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THE EURO-DOLLAR MARKET AND THE UNITED STATES BALANCE OF PAYMENTS

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The enormous expansion of the Euro-dollar market in the last few years has been accompanied by significant changes in the character and purposes of short-term capital flows. These changes in turn have produced important modifications in the balance of payments positions of a number of countries, and in some cases domestic credit conditions have also been affected. Partly in response to these developments, several countries which play leading roles on the international financial stage have taken steps to defend their foreign exchange reserves and domestic credit markets from the strong pull of the Euro-dollar market.1/ Thus, in only a few years, this market has evolved into a mechanism capable of exerting a powerful external influence on domestic financial markets and on the management of national stabilization policies.

As is widely recognized, while the focus of the Euro-dollar market is in London, its basic driving force during the last year has centered in about a

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1/ A good account of these developments is given in "Euro-Dollars: A Changing Market," Federal Reserve Bulletin, October, 1969, pp. 765-784.

dozen large banks in the United States. These banks -- mainly through their London branches -- have registered the strongest demand for Euro-dollar funds primarily to compensate for the loss of deposits at home. Consequently, any assessment of the behavior of the Euro-dollar market must necessarily focus on the strategic role of American banks.

The successful bidding by these institutions for Euro-dollar funds has greatly complicated -- and made more difficult -- the management of monetary policy in the United States. It has also generated strong upward pressures on interest rates in European capital markets, which in turn has widened the concern among some central bankers on the Continent about the stability of foreign exchange markets. On two previous occasions, I have examined the interrelations between the Euro-dollar market and monetary policy in the United States.[1/] Thus, there is no need to repeat the details of that earlier discussion. In recent months, however, partly reflecting the impact of monetary policy measures adopted in the United States, the conditions governing transactions in the Euro-dollar market have undergone several basic changes. The most important of these was the decision made during the summer to impose marginal reserve requirements on Euro-dollar borrowings by American banks. In this paper, an effort will be made to assess the effects of this move on the behavior of U.S. banks and on the functioning of the market.

1/ "Euro-Dollar Flows and the Efficiency of U.S. Monetary Policy," presented before a Conference on Wall Street and the Economy, New School for Social Research, New York, March 8, 1969.

"Financial Innovation and Monetary Management in the United States," presented at a Meeting of the Association of American Banks in London, July 9, 1969.

The heavy borrowing of Euro-dollars by U. S. banks has had an asymmetrical effect on the behavior of the U.S. balance of payments. As measured on the official settlements basis, the U.S. balance of payments was aided considerably during 1968 and in the first half of this year, since a substantial proportion of the Euro-dollar inflow was reflected in a decline in dollar assets of foreign official institutions. On the other hand, as measured on the liquidity basis, these borrowings have had an adverse effect on the U.S. balance of payments since the high yields in the Euro-dollar market induced Americans to switch a considerable volume of short-term funds from domestic assets to Euro-dollars. These balance of payments aspects of Euro-dollar flows are also traced below.

However, before turning to a closer examination of these subjects, it might be helpful to sketch the expansion of the Euro-dollar market in 1969 and to highlight again the strategic role played by U. S. banks.

Growth of the Euro-Dollar Market, First Half of 1969

At the end of last June, the net size of the Euro-dollar market was about $32 to $33 billion. (See Table 1 attached.) Thus, in the first six months of this year, the market expanded by $7 - 8 billion. The Bank for International Settlements (BIS) estimates that the net size of the market (as measured by U.S. dollar liabilities

or assets of commercial banks in eight major European countries -- net of interbank deposits in these countries 1/) was approximately $25 billion at the end of 1968. In the absence of later BIS information, recent commercial bank data for some of the more important of the eight countries -- particularly the United Kingdom -- were employed to estimate the net size of the Euro-dollar market at about $32 to $33 billion as of midyear.2/ If we extended the net size measure to include the activities of Canadian banks, the Euro-dollar market's net size would be some $3 billion greater as of the end of June, 1969, or about $36 billion.

Leaving aside the U.S. dollar liabilities of Canada and Japan, it appears that the net size of the Euro-dollar market expanded at an annual rate of about 60 per cent in the first half of 1969. During 1968 as a whole, the increase was 43 per cent; the average annual rate of increase during 1965-67 was about 25 per cent. Thus, primarily in response to the sharply increased utilization of the market by U.S. banks, the Euro-dollar market's rate of growth accelerated significantly in the first six months of 1969.

1/ Germany, Belgium, Netherlands, United Kingdom, Italy, France, Sweden and Switzerland. Sources include (in addition to dollar liabilities of banks) switching of bank assets from other currencies to dollars; and uses include (in addition to dollar assets) switches from dollars to other currencies.

2/ This estimate was obtained by using an approximate measure comparable to that used by the BIS.

Sources and Uses of Funds in the Euro-Dollar Market

It would appear that the major industrial countries of Western Europe were the chief source of funds for the Euro-dollar market during the January-June period of this year. Although BIS data giving sources and uses of Euro-dollar funds by geographical breakdown are not available yet for this period, one can get a good indication of the relative importance of various geographical areas as suppliers of funds to the Euro-dollar market by examining changes in the external U.S. dollar liabilities of U.K. banks. There is no need to stress here the fact that London is by far the most important Euro-dollar trading center -- and London banks are the major participants in the Euro-dollar system, active both in receiving funds from around the world and in lending them to the major end-using areas. In fact, during the January-June 1969 period, the total U.S. dollar liabilities of U.K. banks to nonresidents of the United Kingdom increased slightly more than $7 billion, about 90 per cent of the $8 billion increase in liabilities we estimated for the entire eight-country area.

