How Central Banks Manage Their Reserves

Group of Thirty, New York, N.Y.

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The Group of Thirty was established in December 1978, to explore basic problems in the functioning of the international economic system. It meets twice a year, for two to three days at a time. Between these meetings, study groups and researchers gather material to serve as a basis for the Group's discussions.

Group of Thirty

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A study by the Office of the Group of Thirty on behalf of the Multiple Reserve Currency Study Group

Study Group Members
H.J. Witteveen

Geoffrey Bell
Peter Kenen
Alexandre Lamfalussy
Fritz Leutwiler
Christopher McMahon
Jacques J. Polak
Wolfgang Rieke
Robert V. Roosa
Anthony M. Solomon
Robert Solomon

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PREFACE

This report on reserve currency diversification has been undertaken by the Group of Thirty in cooperation with central banks holding more than half of the world's foreign exchange reserves. The aim is to shed new light on a development of considerable importance to the international financial system — the evolution of a multiple currency reserve system.

The move to a *de facto* multiple currency reserve system (MCRS) has far-reaching implications for the authorities in the older and newer reserve centers as well as for those who are diversifying their reserves. Central banks in each of these categories are among those who have contributed to the study. The Group of Thirty hopes that the study it has undertaken may contribute to a clearer appreciation of the benefits and drawbacks of the process. This in turn may help both central banks and international institutions in their quest for policies of the greatest practical benefit to the international financial system.

The report is based on central banks' replies to questions that were drawn up by a study group under Dr. H.J. Witteveen, chairman of the Group of Thirty and former managing director of the IMF. The membership of the study group is shown on the title page. As in the case of previous surveys by the Group of Thirty, respondents were promised absolute confidentiality; answers were seen by the staff of the Group alone.

This study is published in conjunction with a booklet, "Reserve Currencies in Transition" consisting of essays by Dr. Wolfgang Rieke of the German Bundesbank, Mr. Michiya Matsukawa of Nikko Securities, Dr. Fritz Leutwiler and Dr. René Kästli of the Swiss National Bank and Mr. Christopher McMahon of the Bank of England. The booklet contains an introductory article by Mr. Robert V. Roosa, a partner in Brown Brothers Harriman and a former Under Secretary for Monetary Affairs at the US Treasury. In his article, Mr. Roosa discusses the background to the evolution of the multiple currency system and explores various approaches to reducing its possible instability. The article draws on extensive discussions of these topics at meetings of the study group.

The Group of Thirty wishes to express its thanks to the central banks that participated in the study; and to Mr. M.S. Mendelsohn, who took the leading role in compiling the report. Final responsibility for the report remains, however, with the undersigned.

April, 1982

Robert Pringle
Executive Director
Group of Thirty

How Central Banks Manage Their Reserves

Summary of the Report

Although the world has been moving towards a multicurrency reserve asset system during the past decade, this is the first study of its kind to examine the extent of that shift, its possible growth and its implications for the older and newer reserve centers, for reserve holders, and for the stability or otherwise of the international financial system.

The study breaks new ground in being the first to be based on the evidence and views of central banks themselves, in answers to a questionnaire supplemented, in some cases, by interviews. The 22 central banks which cooperated in the study hold more than half of the world's total of about $350 billion of foreign exchange reserves. They include the monetary authorities of most of the Group of Ten countries* and of the most important oil exporting countries as well as central banks of smaller industrial countries, NICs (or Newer Industrialized Countries) and a number of non-oil LDCs. The study has been supplemented by interviews with 12 international commercial and investment banks, because a large proportion of official reserves and other official foreign exchange holdings are placed with such banks in the leading domestic money markets and the

* The Group of Ten countries are the United States, the United Kingdom, Japan, Germany, France, Italy, the Netherlands, Belgium, Canada and Sweden. Switzerland cooperates independently in the work of the Group.

Euromarkets. The trend of reserve asset diversification since 1970 is shown in provisional and hitherto unpublished estimates (pages 30-32).

