the whole of their surpluses in the Euro-market and the Euro-banks relend their funds so that the OIM countries' individual deficits are exactly covered. In the second situation the OEX countries place the whole of their surpluses in the United States. In the first case, where the U.S. oil deficit is financed by way of the Euro-currency market, the United States will have no official settlements deficit. In the second case the United States will show an official settlements deficit, which will be particularly large when the ROIM countries finance their oil deficit not by drawing down their dollar reserves but by borrowing from the United States. In the first situation where there is no official settlements deficit the dollar will tend to be neither particularly weak nor particularly strong vis-à-vis the ROIM countries' currencies; but in the second situation there will, despite the U.S. official settlements deficit, be heavy upward pressure on the dollar!

Perhaps one step in the direction of rendering the official settlements concept more meaningful again would be to count increases in liabilities to official holders in the OEX countries as an "above-the-line" item in the balance of payments.

IV. Problems of Stability

One inevitable consequence of the emergence of huge current-account deficits in most countries of the non-communist world and of their financing is that an increasing part of national real and financial assets will be foreign-owned. While it may require a fairly strong inducement to persuade either a private person or a firm who has always had his funds invested in the domestic markets to transfer his capital abroad it will make very little difference to a private or public entity which already has its capital invested abroad whether its funds are located in country A or country B; even small changes in interest rate differentials, exchange rate expectations or risk considerations may induce a shift from country A to country B. The substitution of foreign ownership for domestic ownership of national

assets will thus in itself be an important factor in increasing the international mobility of capital.

In itself, increased international mobility of capital is not necessarily a bad thing. In fact in a world of low, stable and uniform rates of increase in price levels, where there was a wide measure of international harmonisation of national economic policies with interest rate differentials truly reflecting the scarcity of capital, and where there was a large degree of confidence in the prevailing exchange rate structure, high international mobility of capital would probably be a good thing. More capital would tend to flow to places where it was needed most, the flows would be fairly stable, and they would prevent rather than cause exchange rate fluctuations. But when wide differences in rates of inflation, uncertainty about the course of inflation and domestic policies to control it, and large initial balance-of-payments disequilibria make it next to impossible for the markets to judge what a realistic pattern of exchange rates should look like, increased international mobility of capital may add to the problems. In such a situation international capital flows might at times be quite unstable and instead of smoothing out exchange rate movements might intensify them. Since, in addition, exchange rate changes have a direct impact on the price level performance of individual countries, the capital and money flows might in these circumstances strengthen the centrifugal forces in the system rather than being part of the balancing mechanism. If, on the other hand, the monetary authorities sought to stabilise exchange rates by intervening in the exchange markets, major problems might arise for domestic monetary management: Given the suddenness with which shifts occur and the potential size of the flows, complete neutralisation of the domestic monetary impact of these capital and money flows without undesirable structural side-effects might not always be feasible; moreover, unless it were accompanied by direct capital controls, such neutralising action would itself be inclined to magnify the size of the flows.

Unfortunately a sharp increase in the amount of internationally mobile capital might not be the only effect of the oil price situation. By adding in varying degrees to inflationary cost pressures, accentuating the fears about inflation and aggravating balance-of-payments disequilibria and exchange rate uncertainties it may also contribute towards the creation of an international monetary climate in which there is the danger that funds may be moved around in a destabilising way.

How will the Euro-currency market affect this situation? In the short run its influence will be, and probably has already been, a stabilising one. It makes it easier for countries to finance their oil deficits and thus tends to calm down the exchange markets. In the longer run, however, the existence of the Euro-currency market might conceivably add to the problem of instability in three ways. Firstly, it makes it easier and more attractive for the OEX countries to invest their funds in liquid form. Secondly, it links together in an institutional sense the various national markets and so increases the ease with which capital can be shifted around between them. In particular, it makes it possible for funds to be switched from one currency into another while being left on deposit with the same bank. Thirdly, and probably less likely, if the Euro-currency market should really play a large rôle in the intermediation of the oil funds there might sometimes be doubts about some major borrowing countries and thus about the health of the market itself, which could induce sudden major shifts of deposits from the Euro-currency market to certain national markets.

It is of course true that the OEX countries as a whole have very little to gain from exchange rate instability, which would if anything reduce the liquidity of their investments. They are no doubt aware of the impact that their transactions have on exchange rates and, as seems to be borne out by recent experience, they may tend to operate in a cautious and responsible manner. Nevertheless the OEX countries are not a single political unit with a common will; individual OEX countries may feel that they have to safeguard the value of their assets and, although the group as a whole may lose as a result of exchange rate movements, individual countries within the group may gain — namely those which move first in the "right" direction. Secondly, and perhaps more important, given the scale of their surpluses and the thinness of the exchange markets at the present time the OEX countries might unsettle the exchange markets not by re-allocating their outstanding stock of investments but simply by changing the direction of the current flow of their new investments.