Just under 50 per cent of the U.S. dollar funds flowing to London during the first half of 1969 came from Western Europe. About 25 per cent of the Euro-dollar flows to London during this period was from the United States and Canada combined, and about 25 per cent was from sources other than Western Europe, the United States or Canada. Of course, we must be cautious in interpreting these figures as indicating

the ultimate sources of the Euro-dollar funds. Funds recorded on the books of a U.K. bank as coming from another Western European country may well have come to the latter country from some other spot in the world, having simply passed through the European country on their way to the London bank. For this reason (until complete data for the eight-country area are available from the BIS) it might be wise to take the 50 per cent figure for flows of funds to the London market from Western Europe as the upper limit.

As would be expected from the developments outlined earlier, the major user of new funds flowing into the Euro-dollar market during the first half of the year was the United States. The increase in U.S. bank borrowings of Euro-dollar funds through their own overseas branches alone was a little more than $7 billion. This was almost equal to our estimate of the increase in the net volume of funds in the Euro-dollar system.

Increased U.S. bank utilization of Euro-dollar funds in 1969 sharply raised the U.S. share of total uses of Euro-dollar funds. (See Table 2.) At midyear, U.S. bank borrowings of Euro-dollars through their foreign branches ($13.3 billion) were about 40 per cent of the total volume of funds we have estimated outstanding in the eight-country Euro-dollar system ($32 to $33 billion). At the end of the years 1966, 1967 and 1968, U.S. bank borrowings of Euro-dollar funds through their overseas branches averaged about 23 per cent of the total volume of Euro-dollar funds in the eight-country area as estimated by the BIS.

In prior years, the U.S. share of total uses of funds had been less than 14 per cent.

U.S. Banks and the Euro-Dollar Market

As I mentioned above, the role of U.S. commercial banks in the Euro-dollar market in the last year is to be explained primarily in terms of their efforts to adjust to domestic monetary restraint against the background of rapidly rising credit demands. When the Federal Reserve adopted a severely restrictive monetary policy last December, it also decided not to increase the maximum rates of interest which member banks could pay on time deposits. Almost immediately, interest rates on newly issued negotiable certificates of deposit (CD's) reached the rate ceiling of 6-1/4 per cent on minimum maturities of six months. As yields on alternative short-term market instruments rose further, the attrition in bank CD's accelerated. From mid-December, 1968, to October 29, 1969, the volume of CD's outstanding declined from $24.4 billion to $11.5 billion, a drop of $12.9 billion.

Partly to compensate for the loss of deposits, U.S. commercial banks resorted to several other sources of funds, including the sale of participations in loans, issuance of commercial paper by bank subsidiaries, affiliates or one-bank holding companies, borrowing of Federal funds -- and above all borrowing of Euro-dollars, primarily through the London branches of U.S. banks.

Total loans and investments at large banks declined sharply during the first 10-1/2 months of this year, in marked contrast to

sizable increases in credit at these banks during the comparable period of 1968. This decline reflected large reductions in bank holdings of securities and a substantial cutback in loan expansion.

These effects of, and reactions to, monetary restraint were evident at banks that have access to funds in the Euro-dollar market through foreign branches -- hereafter referred to as Euro-dollar banks -- as well as for those banks that do not. Both types of banks experienced substantial losses of CD funds during this period. And while Euro-dollar banks had larger losses of other types of time and savings deposits, the non-Euro-dollar banks incurred much heavier declines in demand deposits. On balance, total deposits fell by a comparable amount at both kinds of institutions.

In response to these deposit outflows, banks with foreign branches borrowed heavily in the Euro-dollar market, and outstanding liabilities to foreign branches at the 14 major Euro-dollar banks -- which account for 95 per cent of the Euro-dollar borrowing -- rose by more than $7 billion. Banks without this source of funds borrowed to a much larger extent in the Federal funds market and from the Federal Reserve System than did Euro-dollar banks, as indicated by "total borrowings" in Table 3. However, Euro-dollar banks were just able to offset their deposit outflows by the utilization of these other sources of funds -- the sum of "total borrowings" and "other liabilities" in Table 3 -- while the amount of funds other banks obtained by these means fell somewhat short of the decline in their total deposits.

Nevertheless, the asset adjustments of both types of banks were generally similar. Both made substantial reductions in their holdings of securities, although the composition of these declines varied. Euro-dollar banks ran off a smaller volume of U.S. Government securities than did other banks, but they reduced their holdings of other securities -- particularly municipal issues -- by a much larger amount. Moreover, the growth in total loans at both types of institutions was less than in the comparable period of last year, although this reduction was much more pronounced at banks without foreign branches. However, business loan expansion at both types of banks remained above that in the comparable period of last year.

The impact of restraint and the reaction of these banks to restraint varied considerably during the first half of the year as compared to that since midyear. Both types of banks experienced heavy deposit outflows during the first 6 months of 1969, but during this period the decline was somewhat larger at Euro-dollar banks. (See Table 4.) Consequently, banks with foreign branches borrowed heavily in the Euro-dollar market, adding over $6 billion to their lendable funds in this manner. The non-Euro-dollar banks were able to add to their funds from other sources, although by much less than the funds that Euro-dollar banks were able to acquire.

