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BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON, D. C. 20551

CONFIDENTIAL (FR)

July 12, 1972

To: Federal Open Market Committee

From: Mr. Broida

Enclosed is a copy of a memorandum from Mr. Hersey entitled "Effects of U.S. Banks' Borrowing from Eurodollar Market upon Member Bank Reserves and U.S. Interest Rates." This memorandum was prepared in response to a question raised by Governor Mitchell at the FOMC meeting of May 23, 1972.

Arthur L. Broida
Deputy Secretary
Federal Open Market Committee

Enclosure

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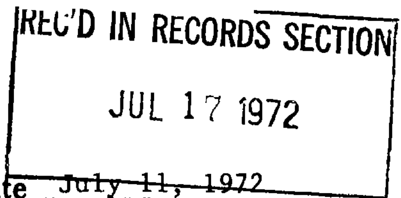

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM

Office Correspondence

Date ~~July 11, 1972~~

To Mr. R. Solomon

From A. B. Hersey

Subject: Effects of U.S. Banks' Borrowing from Eurodollar Market upon Member Bank Reserves and U.S. Interest Rates

CONFIDENTIAL (FR)

The following analysis relates to questions raised by Governor Mitchell at the May 23 meeting of the F.O.M.C. about the importance of Eurodollar interest rates as a factor influencing the relationship to be expected, in an inter-meeting period, between member bank reserve growth and the Federal funds rate.

When the overnight Eurodollar interest rate is below the Federal funds rate -- as it has been in recent months -- it might at first glance seem very likely that the Federal funds rate would be pulled down from what it would otherwise be, given a particular rate of reserve growth. A movement of funds from banks in the Eurodollar market to U.S. commercial banks might occur as a result of U.S. banks' borrowing from their branches abroad (who bid in the Eurodollar market for interbank and other deposits), or it might occur as a result of lending by foreign banks to their branches or agencies in this country. If there were a substantial cumulative flow of overnight funds in these ways from the Eurodollar market, the balance of supply and demand in the Federal funds market would be altered. A particular member bank borrowing overnight Eurodollars would have less need to borrow Federal funds; a foreign bank agency in New York receiving funds from its head office abroad might be contributing an addition to the supply of overnight interbank loans ("Federal funds sales") in New York.

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In neither case would there have to be any alteration in the rate of reserve growth, which would be determined by Federal Reserve operations.[1/]

Apart from the interest rate effects directly ascribable to the inflows, it is possible that interest rates in U.S. markets may be influenced in a more general way by changes in conditions abroad that lie behind such inflows. It is possible, for example, that participants in U.S. financial markets may be influenced by their knowledge of interest rate declines abroad in formulating their own demand or supply schedules.

Two different sorts of factors limit the extent to which the Federal funds rate is pulled down by a change in demand and supply conditions attributable to U.S. banks' borrowing from the Eurodollar market. (1) There are institutional and regulatory factors (to be described below) that limit the magnitude of the flow of funds from the Eurodollar market. (2) The transmission of funds necessarily calls into action other market forces that tend to counterbalance, in part, whatever downward pressure the inflow tends to exert on the Federal funds rate. The next section deals with these counterbalancing forces.

1/ If the inflow involved purchases of dollars by holders of other currencies who were induced to place deposits in Eurodollars, foreign central banks might experience a drain of dollar reserves. If this took the form of a decline in foreign central bank deposits at the Federal Reserve or the form of gold sales to the U.S. Treasury to replenish those deposits (producing then a rise in Federal Reserve gold certificate holdings), additions to member bank reserves would be generated. But the Desk would take that into account and would modify its open market operations accordingly, buying less or selling more in order to offset the expansive effect of these foreign operations on member bank reserves.

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Counterbalancing forces

Whenever a bank operating in the Eurodollar market obtains dollar funds from any source and lends them to a U.S. member bank -- this may be a U.S. bank branch advancing funds to its parent, or a foreign bank lending in the United States through a New York agency or branch -- the settlement of the double transaction necessarily involves a decline in some pre-existing foreign private or official asset in the United States.[1/] (For convenience of expression, we speak in absolute terms of a "decline" in assets, but we mean changes relative to what would have occurred in the absence of the particular borrowing transactions being considered.) Conceivably but improbably, the person (or institution) placing funds in the Eurodollar market is reducing his own pre-existing assets in the United States; this is improbable at a time when interest rate differences are tending to attract short-term investors' funds to the United States, not away from it. More probably, he is reducing his pre-existing assets elsewhere and buying dollars in the foreign exchange market. If so, the sellers of dollars in the foreign exchange market are reducing their assets in the United States. Again, it is improbable -- given the assumed interest rate differences -- that

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1/ Alternatively, there might be a decline in foreign official gold holdings or other monetary reserve assets through sale to the U.S. Treasury, or there might be a rise in some foreign liability to the United States such as would result from an inter-central-bank swap drawing. In such cases, in order to offset the resultant increase in member bank reserves, Federal Reserve open market sales of securities would be increased (or purchases reduced).

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foreign commercial banks are the ones who are reducing their dollar balances; as they sell dollars in the exchange market, they replenish their holdings by buying from their central banks. The central banks then have to replenish their working balances (these days) by reducing their holdings of U.S. Treasury bills or (in other days) by selling gold. (As it happened, the inflow in April and May, with the underlying balance of payments still heavily in deficit, served to check foreign reserve gains, and so was accompanied by a cessation of the previously large foreign central bank purchases of Treasury bills.)