The principal findings

The fact of reserve asset diversification has now been attested for the first time by an important cross section of leading central banks. And, contrary to a widespread impression, diversification has by no means been limited to oil exporters and developing countries. Although some members of the Group of Ten continue to hold their foreign exchange reserves almost exclusively in dollars, excepting for minimal working balances in other currencies, several leading industrialized countries indicate that they have been diversifying some of their own reserves into currencies other than the dollar in the past five years. Moreover, even those central banks that have not as yet begun to diversify by currencies have, like the others, begun to manage their assets more actively than before in terms of the investment instruments chosen.

The dollar, however, remains unique in retaining all the functions of a reserve currency, above all in being the world's only intervention currency for all practical purposes. It is true that the Deutschemark has come to be used for official intervention too, but as yet mainly within the European Monetary System and on a limited scale even within that. The other reserve currencies like sterling, the yen, the Swiss and French francs and the Dutch guilder represent foreign exchange assets for the holders, but they are not fully-fledged reserve currencies because they are not used directly for official intervention in the markets.

The original impetus to diversification came from the collapse of the Bretton Woods system and the floating of exchange rates. This motivated many countries to try to maintain the real value of those assets or at least to increase the return on them.* The replies further suggest that the desire to spread the exchange risk on the large accrual of reserves to raw material producers after the commodities' boom of 1972/73 and to oil producers after 1973 and 1979 contributed to reserve asset diversification. So, in the view of respondents, did the desire to match foreign liabilities and assets following the large increase in balance of payments borrowing from 1973 onwards by industrial as well as developing countries. Changing patterns of trade have played their part and so have wide fluctuations in interest rates since 1979.

The Euromarkets provided a channel for diversification from the start. More recently, other channels have been provided by the relaxation of restrictions

* "Real" dollar interest rates were negative from 1972 to 1977 and only marginally positive from 1977 to early 1980.

on foreign official holdings of Deutschemark, yen, Swiss franc and Dutch guilder resulting, in part, from the current payments deficits of those countries at various times since 1979. However, the Euromarkets continue to attract central bank placements because of the higher yields available, as well as the flexibility and anonymity of these markets.

Diversification will continue, in the view of most respondents, although they see limitations to that process, partly because very few countries have markets of a breadth and depth which would make their currencies suitable as foreign official assets on any significant (or significantly larger) scale: one referred specifically to the shortage of liquid money market instruments in the 'new' reserve currencies — others to the 'narrowness' of non-dollar markets generally.

Countries that are large borrowers can achieve most of their diversification goals by a more active management of their debt structure; the replies yielded some evidence to substantiate this point, which was made by a G-10 central bank.

The maintenance of a currency mix appropriate to the pattern of foreign trade and of external indebtedness was seen as the most important influence on the management of reserves at present.

MCRS in practice

Destabilizing . . . In the view of most central banks who cooperated in this study, the trend towards the MCRS may have a marginally destablizing influence, but they attribute the main causes of instability in exchange and interest rates to unstable economic conditions and monetary policies; moreover, the impact of switching by official holders is thought to be much less than that of private investors.

. . . **or, stabilizing**? However, several other respondents believe that the MCRS may actually contribute towards stability at the margin, by spreading responsibility for adjustment among more centers. In particular, in such a system the dollar faces competition from other currencies and this "may tend to constrain dollar creation." Official currency switching can reinforce the signals for economic adjustment to the older and newer reserve centers and thus contribute to prompter adjustment by those centers when necessary.

Active portfolio management of part of their reserves by a growing number of central banks is tending to blur the distinction between their behavior and that of other participants in world financial markets. The impact on the financial system may vary greatly according to whether official "diversified portfolios" are managed aggressively (like "performance funds") or cautiously. The evidence suggests that some central banks tend towards the first course and others towards the latter.