Still, total loans and investments at Euro-dollar banks fell during the first half, while credit at other banks expanded slightly. Both types of banks ran off securities in volume, but they also

increased their outstanding loans -- largely to businesses -- by more than in the first half of 1968. At Euro-dollar banks, however, the liquidation of securities more than offset the rise in loans, while this was not the case at other banks.

The picture changed markedly after midyear. Deposit outflows were much more severe at banks without foreign branches, particularly when viewed with respect to deposit flows at these two types of banks during this period in 1968. (See Table 5.) As a result, the non-Euro-dollar banks continued to borrow heavily in the Federal funds market and at the Federal Reserve Banks' discount window. But Euro-dollar banks stepped up their borrowing from these sources, while increasing their borrowings in the Euro-dollar market only slightly further, the latter probably partly in response to recent action by the Federal Reserve Board to regulate such borrowings.

Asset adjustments since midyear reflected the more adverse deposit flows at banks without foreign branches. While total loans and investments declined at both types of banks, the reduction was substantially less at Euro-dollar banks. Both types of banks continued to liquidate similar amounts of securities, and they also began to reduce their outstanding loans as liquidity positions reached very low levels. However, the decline in loans was much less at Euro-dollar banks than at other banks. In fact, Euro-dollar banks were able to continue to expand their business loans, for example, by more than in the comparable period of 1968. In contrast, business loans at other banks fell after midyear, as compared with a rise in this period last year.

Impact of Federal Reserve Regulatory Measures on Euro-Dollar Borrowings by U.S. Banks

As I indicated above, the Federal Reserve Board adopted several measures in the last few months which have altered greatly the behavior of U.S. banks in the Euro-dollar market. The effects of two of these measures (i.e., the imposition of marginal reserve requirements on Euro-dollar borrowings by American banks and restrictions on the use of mainly overnight deposits to reduce required reserves) can be traced reasonably well. In addition, other moves aimed primarily at moderating banks' access to domestic sources of funds have also had indirect effects in the Euro-dollar market.

As I mentioned above, U.S. banks increased their use of Euro-dollar funds by about $7.2 billion between January 1 and June 25 this year. This competition for funds exerted extreme pressure on Euro-dollar deposit rates. For example, the 3-month deposit rate -- which was 7 per cent at the end of 1968 -- climbed sharply during January and February and again during May and June, reaching a record 12-1/2 per cent on June 10. During June, U.S. banks' borrowing of Euro-dollar funds through their overseas branches accelerated sharply and increased about $3 billion during the first three weeks of that month alone.

Marginal Reserve Requirements: Against this background of enormous expansion in Euro-dollar borrowing by American banks, the Federal Reserve Board proposed amendments to its regulations at the end of June to moderate the flow of Euro-dollars between U.S. banks

and their foreign branches and also between U.S. and foreign banks. These amendments focused on the three major channels through which Euro-dollar funds may affect credit availability in the United States:

- The flow of Euro-dollar funds between U.S. bank head offices and their overseas branches.
- The flow of credit between U.S. overseas branches -- which draw on Euro-dollar funds -- and U.S. residents.
- The flow of Euro-dollar funds between U.S. banks and foreign banks which are not branches.

Briefly, a 10 per cent marginal reserve requirement was proposed on U.S. bank liabilities to overseas branches and on assets acquired by overseas branches from their U.S. head offices in excess of outstandings during a base period, defined as the four weeks ending May 28, 1969. The reserve-free base was made subject to automatic reduction -- unless waived by the Board -- when, in any period used to calculate a reserve requirement, outstanding amounts subject to reserve requirements fall, and are below the original base. A 10 per cent marginal reserve requirement was proposed for U.S. branch loans to U.S. residents in excess of outstandings during a given base period, which could be calculated in one of two optional ways. Finally, the Board proposed to define deposits against which required reserves are calculated to include any non-deposit borrowing by a member bank from a foreign bank. A 10 per cent reserve requirement was proposed for deposits of this class.

These proposals were adopted by the Board and put into effect August 13. The first four-week "reserve computation period" began

September 4. The average liabilities of a bank to its overseas branches during the reserve computation period will be compared with its base -- the average of such liabilities during the four week period ending May 28 -- to establish the amount of additional reserves it must hold. The first four-week "reserve maintenance period" began October 16. During the maintenance period, a bank must hold on the average the additional reserves required on the basis of its excess Euro-dollar holdings from its overseas branches during the previous computation period.

For purposes of this analysis, I have divided the period since midyear into three sub-periods: (1) from June 25 to September 3, the period during which the Board's marginal reserve proposals were pending; (2) from September 4 to October 1, the first reserve computation period; and (3) from October 16 to November 5, covering most of the first reserve maintenance period.

U.S. banks continued to increase their borrowings of Euro-dollar funds during July and August -- raising liabilities to overseas branches $1.3 billion during those two months to a new peak level of $14.8 billion. Most of the increase, however -- $1.1 billion, occurred during July. (See Table 6.)

The Euro-dollar market was able to accommodate the continuing demand for funds from U.S. banks without any further increase in interest rates. Rates had dropped sharply in late June as the immediate pressure on U.S. banks eased with the passing of corporate borrowing for tax

payments, and the banks in turn put less pressure on the Euro-dollar market. By the end of June, the 3-month rate was down to about 10-1/2 per cent. It ranged between 10-1/2 and 11-1/4 per cent during July and August.