The obvious, though by no means easy, answer to these problems is: firstly, official intervention in the exchange markets to smooth out the exchange rate impact of destabilising capital flows and to help create a climate of continuity which may discourage them; secondly, official co-operation and arrangements between the OIM countries

to help finance this official intervention; and thirdly, official contacts between the OEX and the OIM countries to try and prevent the flows from developing in the first place. In the longer run, of course, a return to low, uniform and stable rates of increase in domestic price levels would be the most important contribution towards a rational pattern of international capital flows.

V. The Future of the Euro-Currency Market

Although the oil price situation necessarily entails a sharp increase in the volume of international capital flows which are the life-blood of the Euro-currency market, its impact on the growth of the market in real terms is not so certain.

For one thing, oil price increases involve a massive transfer of income from the OIM countries to the OEX countries. As has already been pointed out, the resultant decline of real income and of savings formation in the OIM countries will tend to slow down the supply of non-oil funds to the Euro-currency market. Moreover, the necessity of running up an increasing amount of foreign indebtedness will tend in the OIM countries to make for policies, both in the field of interest rates and in that of direct capital controls, which will hold down the outflows of funds to the Euro-currency market.

Secondly, there is quite a large number of weighty considerations which may — as indeed they already seem to be doing — limit the Euro-currency markets's contribution to the intermediation of the oil funds:

(a) The oil price situation in itself has weakened the international financial strength and, as viewed from the standpoint of the Euro-banks, the credit rating of many OIM countries. Now, already in the initial stage of this "new world", the Euro-banks seem somewhat reluctant to expand their credits to some of the OIM countries.

(b) Although inevitable from a macro-economic point of view, the financing of the oil deficits does not seem to be on a par with the standards of traditional bank business. Unlike the projects usually financed by banks, it does not in itself generate a future cash flow for the borrowing countries, i.e. a future flow of foreign exchange receipts which will permit the servicing and the ultimate repayment

of these loans. On the contrary, since there seems to be little prospect of the OIM countries being able to eliminate their combined current-account deficit in the foreseeable future, they will have to go on increasing their foreign indebtedness. This means that the OIM countries will only be able to service and repay the credits out of the proceeds of even larger borrowing. Moreover, the countries which need to borrow most, i.e. the large deficit countries, would be the least credit-worthy ones by normal banking standards. It would seem highly unlikely that the Euro-banks would go on building up their claims on those countries without some kind of joint international guarantees.

(c) Unless agreement is reached about gold there is little prospect that the collateral against which the OIM countries borrow — i.e. their international reserves — will expand in real terms (see pages 215-216). In fact, with inflation running at its present rate the real value of the OIM countries' exchange reserves will dwindle rapidly.

(d) The challenge of financing the oil deficits comes at a time when the market needs time for consolidation after a period of extremely rapid growth in an environment of sharply rising raw-materials prices, general inflation and exchange rate speculation. Even if they did not participate on a large scale in the intermediation of the oil funds, the banks might be afraid that the slow-down of economic activity that is probably inherent in any successful fight against inflation could exert considerable strains on the market in its present position.

(e) The contribution of the Euro-banks towards financing the oil deficit might be limited by their capital ratios which seem to be fairly tightly stretched already. In view of the depressed state of the equity markets the banks would at the present time probably have difficulty in keeping their capital base in line with the growth of their balance sheets in the event of further rapid expansion of the market.

(f) The growth of the Euro-banks' balance sheets would not be accompanied by a diversification of their assets and liabilities but would be concentrated on a fairly limited number of large depositors and borrowers. On the liabilities side this would not only involve the risk of sudden large-scale withdrawals but might also create a kind of political dependence which could perhaps compel the banks

at times to act against their own commercial interests. Here again the Euro-banks might be quite hesitant to rely for their funds increasingly on a very limited number of depositors, unless there were some official guarantees that would protect them from the consequences of a sudden withdrawal of the oil funds.

(g) The OEX countries have in the past shown a strong preference for liquidity, whereas the OIM countries' deficits and thus their borrowing requirements seem to be of a very long-term nature. Consequently, large-scale participation in the financing of the oil deficits might involve the Euro-banks in an excessive amount of maturity transformation.

The practical impact of these various considerations on the behaviour of the Euro-banks will be that the latter will revise downwards the interest return they are willing to offer on deposits, particularly on short-term deposits from the OEX countries, and raise the interest on their loans to the deficit countries. This increase in the interest margins charged by the Euro-banks will tend to deflect the flow of oil funds to other channels; the part of the oil business that is nevertheless handled by the Euro-market will tend to be the cream of the crop, will probably involve less maturity transformation than so far, and will be carried out at margins that contain sufficiently large risk premiums.

The various considerations enumerated above are quite often used not as an argument suggesting a fairly limited rôle for the Euro-market in the intermediation of oil funds but as an argument that the Euro-currency market is heading for trouble. This line of reasoning seems to be based on the assumption that, since from a global point of view the intermediation of the oil funds is an unavoidable task, the Euro-market as one of the main vehicles of international capital flows cannot help becoming heavily involved in it. However, even on the rather unlikely assumption that the Euro-banks would throw to the winds their micro-economic principles and risk their health in the service of some macro-economic duties, it is by no means self-evident that in the event of a confidence crisis the market as a whole could run out of funds, though of course problems are readily imaginable in the case of individual banks. Given the world-wide scope of the Euro-currency market and its close links with national banking systems, if there were a flight of funds from the Euro-currency market would not the money be returned to the

market through other channels or used in such a way as to relieve the demand pressure on the market?

