



BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM MAR 21 1966
WASHINGTON 25, D. C.

March 21, 1966.

CONFIDENTIAL (FR)

TO: Federal Open Market Committee
FROM: Mr. Holland

As you will recall, Mr. Young reported at the meeting of the Committee held on March 1, 1966 that a staff memorandum on System foreign currency operations was being prepared in response to the Committee's request of last November. A copy of the memorandum, entitled "Federal Reserve Operations in Foreign Exchange 1962-65", is attached.

Mr. Charles C. Baker, Jr. of the Board's staff carried main responsibility for drafting.

To allow more time for study, the Committee may prefer not to discuss the substance of the attached memorandum at tomorrow's meeting, but to defer consideration of the attachment (and of the related memorandum from the Secretariat, dated February 18, 1966, proposing a reorganization of the instruments governing foreign currency operations) until a later meeting.

A handwritten signature in black ink, appearing to read "Robert C. Holland".

Robert C. Holland, Secretary
Federal Open Market Committee

Attachment

DOCT IN RECORDS SECTION

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Federal Reserve Operations in Foreign Exchange
1962-1965

In the spring of 1961, after nearly thirty years of inactivity in the foreign exchange market, the Federal Reserve began consideration of renewed foreign currency operations. A variety of factors were responsible for this reconsideration; but foremost among them was concern about the position of the dollar in world markets, the result of persistent deficits in the U. S. balance of payments and drains on the U.S. gold stock.

In February 1962, the Open Market Committee authorized the New York Federal Reserve Bank to undertake open market operations in foreign currencies for System account. These operations were, and still are, considered to be exploratory and experimental in nature. This paper examines the aims and experience of the System's operations in foreign currencies over the last four years and attempts to lay the groundwork for assisting in a re-evaluation of those activities.^{1/}

Aims and Purposes

Since 1962, the broad underlying purposes of the System's operations in foreign exchange have been the defense of the value of the dollar in exchange markets, especially in the face of

^{1/} A historical review of System activities may be found in Appendix A; statistical tables supplementing both the text of the paper and Appendix A may be found in Appendix B.

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speculative pressures, and the temporary restraint of drains on the U.S. gold stock. In initial discussions, the role contemplated for the Federal Reserve's operations had been a relatively more active one; but later, in the draft of the proposed Authorization for Open Market Operations in Foreign Currencies, dated October 17, 1961, and then in the version of February 13, 1962, the operations were all described in terms indicating that they should be undertaken only in reaction to market forces.

Short-run purposes. Within the underlying aims of the System's foreign exchange operations, it is useful for discussion to distinguish four short-run purposes:

- (1) Offsetting of disequilibrating, short-term flows of private funds;
- (2) Moderating fluctuations in exchange rates within the limits established by the I.M.F. Agreement;
- (3) Counteracting disorderly conditions in the foreign exchange market; and
- (4) Averting or postponing purchases of U.S. gold by foreign central banks.

(1) Offsetting of disequilibrating, short-term flows of private funds. In an exchange market environment in which par values rarely change and in which movements of spot quotations around those par values are constrained within narrow limits, the risks of loss to holders of foreign currencies (or to foreign holders of dollars) through sizeable exchange rate fluctuations are largely removed, thus raising the possibility of large private flows of funds in

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response to relatively small variations in interest incentives or in response to speculative opinions about exchange rate parities. Attainment of fundamental goals of balance-of-payments policy may thus be hampered by such private short-term capital movements, unless official actions can counteract such flows by influencing spot or forward rates or both so as to avert or stop disequilibrating private flows of funds or to stimulate equilibrating flows.

For example, in times of grave political or economic uncertainties a decline in the dollar exchange rate might, for reasons of market psychology, stimulate a private outflow of domestic or foreign funds. Should the outflow lead to a further decline in the exchange rate or to foreign official conversions of dollars into gold, a further outflow could occur and a vicious spiral be generated. Under such circumstances, spot market intervention could be employed to temper or prevent the decline in the exchange rate. On the other hand, if the dollar spot rate were about to appreciate toward its ceiling, spot market intervention might be directed toward slowing that appreciation in order to encourage a greater volume of dollar purchases by foreigners.

Disequilibrating movements of private funds might also be influenced through forward exchange market operations. Two cases may be considered: If confidence in the currency is unimpaired, movements of funds in response to covered rate differentials could be influenced by official intervention to move the forward rate one way or the other. If, on the other hand, confidence in the currency has

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been impaired, official support of the forward rate may encourage those who would like to buy foreign exchange forward to do so, instead of moving funds out of the domestic currency immediately. In the British experience in 1964-1965, a policy of this latter kind proved effective in limiting reserve drains, although one final result may have been to stretch the selling pressure on the exchange rate out over a longer period.