In September -- the first reserve computation period -- U.S. banks decreased their Euro-dollar borrowings by nearly $1/2 billion. In fact during the six weeks from August 20 to October 1, borrowings decreased in all but one weekly period and outstandings fell from $14.8 billion to $14.1 billion. Reduced demand pressures from U.S. banks no doubt were an important factor in the general -- albeit very moderate -- decline in Euro-dollar rates up to the last few days of September when typical quarter-end pressures in international money centers put some upward pressure on rates.

Taking the third quarter as a whole, demand pressures on the Euro-dollar market from U.S. banks were much more moderate than they were during the first half of the year. American banks increased their Euro-dollar borrowings by only $900 million between June 25 and October 1, compared with average quarterly increases of about $3-1/2 billion during the January-June period. To some extent, this reduced demand for Euro-dollars may have reflected the increased reliance of U.S. banks on domestic sources of non-deposit funds discussed above.

Because of a number of cross-currents in the Euro-dollar market since the beginning of October, it is difficult to estimate

quantitatively the effects of the marginal reserve requirements on the borrowing behavior of U.S. commercial banks in that particular market. Although Euro-dollar rates declined during most of October, these banks sharply increased their borrowings of Euro-dollar funds in the first half of the month and subsequently repaid more than the previous rise. At the end of October, U.S. bank liabilities to their overseas branches were $13.6 billion, only slightly higher than the $13.2 billion outstanding at the end of June. Other cross-currents in the market since the beginning of October included a rather short-lived expectation of significantly lower interest rates in the near future and a large flow of funds out of German marks following the initiation of the transitional floating arrangement for the mark (and its subsequent appreciation) -- which was reflected in a considerable decrease in official dollar holdings of the German central bank.

As I mentioned above, September was the first reserve "computation" period for the Board's marginal reserve requirement against Euro-dollar borrowings. Using weekly data (the banks will compute their borrowings on a daily average basis), we estimate roughly that bank borrowings of Euro-dollars were about $5 billion more on the average during September than during May -- the base period. Thus, during the four-week period beginning October 16, U.S. banks needed to maintain on the average slightly over $400 million of additional reserves.

In passing, it might be observed that this additional amount of required reserves is not drastically different from the increase

which would have resulted earlier in the year if a slightly different approach had been adopted then. Last March, I suggested that the Board consider applying average reserve requirements, at a 6 per cent rate, to the volume of Euro-dollar borrowings by U.S. banks. At the end of February, the total of such borrowings was just over $9.0 billion; thus, the rise in required reserves at that time would have been about $540 million.1/

Another recent development related to the Euro-dollar scene (and one which can be traced directly to the imposition of the marginal reserve requirement) is the sharp increase since mid-September in U.S. bank time liabilities to foreign official institutions. After falling rather consistently through July, foreign official time deposits in U.S. banks rose by $212 million in August and by more than $1.0 billion from September 10 to October 29.

It would appear that some of the increase reflects a shift of official funds from the Euro-dollar market (including overseas branches of U.S. banks) to time deposits held directly with U.S. head offices. Part of the drop in U.S. bank Euro-dollar borrowings in late September and since mid-October may reflect such a shift of funds by foreign official institutions.

It may be that U.S. banks have been attempting to induce shifts of foreign official funds from branch to head office books to take advantage of the relatively lower reserve requirement associated with balances on head office books. For example, a shift of $1 million from the branch to head office (assuming that the funds were made available for head office use in either case and that the U.S. bank in question

1/ However, it should be noted that a marginal reserve requirement provides a greater deterrent to additional future borrowing than does an average reserve requirement that involves the same increase in total required reserves.

presently has Euro-dollar borrowings outstanding in excess of its base) would release $100,000 from required reserves against Euro-dollar borrowings (where the marginal reserve requirement is 10 per cent) and absorb $60,000 into required reserves against time deposits with the head office -- a net saving of $40,000 of reserves. Thus, the head office would be willing to pay about 4 per cent more for funds on head office books than for funds obtained through branches. If official funds could be obtained for 10 per cent per annum through branches -- Euro-dollars -- the head office would be willing to pay up to 10.4 per cent per annum for the same funds directly -- and could do so because of the exemption of official funds from Regulation Q ceilings.

Table 7 compares the cost of raising funds in these two alternative ways, from the point of view of the U.S. banks, after adjusting market quotations to reflect the additional cost associated with holding reserves in each case. As may be seen, once the Euro-dollar marginal reserve requirement went into effect, Euro-dollar funds became considerably more expensive than funds attracted through official time deposits. From September 10 to late October, however, this advantage for the official time deposit source was gradually reduced as the official time deposit rate increased and Euro-dollar rates declined.

Overnight Deposits: Effective last July 31, the Federal Reserve Board amended its Regulation D to eliminate the possibility for a member bank to reduce its reserve requirements through the use of so-called "London checks" and "bills payable checks" to repay overnight and other deposits in its foreign branches.