"Rational" behavior by "large new holders of reserves, primarily OPEC countries" was favorably commented on by a G-10 central bank. Similar observations were made by a few other central banks, acknowledging the profit-oriented yet prudent portfolio management policies of some of these large new reserve holders. Such policies will tend to have a stabilizing influence on the exchanges.*

"Irrational" behavior, on the other hand, was reported by several commercial bankers. They said that diversified reserve holders often act "perversely" by selling out of falling markets and buying into rising markets, thus contributing to exchange rate instability. One investment banker spoke of "wild and ill-informed trading" in currencies and commodities by some of his official clients, adding that they frequently lose money.**

Policy issues

The de facto MCRS is here to stay, according to most respondents. "We cannot go back to the dollar alone or forward to the SDR" said one G-10 central banker. Most central banks surveyed expect the SDR's role to remain modest, and there was surprisingly little difference of view between industrial and developing countries. Nor did most respondents see an alternative to the MCRS in a substitution account of the type proposed in 1979/80, which would have substituted SDR claims on the IMF for some of the official dollar claims on the US. At the same time, most respondents doubt whether any general understanding could be reached between reserve centers and holders on rules or guidelines for diversification, although several thought the idea worth exploring.

Other policy issues arising from the replies were the following:

1. In the view of several central banks, the extent of further reserve diversification will be strongly influenced by US monetary policy and the American authorities' attitude to the dollar's exchange rate including, but not limited to, intervention policy;
2. Replies suggest that insofar as measures to reduce exchange rate instability associated with an MCRS might be desirable, central banks look in the first instance to the central banks of reserve centers to make the necessary arrangements with each other;

* An example of this has been publicly provided by Mr. AlQuraishi, the Governor of the Saudi Arabian Monetary Authority. He has said that SAMA's policy is to buy into falling markets and to stay in or sell out of rising markets. *The Banker*, London, July 1981, page 77.

** One example, recently reported, referred to estimated losses of "well over $25 million, or as much as the paid-up capital" of the Abu Dhabi Investment Company, created in 1977 as a merchant bank and investment vehicle for that state's official funds. *The Economist Financial Report*, December 10, 1981.

3. Further, the replies taken together suggest that if the financial community should at some point in the future wish to move decisively away from the dollar, a successor to the dollar would have to fulfill all the functions of a reserve currency, including particularly its ability to serve as a means of direct intervention in the foreign exchange markets.

Conclusions

Most of the respondents to this survey believe that there is no practical alternative to the *de facto* MCRS that has come into being. They foresee a further if limited tendency towards reserve currency diversification and more active asset management through a wider range of market instruments by reserve holders. Most of them see little prospect of official management of the phenomenon; but they do not seem to be strongly concerned about this.

Some central banks believe reserve diversification adds marginally to international financial instability. Others believe that it does or could make a marginal contribution towards the stabilizing of exchange relationships. The outcome would seem to depend partly on the extent to which official asset holders perceive an identity between their own longer-term investment interests, and the contribution which that perception could make towards stabilization.

The Development of a Multi-Currency Reserve System

Report on Central Banks' Replies
to Questionnaire

PART 1: THE MANAGEMENT OF RESERVE ASSETS

1. Please list in order of importance, in your personal opinion, the factors that have contributed to the process of reserve currency diversification by many central banks in recent years (comments on those factors would be helpful):

   i) the expectation of long-lasting trends in exchange rates, such as a depreciation of the US dollar

   ii) short-term fluctuations in exchange rates without regard to trend

   iii) interest rate instability

   iv) changing trade patterns

   v) a new desire for capital inflows on the part of some industrial countries

   vi) a new desire to increase the overall return on reserve assets on the part of central banks

   vii) a desire to match the currency composition of reserve assets with that of external liabilities

   viii) the ready availability of diversification opportunities through the Euro-currency (or comparable) markets

Respondents' answers

Nearly all agree that the dollar's almost continuous decline and large exchange rate fluctuations from 1971 onward gave the original impetus to reserve diversification and more active reserve asset management.

The replies suggest that, once started, the main factor contributing to diversification and more active reserve asset management was the desire of many countries to maintain the real value of their resources at a time of steeply rising liquidity or at least to increase the return on their assets. That became additionally important for commodity producers whose reserves increased substantially after the 1972/73 raw materials' boom and for oil exporters whose reserves rose sharply after the large increases in world oil prices in 1973 and 1979. Reaction to wide interest rate fluctuations coming on top of large exchange rate fluctuations from 1979 then became an important further influence motivating central banks to increase the return on reserve assets or maintain their value through currency diversification and active portfolio management. In other words, respondents tended to list the "factors" in the sequence of their influence over time, rather than in their relative importance at any given moment.