We have been looking so far at the international ("balance of payments") part of the settlement process. At this point in the analysis it can be seen that while downward pressure is being put on the Federal funds rate upward pressure is being put on the Treasury bill rate. The analysis can now be carried further, to look at the domestic clearing part of the settlement process.

Suppose first that the Treasury bills being sold by foreign central banks are being bought by someone other than a member bank. As payment is made for the bills, the member bank at which the buyer of the bills has his deposit account loses reserves to the member bank at which the foreign central bank has its account. But simultaneously that bank is losing reserves, and as a result of the chain of foreign exchange and Eurodollar transactions that are taking place, the reserves go ultimately to the member bank that is borrowing, let us say, from

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the New York agency of the foreign bank that is drawing funds from the Eurodollar market. Thus, intimately linked with the foreign bank agency's adding to the supply of interbank loans, there is an additional demand for funds in the Treasury bill market, and when someone comes forward to buy the bills offered, a member bank somewhere becomes shorter of reserves (through no choice of its own) than it otherwise would have been, and very probably enters the Federal funds market as a borrower (or as less of a seller). Thereby equilibrium of supply and demand is established, and the decline in the Federal funds rate is minimized. Similarly, the buyer of Treasury bills -- who conceivably is influenced by his knowledge of a change in conditions in foreign financial markets, and in any case finds the Treasury bill rate attractive -- minimizes the rise in the Treasury bill rate by coming forward to buy. The process is the same whether foreign central banks are now selling Treasury bills, or have ceased being heavy buyers.

Suppose, alternatively, that no investor comes forward to buy the Treasury bills and that they are bought by a dealer who finances the purchase not by reducing a deposit balance but by borrowing. Some member bank with funds to spare lends, by its own choice, to the dealer (perhaps at a rate that has risen along with the Treasury bill rate) instead of lending Federal funds, or perhaps it buys Treasury bills itself. In this case the equilibrating reaction in the Federal funds market may perhaps not be as strong as in the first case (where a member bank was forced

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to borrow) but still something is happening to blunt the downward pressure on the Federal funds rate as well as the upward pressure on the Treasury bill rate.

These two examples of what may happen in connection with an inflow of overnight Eurodollar borrowings are only instances of a very general proposition that private capital inflows to the United States add neither to member bank reserves in the aggregate nor to the net supply of total credit to the domestic economy, since their effects in these respects are offset by the effects of the accompanying increase in Treasury bill sales (or decrease in Treasury bill purchases) by foreign central banks -- or by the Federal Reserve, in the case of gold settlements in the balance of payments.[1/] Nevertheless, private capital inflows are likely to have differential effects on different sectors of U.S. financial markets, tending to raise Treasury bill rates and depress other rates. But again, these differential effects on rates may turn out to be small, because of the action of equilibrating forces in the domestic markets.

Institutional and regulatory limits

The extent to which the Federal funds rate is pulled down by U.S. banks' borrowing from the Eurodollar market is limited not only by these equilibrating forces, but also by institutional and regulatory factors that limit the size of the inflow. One of these factors which is especially important at present is the 20 per cent marginal reserve

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1/ See the preceding footnotes.

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requirement against member banks' liabilities to their foreign branches. Under the market conditions of recent months member banks have found it advantageous to maintain average Eurodollar borrowings equal to their reserve-free bases, but not to increase their average borrowings over a 4-week computation period appreciably above that level. Typically they have borrowed more heavily in the first two weeks of a period, and then reduced their borrowings in order to avoid the cost of the reserve requirement.

Such influence as the Eurodollar market has had on the Federal funds market in recent months has been transmitted primarily through the operations of foreign banks with agencies or branches in this country. Here another institutional factor comes into play: the limits set by bank management on the employment of resources in particular fields do not permit an endless flow. At a time, as in recent months, when relatively easy money conditions in European national markets have been tending to hold down rates in the very short end of the Eurodollar market below corresponding rates in the United States, there has been a strong incentive to shift funds to the U.S. market. In fact, up to a certain point, the willingness of the foreign banks to lend here may be strong enough to have a clearly observable effect on U.S. money market rates despite the existence of the equilibrating forces described above. But the capital resources of these banks are finite, and the rule against putting too many eggs in one basket further limits the amount of funds that will be transferred to the United States. Thus, even though a gap

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may persist between the Federal funds rate and overnight money rates abroad, as it has in recent months, the inflow may come to an end fairly soon -- as indeed happened in May.

According to weekly balance of payments data maintained by the Federal Reserve Bank of New York, foreign agencies and branches in New York increased their liabilities to their head offices and branches abroad by $2.3 billion between Wednesday, December 29, 1971, and Wednesday, May 17, 1972. In the following four weeks there was a decline of about $300 million. The increase was especially sharp in the six weeks from March 29 to May 10, when it exceeded $1 billion. (Month-end balance sheet data indicate an even larger increase within the month of April.) Such information as is available indicates that an important part of this increase in the resources made available to the foreign agencies and branches was employed in interbank lending, including "Federal funds sales."