The effects of this action (aimed at stopping the use of overnight borrowing, in itself reserve-free at that time like any borrowing from branches, to reduce requirements against domestic deposits) are clearly evident. For example, at the end of June, Euro-dollar deposits in foreign branches of U.S. banks totaled $20.4 billion. Of this amount, $2.4 billion (or 11 per cent) was held on an overnight basis. By the end of August, total Euro-dollar deposits at these branches had risen to $22.6 billion, but overnight deposits had fallen to $1.4 billion, representing only 6 per cent of the total. During the same period, the proportion of deposits held on call declined from 19 per cent to 15 per cent, and those of one month maturity declined from 45 per cent to 43 per cent of the total. In fact, a very large share of the increase of $2.3 billion in total Euro-dollar deposits at these branches during July and August was accounted for by the rise in deposits maturing within two months -- while overnight and call deposits decreased by $1.4 billion.

Sales of Commercial Paper: On October 29, the Federal Reserve Board announced it was considering amending its rules governing the payment of interest on deposits (Regulation Q) to apply to funds

received by member banks from the issuance of commercial paper or similar obligations by bank affiliates. This was the last of the major domestic sources of funds to which U.S. commercial banks had resorted and which had remained beyond the reach of the Federal Reserve's interest rate ceilings or reserve requirements. (In addition to Euro-dollar borrowings, other sources with respect to which the Federal Reserve Board finalized and proposed regulatory changes last summer included sales of participations in individual loans or pools of loans and the conversion of demand deposits into "Federal funds borrowings," which a few banks were attempting.)

At the time of this action on commercial paper, about 58 banks had outstanding around $3.6 billion of such liabilities issued through their subsidiaries or related one-bank holding companies.[1/] All of this paper had been sold at yields far beyond the maximum interest rates payable on CD's. Between the end of July and the end of October, the number of banks offering commercial paper in some manner rose by 50 per cent, and the amount outstanding climbed by $1.8 billion (or 100 per cent). Of the total outstanding on October 29, roughly $0.4 billion had been issued by bank subsidiaries. Under a parallel ruling by the Board, as of December 1, commercial paper in the latter category will become subject to the maximum interest rates which the banks themselves could pay on time deposits.

Partly in response to this latest policy move, U.S. banks substantially increased their bidding for Euro-dollar funds during

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1/ In London, "commercial paper" means acceptances; in the United States it means a short-term promissory note issued by a nonbank corporation.

the week ending November 5. This development may well account for the sharp rise in Euro-dollar rates during the last few days of October. As the commercial paper outstanding matures, banks probably will not be able to renew it at the existing interest rate ceilings. Thus, some of them may attempt to expand their borrowing in the Euro-dollar market.

On the other hand, the higher cost of obtaining Euro-dollars resulting from the imposition of marginal reserve requirements may dampen this tendency. This possibility is suggested by the behavior of the banks as they prepared to meet the newly effective reserve requirements.

During the two weeks October 16 to October 29, aggregate U.S. bank borrowings of Euro-dollars fell sharply. While this decline may have been related to domestic credit developments, it may have also reflected the desire of banks to cut back their Euro-dollar borrowings for the October computation period in order to reduce required reserves for the second maintenance period beginning November 13. Thus, the need to repay borrowings to reduce required reserves may have overridden the need to put up additional reserves against the borrowings existing in September. In any case, the reduced U.S. bank demand for Euro-dollar funds was an important factor in declining Euro-dollar rates until the last few days of October.

Euro-Dollar Flows and the U.S. Balance of Payments

The generally widespread movement of funds into Euro-dollars -- particularly during the first half of 1969 -- is clearly reflected in

the U.S. balance of payments. The movement of funds by private foreigners from other currencies into U.S. dollars for investment in the Euro-dollar market generally results in a reduction of foreign central bank holdings of U.S. dollar balances. This happened during the first half of 1969, and the United States had a surplus in its balance of payments on an official reserve transactions basis of $2.9 billion, at the same time that the U.S. liquidity balance was in deficit by $5 billion (all figures not seasonally adjusted). The difference between the two balances reflects, primarily, the large inflow of private foreign short-term capital that occurred during the first half of the year. And the latter is nearly fully accounted for by the $7.3 billion increase in Euro-dollar borrowings by U.S. banks via their branches.

This may be related to the U.K. data which give an indication of what happened in the entire eight-country BIS Euro-dollar area. We see that, of the $7.2 billion increase in U.S. dollar liabilities of U.K. banks to non-residents, $6.4 billion was an increase in dollar liabilities to residents of countries other than the United States.

It is difficult to make a firm estimate of the volume of U.S. resident funds which went into Euro-dollars from U.S. sources. Reported short-term claims abroad of U.S. nonbanks -- where one would expect such flows to appear -- increased only $78 million in the first half. From the U.K. statistics, however, we see that dollar liabilities of U.K. banks alone to U.S. banks and nonbanks increased by over $3/4 billion. So, it may well be that the flow of U.S. resident funds into Euro-dollars in the first half of the year approached or perhaps somewhat exceeded

$1 billion. Some of the very large direct investment outflow -- about $2.1 billion during the first half -- may have reflected balances made available by U.S. corporations to their foreign subsidiaries for Euro-dollar placement instead of for direct investment outlays; these balances would not show up in the European data as liabilities to U.S. residents. Another part of the extraordinarily large first half errors and omissions items in the U.S. balance of payments accounts probably reflects the movement of speculative funds into German marks.

In the third quarter, it would appear that Euro-dollar flows were quite changed from earlier in the year. Whereas in the first half the flow of foreign funds to Euro-dollars was large enough to result in a $2.6 billion reduction in foreign official dollar holdings in the United States, in the July-September period foreign official dollar holdings increased sharply -- by about $1.7 billion. This reflected an abrupt change in the flow of funds into the Euro-dollar market, and it may well be that there was some movement of foreign funds out of Euro-dollars into foreign currencies after July.