The desire to match foreign exchange liabilities and assets acquired growing importance on changing patterns of trade and even more so because of heavy balance of payments borrowing by many countries after 1973. Several banks also stated that foreign currency matching became important in guiding the direction and extent of diversification rather than originally motivating diversification.

Finally, there are the markets that have contributed to diversification and more active asset management, as distinct from motivating those trends. The Euromarkets make possible diversification both by currencies and the location of where assets are held. They were well established even before reserve diversification began, but have grown significantly during the past decade both in size and in the variety of investment instruments available. More recently, some countries have partly eased the restrictions they formerly imposed on the use of their currencies as reserve assets in response to deteriorations in their balances of payments, notably Germany, Japan, Switzerland and the Netherlands.

2. Do you expect that a general process of reserve currency diversification will persist?

Respondents' answers

The reply was an almost unanimous "yes" excepting from one central bank which said it was unsure and another which declined to answer this question. The reason most commonly given was summed up by a Group of Ten central bank which said: "Diversification is likely to persist under conditions of strongly growing liquidity and indebtedness combined with instability of interest and exchange rates." "There is no alternative," said another G-10 central bank which added, as most respondents did explicitly or implicitly, that it foresees no early return to enduring international financial stability. The matter was put somewhat differently by a third G-10 central bank which said, "Even periods of dollar strength may also serve to permit diversification with more ease and less embarassment to the United States". At another level, the central bank of one of the smaller Latin American countries said that its reserve diversification would be "strictly tied to the development of our foreign trade and foreign capital inflows".

3. Have the objectives, or priorities among the objectives, of your reserve policy changed significantly over the past five to ten years? If there have been significant changes, could you indicate what they have been and the principal reasons for them?

Respondents' answers

More than half the respondents reported no fundamental change in objectives or priorities in the past five or even ten years, although several said that they had improved their techniques of diversification and asset management over time. However, a minority did report changes of objectives. They include:

- A G-10 central bank which said that its initial objective had been to maintain cover for its non-dollar liabilities. More recently, its diversification had "moved towards a more positive approach to a more balanced portfolio";
- Another G-10 central bank similarly reported that large exchange rate movements had recently made it more "sensitive" to the need for stabilizing the value of its reserves by holding a more balanced portfolio of currencies other than the dollar;
- A third G-10 central bank said: "One new objective for our reserve policy has been established over the last five years: to achieve a currency mix in reserves which at least to some extent reflects official indebtedness. Furthermore, the yield aspects of reserve management have become more important over the past five years";
- A fourth G-10 central bank reported that it had made modest gold

sales in recent years so that more of its reserves might be invested in interest-bearing securities:

- The central bank of a smaller, European industrial country said that it had taken advantage of the recent relaxation of restrictions in secondary reserve centers to acquire a portfolio of assets which "is now well spread over a range of currencies";
- The central bank of an industrial country outside the G-10 said it had shifted to a new emphasis on liability management in recent years by arranging short-term credit lines to be drawn down in times of external deficit and repaid in times of external surplus;
- An oil producing country said it had progressively adapted its reserve management policy to reflect higher oil earnings and the diversification of its imports during the 1970s.

4. Recognizing that there are wide differences between the policies of different central banks, particularly with regard to reserve diversification, if you now hold a number of currencies in your reserves, could you please indicate which of the following considerations are important influences on your present management of those reserves (comments would be appreciated):
   i) asset preservation over the longer term
   ii) maximization of total yields over the longer term (i.e. yields after allowing for appreciation or depreciation of currencies held)
   iii) opportunities for more active portfolio management
   iv) maintenance of a currency composition appropriate to patterns of international trade in goods and services
   v) maintenance of a currency mix appropriate to the currency structure of overseas indebtedness
   vi) protection against the possibilities of an asset freeze in one center
   vii) continuity of relationships with international commercial banks on the part of monetary authorities that place some of their reserves with commercial banks

Respondents' answers

The maintenance of a currency mix appropriate to the pattern of foreign trade and external indebtedness was cited as the most important influence by a majority of respondents, closely followed by the desire for asset preservation over the longer term and maximization of yields, which were given equal importance. Very little importance was attached to the other influences cited. One European central bank summarized this by saying: "The matching of external assets and liabilities is the most important factor for us. Asset preservation and yield maximization come next. The other factors are insignificant or have no importance at all".