Here again the asymmetry between the United States and the other oil-importing countries is of considerable importance. If the funds withdrawn from the market were placed in the ROIM countries, the dependence of those countries on Euro-currency finance would decline accordingly. They could reduce their Euro-currency borrowing or even their outstanding debts; thus, the drop in the supply of Euro-currency funds would be matched by a contraction in demand. Alternatively, individual ROIM countries recording an increase in their reserves as a result of inflows of funds withdrawn from the Euro-currency market could redeposit those funds in the Euro-currency market with the result that the reduction in private supplies of Euro-currency funds would be offset by an increase in official supplies. Of course, the balancing mechanism would not function spontaneously and there would be problems of distribution, but with a proper understanding of the situation and a substantial amount of official co-operation it should be possible to cope with this situation. After all, all the parties involved will have a vital interest in the conservation of the system.

The situation might be more difficult to handle if the funds withdrawn from the Euro-currency market were placed mainly in the United States and if, as is the case at present, the Euro-banks' asset counterpart of these funds consisted mainly of claims on the ROIM countries. In that case it is unlikely that the withdrawal of funds from the Euro-currency market would be offset by a corresponding reduction in demand or by an increase in alternative supplies. The ROIM countries would register a decline in reserves that they could ill-afford, so that the Euro-banks would have difficulty in liquidating their assets. At the same time, the only effect in the United States would be a decline in liabilities to official holders in the ROIM countries offset by a rise in liabilities to the OEX countries and to private holders in the ROIM countries. Apart from possible structural effects, there would be no increase in credit availability and thus no automatic incentive for an increase in the supply of U.S. funds to the market. It is of course true that the squeeze of the Euro-currency market would lead to a sharp widening of the premium of Euro-currency rates over interest rates in the United States, but it is doubtful whether in the circumstances such a premium would be very effective

in retaining the funds in the Euro-currency market or in attracting fresh resources.

Nevertheless, relief would probably come from two sources. Firstly, the Euro-branches of U.S. banks which, because of the strong preference of the OEX countries for first-class names, would in any case have played a leading rôle in the intermediation of oil funds could count on automatic support from their head offices. Secondly, the remaining financial gap would probably be covered by means of assistance from the U.S. official sector. For example, the ROIM countries could draw on their U.S. swap lines and use the proceeds either to repay their debts to the Euro-market or to make deposits there. As already explained on page 208 above, such foreign lending, whether it is in the form of interbank loans or official credits, would not constitute any great handicap for U.S. domestic monetary management nor would it involve a real cost for the U.S. economy. Without such lending the damage done to the international economy and thus ultimately also to U.S. interests might be quite serious. This, notwithstanding possible political hesitations, should make the decision a relatively easy one.

Let us, however, leave these exercises in conjecture and come back to realities. To sum up this paper it can be said that from the point of view of money, credit, prices and international liquidity there are no major reasons why the Euro-market should not make a large contribution to the intermediation of the oil funds. However, there may be certain dangers of instability associated with sudden shifts in the pattern of international capital flows. Furthermore, in the absence of official guarantees the Euro-banks themselves are, from health considerations, probably not willing to play a very large part in the financing of the oil deficits. That, however, is nothing to rejoice about; if the Euro-banks and, owing to the close links between the two, also the big U.S. banks largely stand aside, somebody else will have to step in.

It is of course true that with or without the assistance of the Euro-currency market the OEX countries have no choice but to invest the receipts of their current-account surpluses in the OIM countries; however, the danger is that without the distributive rôle of the Euro-currency market the bulk of these investments would be concentrated on a relatively limited number of countries with broad, elastic and well-developed capital markets, and that basically means the United States and perhaps one or two ROIM countries. A large

part of the ROIM countries would therefore be left with the problem of finding the necessary funds to cover their oil deficits. Not being favoured by market forces, these countries would have to rely on direct inter-governmental borrowing arrangements. Apart from a certain amount of assistance from other ROIM countries and international institutions their main source of finance would have to be the U.S. official sector, which would thus take over from the Euro-banks part of the task of intermediating the oil funds, or direct credits from the governments of the OEX countries. These official borrowings would, of course, have political undertones but there are hardly any acceptable alternatives; if they were unable to borrow sufficient amounts in the markets and did not obtain supplementary finance from the U.S. official sector or the governments of the OEX countries, the deficit countries would have to try to pass on the uncovered part of their combined current-account deficit to other OIM countries, which would mean to a large extent the United States. And if, as is quite possible, these other countries were not prepared to accept the deficit there would be the danger of opening Pandora's box of international evils: competitive devaluations, trade restrictions, and the rest.

The conclusion is clear. Whether the financing of the oil deficits is for the most part effected inside or outside the Euro-currency market, there will in either case be abundant need for official action and co-operation in the field of joint international guarantees and credit assistance. The Euro-market itself will only be the minor problem.

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