Although the U.S. liquidity deficit continued large in the third quarter -- nearly $3 billion before seasonal adjustment -- we are inclined to doubt that this reflected to any major extent flows of U.S. resident funds directly into the Euro-dollar market.

In closing, I would like to comment on the widespread tendency to portray the U.S. liquidity deficit as a "source of funds for the Euro-dollar market" and hence a source of funds for U.S. bank borrowing in the Euro-dollar market. This portrayal is usually combined with an

assertion that a reduction of foreign official dollar balances in the United States is also a "source of funds for the Euro-dollar market."

I believe this view gives the wrong impression of the factors that are at work. Whether the United States has a liquidity deficit or not reflects the whole sprectrum of developments in U.S. trade and payments, and is quite different from the question of whether Euro-dollar assets are rising or falling. Of course, one flow of funds into that market comes directly from U.S. residents, although it has apparently accounted for only a relatively modest part of the market's growth. That flow of funds might be regarded as a recycling of U.S. funds that can be discounted in judging the extent of the U.S. liquidity deficit.

In this context, by far the most important aspect of the Euro-dollar market which should be stressed is that private foreigners are attracted by high yields to hold these assets rather than assets denominated in other currencies. This process, as outlined above, tends to put pressure on central banks' dollar holdings. This is where the connection between the Euro-dollar market and the liquidity deficit might be made. When the liquidity deficit provides ample supplies of dollars to foreign central banks, the effect on their reserves of the growth in private holdings in the Euro-dollar market is comfortably cushioned. Even in this case, some pinching has occurred, but central bank resistance in one form or another to such large investments in Euro-dollars would certainly have been much more in evidence if the U.S. liquidity deficit had not been so large.

Table 1

Estimated Net Size of Euro-dollar Market
(Billions of U.S. dollars)

Sources	End-1968 (BIS Estimate)[1] Total Sources/Uses	End-1968 (BIS Estimate)[1] Per cent of Total	End-June 1969 (Estimated from change in Published U.K. Data)[2] Total Sources/Uses	End-June 1969 (Estimated from change in Published U.K. Data)[2] Per cent of Total	Estimated Change: End-1968 to End June 1969 Change	Estimated Change: End-1968 to End June 1969 Per cent of Chg. in Total Sources/Uses
A. Outside Area[3]						
U.S. and Canada	4.5	18.0	6.3	19.5	+1.8	25
Japan	0.1	0.4				
Eastern Europe	0.6	2.4	9.2	28.5	+1.9	26
Other	6.6	26.4				
Total	11.8	47.2	15.5	48.0	+3.7	51
B. Inside Area						
Non-banks	5.2	20.8	16.8	52.0	+3.6	49
Banks	8.0	32.0				
Total	13.2	52.8	16.8	52.0	+3.6	49
Grand Total	25.0	100.0	32.3	100.0	+7.3	100
Uses						
A. Outside Area						
U.S. and Canada	10.2	40.8	16.8	52.0	+6.6	90
Japan	1.7	6.8				
Eastern Europe	0.9	3.6	6.9	21.4	+0.1	2
Other	4.2	16.8				
Total	17.0	68.0	23.7	73.4	+6.7	92
B. Inside Area						
Non-banks	4.7	18.8	8.6	26.6	+0.6	8
Banks	3.3	13.2				
Total	8.0	32.0	8.6	26.6	+0.6	8
Grand Total	25.0	100.0	32.3	100.0	+7.3	100

1/ B.I.S. (Thirty-ninth) Annual Report, June 1969, p. 149.
2/ Bank of England Quarterly Bulletin, September 1969, p. 331.
3/ The 8-country B.I.S. Euro-dollar area includes the U.K., Sweden, Switzerland, Italy, France, Belgium, Germany and the Netherlands.

Table 2

Use of Euro-dollar Funds by the United States Relative to Estimated Net Size of the Euro-dollar Market
(Billions of U.S. Dollars)

	1964	1965	1966	1967	1968	June-1969[1/]
Net Size	9.0	11.5	14.5	17.5	25.0	32.0
Uses: in U.S. and Canada[2/]	2.2	2.7	5.0	5.8	10.2	16.8
Per cent of Net Size	(24.4)	(23.5)	(34.5)	(33.1)	(40.8)	(52.5)
U.S. Bank Borrowings Through Their Overseas Branches	1.2	1.3	3.4	3.7	6.0	13.3
Per cent of Net Size	(13.3)	(11.3)	(23.4)	(21.1)	(24.0)	(40.3)

1/ Estimated by Federal Reserve Board. Estimates for other years made by the BIS. Net size is for an area including only eight European countries: U.K., Belgium, Netherlands, France, Germany, Italy, Sweden, and Switzerland.

2/ Total short-term assets in the U.S. and Canada owned by banks in the eight-country area.