There was no discernible difference of emphasis in the answers received from central banks in the G-10, other industrial, oil-exporting and developing countries, excepting that the five central banks which declined to answer this question included three from the Group of Ten which said that the question did not apply to them because they continue to hold nearly all of their foreign exchange reserves in dollars excepting for minimal working balances in some other currencies.

The central bank of a small industrial country said that the first stage of its reserve management was the selection of a desired currency mix with the object of preserving so far as possible the real value of its reserves at minimum risk. Having taken that long-term view, the bank added that it does not switch frequently between currencies. The second stage of its reserve management consists of selecting investment instruments in each of the currency markets chosen, but with prudential limits for various portfolio variables; "for example the time weighted average life of investments, the maximum maturity for bonds, the maximum proportion that may be invested in bonds, the maximum that may be placed with commercial banks, and so on".

Although the monetary authorities of oil exporting countries were among the minority which referred to the risk of an asset freeze as one influence on their reserve management, they rated it low down among their considerations.

5. If you presently aim for some further currency diversification, what factors limit or might limit the process in your case? The following lists a number of possible constraints (again comments would be appreciated):
   - i) reimposition (or increasing likelihood) of restrictions on non-residents in-flows by some reserve currency countries
   - ii) limit in the number of domestic financial markets of sufficient size to offer scope for large-scale diversification
   - iii) political pressure by some recipient countries to limit official capital inflows from abroad
   - iv) slower growth in the breadth and depth of some of the biggest existing financial markets
   - v) concern over the reliability of "extra-territorial" markets for providing the liquidity appropriate for reserve assets

Respondents' answers

Nearly half the respondents to this questionnaire did not answer this particular question on one of two grounds: that they had not diversified their foreign exchange reserves, or that they do not at present intend any further diversification.

Those that answered cited as the two most limiting factors the possible reimposition of restrictions on official non-resident holdings in some of the newer, secondary reserve centers and the limited number of domestic financial markets of a sufficient size to offer scope for large-scale diversification. Far less importance was attached to the other possible limitations cited, like the possibly slower growth of the bigger existing financial markets and the liquidity of extraterritorial markets.

Among the comments made was this, by a central bank in the Group of Ten: "Restrictions on non-resident capital inflows might become a constraint again, not so much because ways will not exist of getting around such constraints but because the spirit of central bank cooperation, at least among G-10 and certain other countries, would inhibit their use."

6. Moving from the objectives to the instruments of policy, do you think that central banks in general manage their reserves more actively than formerly (say, five to ten years ago), in the sense of changing maturity structure and asset composition? Would you judge that your own management has become more active?

Respondents' answers

With the exception of two respondents which did not answer this question, all said that they believe central banks generally manage their reserves more actively than in the past and that they themselves did so. The respondents who gave this reply include several banks of the G-10 countries, some of which say they have been doing so partly by currency diversification. Others, which still hold their foreign exchange reserves almost exclusively in dollars excepting for minimal working balances elsewhere, nevertheless said that they now manage the maturity structure of their dollar assets more actively than before. "We have widened the number of our investment instruments in the United States", said one.

One major G-10 central bank, which said it had begun currency diversification of its own reserves in the latter 1970s, added: "Certainly our own management has become more active, but regular contacts with other G-10 countries suggest growing activity among some of their number".

The monetary authority of an important oil-exporting country referred to the "advantages of applying the principle of portfolio management to foreign exchange reserves in a world of floating currencies". However, it added a cautious note, "As a risk-averse institution, a central bank has to think of ways of reducing the political and economic risks of reserve holdings placed abroad. This implies a mix in its reserve holdings in terms of currencies and location".