Table 3

NET CHANGE IN MAJOR BALANCE SHEET ITEMS FOR WEEKLY REPORTING BANKS
December 25- October 15 1/

(In billions of dollars, not seasonally adjusted)

Items	Total		14 Major Banks with London Branches		Other	
	1969	1968	1969	1968	1969	1968
Total loans and investments 2/	- 4.6	14.0	- 2.6	5.6	- 2.0	8.3
U.S. Treasury securities	- 6.9	.3	- 2.4	.6	- 4.5	- .3
Other securities	- 3.4	4.2	- 2.4	2.2	- 1.0	2.0
Total loans 2/	5.7	9.6	2.2	2.9	3.5	6.7
Business loans	5.5	4.4	2.7	2.1	2.8	2.3
Real Estate loans	1.9	2.5	.7	.2	1.2	2.3
Consumer loans	1.4	1.7	.3	.1	1.1	1.6
Total deposits 3/	-18.6	5.0	- 9.2	- 1.7	- 9.4	6.7
Demand deposits 3/	- 3.6	- 2.4	- .3	- 2.6	- 3.3	.2
Time and savings deposits	-15.0	7.4	- 8.9	.9	- 6.1	6.5
Large CD's 4/	-11.9	2.8	- 6.6	.1	- 5.3	2.7
Other	- 3.1	4.5	- 2.3	.8	- .8	3.7
Total borrowings 5/	8.8	4.5	2.6	2.4	6.2	2.1
Other liabilities	9.2	4.5	7.1	3.9	2.1	.6
Euro-dollars 6/	8.3	3.0	7.4	3.0	.9	7/

1/ Dates are for 1969, comparable dates used for 1968.
2/ Exclusive of loans and Federal funds transactions with domestic commercial banks and net of valuation reserves.
3/ Less cash items in the process of collection.
4/ Negotiable time certificates of deposit in denomination of $100,000 or more.
5/ Largely borrowing in the Federal funds market and from Federal Reserve banks.
6/ Bank liabilities to foreign branches.
NOTE: Figures may not sum exactly due to rounding.

Table 4

NET CHANGE IN MAJOR BALANCE SHEET ITEMS FOR WEEKLY REPORTING BANKS
December 25- June 25 1/

(In billions of dollars, not seasonally adjusted)

Items	Total		14 Major Banks with London Branches		Other	
	1969	1968	1969	1968	1969	1968
Total loans and investments 2/	- 1.0	2.9	- 1.3	.8	.3	2.1
U.S. Treasury securities	- 6.7	- 2.8	- 2.8	- 1.2	- 3.9	- 1.6
Other securities	- 1.2	1.2	- .9	.5	- .2	.7
Total loans 2/	6.8	4.6	2.4	1.6	4.4	3.0
Business loans	5.2	3.1	2.0	1.7	3.2	1.4
Real Estate loans	1.3	1.4	.5	.1	.8	1.3
Consumer loans	1.1	.9	.3	.1	.8	.8
Total deposits 3/	-14.6	- 2.8	- 8.6	- 2.8	- 6.0	7/
Demand deposits 3/	- 6.2	- 3.7	- 2.3	- 1.2	- 3.9	- 2.5
Time and savings deposits	- 8.4	.9	- 6.3	- 1.6	- 2.1	2.6
Large CD's 4/	- 8.2	- 1.1	- 5.6	- 1.8	- 2.6	.7
Other	- .2	2.0	- .7	.2	.5	1.8
Total borrowings 5/	4.7	2.5	.8	1.5	3.9	1.0
Other liabilities	8.9	2.4	7.7	2.2	1.2	.3
Euro-dollars 6/	6.6	2.0	6.2	2.0	.4	7/

1/ Dates are for 1969, comparable dates used for 1968.
2/ Exclusive of loans and Federal funds transactions with domestic commercial banks and net of valuation reserves.
3/ Less cash items in the process of collection.
4/ Negotiable time certificates of deposit in denominations of $100,000 or more.
5/ Largely borrowing in the Federal funds market and from Federal Reserve banks.
6/ Bank liabilities to foreign branches.
7/ Less than 50 million.
NOTE: Figures may not sum exactly due to rounding.

Table 5

NET CHANGE IN MAJOR BALANCE SHEET ITEMS FOR WEEKLY REPORTING BANKS
June 25- October 15 1/

(In billions of dollars, not seasonally adjusted)

Items	Total		14 Major Banks with London Branches		Other	
	1969	1968	1969	1968	1969	1968
Total loans and investments 2/	- 3.6	11.0	- 1.3	4.7	- 2.3	6.3
U.S. Treasury securities	- .2	3.1	.4	1.8	- .6	1.3
Other securities	- 2.2	3.0	- 1.5	1.7	- .7	1.3
Total loans 2/	- 1.2	5.0	- .2	1.3	- 1.0	3.8
Business loans	.4	1.3	.8	.4	- .4	.9
Real Estate loans	.6	1.1	.2	.1	.4	1.0
Consumer loans	.3	.8	7/	.1	.3	.7
Total deposits 3/	- 4.0	7.7	- .6	1.1	- 3.4	6.6
Demand deposits 3/	2.5	1.3	1.9	- 1.4	.6	2.7
Time and savings deposits	- 6.5	6.4	- 2.5	2.5	- 4.0	3.9
Large CD's 4/	- 3.7	3.9	- 1.0	1.9	- 2.7	2.0
Other	- 2.8	2.6	- 1.5	.7	- 1.3	1.9
Total borrowings 5/	4.1	1.9	1.8	.8	2.3	1.1
Other liabilities	.3	2.0	- .6	1.7	.9	.3
Euro-dollars 6/	1.7	1.0	1.2	1.0	.5	7/

1/ Dates are for 1969, comparable dates used for 1968.
2/ Exclusive of loans and Federal funds transactions with domestic commercial banks and net of valuation reserves.
3/ Less cash items in the process of collection.
4/ Negotiable time certificates of deposit in denomination of $100,000 or more.
5/ Largely borrowing in the Federal funds market and from Federal Reserve banks.
6/ Bank liabilities to foreign branches.
7/ Less than 50 million.
NOTE: Figures may not sum exactly due to rounding.