7. A significant proportion of reserve currency diversification, especially on the part of oil exporters, developing countries and some smaller industralized countries has been through the Euromarkets. What, in your opinion, are the main reasons?
    i) greater confidentiality
    ii) absence of controls
    iii) higher yields
    iv) greater flexibility in amounts, timing, and choices of liquid assets

Respondents' answers

Higher yields followed by greater flexibility were cited as the main attractions of the Euromarkets as a channel for reserve diversification. Confidentiality and the absence of controls were ranked about equally in third place.

One bank pointed out that in the early days of reserve currency diversification the Euromarkets were often the only channel available. But, it added, even before diversification many central banks had become accustomed to the higher returns obtainable from commercial banks in the reserve centers compared with the returns on the government obligations of reserve currency countries held at the central bank of those countries.

Another central bank pointed out that in the case of the Deutschemark, the absence of controls in the Euromarket was especially important by contrast with restrictions on non-resident investment in the German domestic market (with similar restrictions applying in several other centers).

The central bank of an industrial country remarked that its credit facilities at international commercial banks influenced the deployment of its currency reserves through those same banks, often in the form of Eurocurrency deposits.

A point made by the central bank of a smaller European country was that although it was attracted by the higher yields obtainable in the Eurocurrencies interbank markets, in the case of bonds it preferred to invest in foreign domestic bond markets rather than the Eurobond market, because of the greater liquidity of the former.

Two LDC central banks were among the minority of respondents which cited the greater confidentiality of the Euromarkets as their greatest attraction.

Several respondents recalled that the placement of funds in the Euromarkets by the central banks of the Group of Ten and Switzerland remains limited under an understanding reached between them in 1971 and renewed in 1979.

8. Is the average maturity of your holdings of claims denominated in the "new" reserve currencies markedly different from that of your dollar holdings?

Respondents' answers

A majority of respondents holding "new" reserve currencies said that the average maturities of such holdings were no different from those of their dollar assets.

A minority, however, said that the maturities of their dollar holdings were, on average, shorter. The reason was given by one of these central banks which said, "The dollar continues to be our main intervention currency and therefore requires a higher degree of liquidity than others".

By contrast, two central banks of smaller industralized countries said their "new" reserves were held at shorter average maturities than their dollar assets because of the lesser degree of liquidity in the "new" reserve centers.

Those central banks which reported no marked difference between the average maturities of their dollar and other currency assets explained that their overriding concern was high liquidity in whatever currencies they invested. Indeed, this strong liquidity preference seems to be common to many respondents, their differing answers suggesting merely differences in tactics for achieving a common objective.

Making a slightly different point, a European central banker said that the maturity of his bank's reserves is influenced by their level rather than their currency composition; the higher the reserves in relation to the outlook for the balance of payments, the longer the maturities of assets the central bank could afford to hold in whatever currency.

9. How frequently do you review your policy guidelines with regard to reserve composition and take decisions as to appropriate changes?

Respondents' answers

The difference in the degree of actual surveillance may be less than suggested by the variety of answer to this question. Some banks said they reviewed policy annually, others at intervals of six months, monthly, weekly or "continously". In reality, most respondents said that changes were made whenever developments seemed to make them appropriate.

"Investment policy is examined as often as necessary depending on developments in the markets" said an LDC central bank. "Decisions are taken in response to exchange rate developments and market intervention needs" said a G-10 central bank.

A different point was made by a European industrial country's central bank, which said that although it kept its reserve composition under regular review, it changed the composition of its reserves only infrequently on the basis of a medium to long-term view.

The monetary authority of an oil exporting country said it likewise did not change the composition of its foreign exchange reserves frequently. "Furthermore, operations have to be conducted in such a way as to have a minimum impact on exchange markets".

10. In implementing your policy decisions, do you effect transactions through other central banks, or domestic or foreign commercial banks, or brokers, or other partners?

Respondents' answers

Most respondents said they dealt through all channels, including foreign central banks, commercial banks, investment banks, and, in two cases, also through securities houses. Only some banks, however, deal through brokers.

A G-10 central bank said it dealt with other central banks, domestic and foreign commercial banks and brokers. It added, "It is also possible to diversify passively through receipts from customer business".

The central bank of an industrial country outside the European and American area said its reserve transactions were conducted mainly with foreign commercial banks, adding, "The dollar balances at the New York Federal Reserve Bank are our only sizeable holdings with a central bank".

Only two respondents said they dealt exclusively or almost exclusively with foreign central banks alone. At the other extreme, a newly industrialized country said, "We seldom engage in reserve transactions with central banks".*

PART 2: THE EVOLUTION OF THE SYSTEM

11. Hitherto, reserve currency diversification appears to have been greatest among oil-exporting countries, developing countries, and some smaller industralized countries. Do you think that the practice may spread to the bigger industralized countries over time?

Respondents' answers

The answers to this question confirmed yet again an important development referred to also in answers to previous questions. While it is true that countries outside the Group of Ten have been most active in the currency diversification and portfolio management of their reserves, some G-10 central banks have also begun to diversify the currency composition of their reserves while others, who have not as yet taken that step, have nevertheless begun to manage their dollar holdings more actively.

Most respondents to this question expect reserve currency diversification to spread over time also to those large industralized countries that still hold their reserves in dollars alone, excepting for some working balances in other currencies.

* Relations between central and commercial banks long predated diversification. Several occupied European countries held assets at American commercial and investment banks from 1939 to 1945 or even earlier and maintained relations with them thereafter. In addition, a number of foreign central banks used US commercial and investment banks for transactions in US government securities and in consequence held some of their dollar balances with those banks. This, in turn, generated other business between New York banks and foreign central banks. Long-established relationships therefore existed to help get reserve asset diversification under way, once it started. Many central banks, especially in non-industrial countries, hire western commercial and investment banks to manage parts of their reserves. Typically, the amount to be managed is allocated to the commercial or investment banks every six months and the management fee is usually between 5 and 10 basis points, or 0.05 to 0.1 per cent of the assets managed. Under an arrangement described as fairly widespread, one developing country employs three commercial and investment banks to manage parts of its reserves. If any of the three banks performs less well than the other two for two successive periods of six months, its contract is ended. The information in this footnote was derived from private bankers interviewed in connection with this survey.

One large G-10 bank reported that "There is already some evidence of diversification among the larger industrial countries and this is likely to continue, especially when they adopt a strategy of public sector external borrowing". Another G-10 central bank stated: "Many of the reasons for reserve currency diversification also seem applicable to larger industralized countries". Yet another said, "Some of the larger countries appear to have shown some interest in reserve currency diversification and this may spread, for example, in the context of the EMS".

A central bank from a non-G-10 industrial country pointed out that, contrary to the view implied in the question, LDCs had in fact been "slow to catch on"; LDCs did not diversify on a large scale "until huge upheavals in the markets and the examples of some industrial countries persuaded them to do so".

The central banker who made this observation mentioned two leading G-10 countries which "were aware much earlier of what was happening," adding "all those with flexibility have already diversified to some extent".

Several central banks based their replies on the expectation, or supposition, that the motives for diversification outlined in answers to question 1 would continue to apply but some stated that they expected the practice to spread only if monetary cooperation between the major countries were to break down.

Two central banks from the European Community (EC) took the view in almost identical language, that the extent of diversification would largely depend on US exchange rate policy. Others pointed out that the room for maneuver was limited by the size of some countries' reserves, and the commitment of leading countries to attempt to ensure "orderly markets".

Only two respondents answered the question unambiguously in the negative. They were both from the Middle East. "There is little likelihood of such a spread because the big industrial and other countries face different circumstances", said one of them.

12. What, in your opinion, are the merits and demerits of the SDR as a reserve asset? What growth do you expect in the official use of the SDR. Will its growth offer a useful alternative to the multiple reserve asset system now prevalent?

Respondents' answers

Only one central bank, from a small country, said that it expected the SDR to become in time a practical alternative to the multiple reserve asset system (and even that respondent qualified its answer). The great majority