Table 6

Liabilities of U.S. Banks to Their Foreign Branches 1/
(Millions U.S. Dollars)

Date	Outstandings	Change from previous date
December 30, 1964	1,183	---
December 29, 1965	1,345	+ 162
December 28, 1966	4,036	+2,691
December 27, 1967	4,241	+ 205
January 1, 1969	6,039	+1,798
1969		
May 26	9,621	+3,582
June 25	13,228	+3,607
July 30	14,324	+1,096
September 3	14,571	+ 247
October 1	14,111	- 460
October 8	14,609	+ 598
15	14,970	+ 361
22	14,306	- 664
29	13,631	- 675
November 5	14,358	+ 727

1/ Exclusive of branch participations in head office loans to U.S. residents.

Table 7

Comparison of Three-month Euro-dollar Deposit Bid Rates with Rates Offered by Prime Banks in New York for Three-month Foreign Official Time Deposits

Period	(1) Three-month Euro-$ Deposit[1] Quoted	(2) Three-month Euro-$ Deposit[1] Adjusted[3]	(3) Offer Rate for Foreign Official Time Deposits in New York[2] Quoted	(4) Offer Rate for Foreign Official Time Deposits in New York[2] Adjusted[4]	(5)=(2)-(4) Differential: Adjusted Euro-dollar Over Adjusted Time Deposit Offer Rate	
1969 - Mar.	8.48	*	7.00 - 7.75	7.45 - 8.24	+1.03	+0.24
June	11.11	*	8.75 - 9.62	9.31 - 10.23	+1.80	+0.88
July	10.57	*	9.00 - 10.00	9.57 - 10.63	+1.00	-0.06
Aug.	10.91	*	9.50 - 10.50	10.11 - 11.17	+0.80	-0.26
Sept. 3	11.25	*	9.50 - 10.88	10.11 - 11.57	+1.14	-0.32
10	11.34	12.60	9.50 - 10.88	10.11 - 11.57	+2.49	+1.63
17	11.14	12.38	9.88 - 10.88	10.51 - 11.57	+1.87	+0.81
24	10.68	11.87	10.12 - 10.88	10.76 - 11.57	+1.11	+0.30
Oct. 1	11.08	12.31	10.25 - 10.88	10.90 - 11.57	+1.41	+0.74
8	10.65	11.83	10.25 - 10.88	10.90 - 11.57	+0.93	+0.26
15	10.43	11.59	9.88 - 10.62	10.51 - 11.30	+1.06	+0.29
22	9.63	10.70	9.38 - 10.50	9.98 - 11.17	+0.72	-0.47
29	9.10	10.11	8.38 - 10.00	8.91 - 10.63	+1.20	-0.52

1/ Average of daily figures for the last week (ending Wednesday) of the period.
2/ Range of rates offered for 90-179 day funds at Prime New York City banks.
3/ To reflect the 10% marginal reserve requirement on U.S. bank liabilities to foreign branches.
4/ To reflect the 6% reserve requirement on head office time liabilities.
*/ Same as quoted rate; reserve requirement computation began in week ending September 10.

Table 8

U.S. BALANCE OF PAYMENTS
(millions of dollars, seasonally adjusted)

	1968	1969 Qtr.1	1969 Qtr.2	1969 Qtr.3p
Balance on goods, services, remittances and pensions	1,357	92	-3	n.a.
Balance on goods and services	2,516	363	283	n.a.
Remittances and pensions	-1,159	-271	-286	n.a.
U.S. Gov't. grants and capital flows, net	-3,955	-793	-1,103	n.a.
U.S. private capital flow, net	-5,157	-1,345	-1,971	n.a.
Foreign capital flow, net, excluding change in liquid assets in U.S.	8,565	1,633	203	n.a.
Errors and unrecorded transactions	-642	-1,239	-838	n.a.
Balance on liquidity basis, seasonally adjusted		-1,653	-3,711	-2,533
Less: Seasonal adjustment		-395	-64	355
Balance before seasonal adjustment	168	-1,258	-3,647	-2,888
U.S. official reserve assets	-880	-48	-299	-686
Liquid liabilities to all foreigners	712	1,306	3,946	3,574
To official agencies	-3,099	-1,707	-556	2,238
To commercial banks 1/	3,382	3,124	4,567	1,519
To other foreign residents and unallocated	374	-23	-147	-191
To int'l and regional organizations	55	-88	82	8
Balance on official reserve transactions basis, seasonally adjusted		1,143	1,243	-933
Less: Seasonal adjustment		-567	29	107
Balance before seasonal adjustment	1,638	1,710	1,214	-1,040
Official reserve assets	-880	-48	-299	-686
Liquid liabilities to foreign official agencies	-3,099	-1,707	-556	2,238
Nonliquid liabilities to foreign official agencies	2,341	45	-359	-512

1/ Includes deposits of foreign branches of U.S. banks and of foreign commercial banks, associated with their U.S.-dollar denominated liabilities to foreign official agencies.

p/ preliminary. n.a./ Not available.

Source: Federal Reserve Bulletin, October 1969, pages A72 and A73.