There are difficulties in the actual execution of any such actions. These include not only problems of deciding on the scope, size, and timing of such operations, but most importantly, those of deciding whether the observed flows are indeed disequilibrating so that official intervention is warranted. Too ready official action runs the risk that optimal international allocation of funds will be hampered, and could result at the extreme, in a system of continual exchange market manipulation. That is, it might be better to take market expectations as given, to permit the resulting exchange rate movements and flows of private funds, and to prevent the developments from having a cumulative effect by other means: for instance, use of the "swap arrangements" with foreign central banks might keep dollars sold by private foreigners in the hands of foreign central banks, with the result that the private flows would not serve to reduce U.S. reserves.

(2) Moderating fluctuations in exchange rates within the limits established by the I.M.F. Agreement. In most instances the System's operations are not designed to "take a stand" at a particular

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exchange rate within the limits of fluctuations established by the I.M.F. Agreement; however, they do aim at moderating the severity of rate movements within those limits.

Proponents of such intervention argue that any resulting moderation of rate movements will be salutary, first, because the mere threat of such intervention lessens undesirable speculation and thereby reduces needs for actual official intervention; and second, because more moderate movements in rates, through their effects on market psychology, may lessen sizeable conversions of dollar assets into gold or foreign currencies, as well as movements out of weaker foreign currencies. Both effects would be beneficial to the dollar's position not only directly but also indirectly, by generally promoting market confidence in the preservation of existing par values.

The most general case against official intervention to effect moderation in rate movements argues that any official intervention in the market will produce distortions and will obscure the working of the natural and fundamental forces that make for the market's efficient operation. This general problem has been recognized by the System, and in order to deal with it, the Committee has deliberately instructed the Management in the Guidelines to "purchase and sell authorized currencies at prevailing market rates without trying to establish rates that appear to be out of line with underlying market forces." (Underscoring added) Further, in respect to transactions in spot exchange, the Guidelines

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instruct that, "The guiding principle for transactions in spot exchange shall be that, in general, market movements in exchange rates, within the limits established in the International Monetary Fund Agreement or by central bank practices, index affirmatively the interaction of underlying economic forces and thus serve as efficient guides to current financial decisions, private and public."

In addition to this broad, general opposition to official intervention, another argument against short-term exchange market intervention for the purpose of moderating exchange rate fluctuation doubts the usefulness of such intervention within the exchange rate limits on the grounds that, while some effect on rates may be achieved in situations of modest imbalance of market forces, support under crisis conditions may stimulate further outflows as the market would consider such support as evidence that the officials consider the situation to be serious. In the case of forward market intervention, the further point is often made that however useful such intervention may be in the first instance, if the crisis is prolonged, the reserve drains avoided by the initial actions may still have to be met later if speculators do not reverse their positions.

(3) Countering disorderly conditions in the foreign exchange market. Disorderly conditions in the exchange market arise when there is no two-way market; that is, when no market demand for a currency exists at prices within existing margins.

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Official intervention in such a market is mandatory for the authorities responsible for currencies other than the dollar (Art. IV, Sec. 4(b) of the Fund Agreement), and is generally advisable for the United States in cases of disruptions in markets for the dollar for obvious reasons of market psychology.

Possibly the most frequent example of such disorder is the bear attack on a currency during a political crisis. Such large supplies of the currency could be put on the market at such a time that all confidence in the stable value of the currency would be lost; demand for the currency would dry up; and a meaningful market would cease to exist. At the sign of such a situation, one counteracting official action might be to place a stop order in the market to indicate the intention of the authorities to maintain the value of the currency in the markets at levels existing before the time of the crisis. One alternative policy might be to place the stop order only at the lower limit of the permissible rate movement, thereby signifying official determination to maintain the currency's market value within the permissible range of variation while making no commitment about the appropriateness of rates existing just before the crisis.

The System's operations have been at times, of course, directly concerned with such "bear" attacks and with market disorder affecting the dollar exchange rate. But the System must also be concerned with disorderly market conditions directed against foreign currencies, for two reasons: (a) such disorder

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may be transmitted to the markets for other currencies, including the dollar, with adverse effects on overall market psychology and general confidence in par values; and (b) since the dollar serves as the intermediary ("vehicle") currency in international transactions of central banks, the dollar rate can come under pressure whenever a foreign central bank finds itself obliged to sell large amounts of dollars to counter disorder in the market for its currency.

(4) Averting or postponing purchases of U.S. gold by foreign central banks. Temporary needs for foreign currencies by private foreign dollar holders may produce sizeable net sales of dollars from time to time. While those needs may be short-lived and the flow of private funds may be quickly reversed, some of the dollars are likely to find their way into foreign official reserves. If the foreign central banks finds that this accrual of dollars swells its dollar reserves beyond the level it desires to hold, it will demand conversion of the excess into gold.

Given the fixed relationship between the U.S. dollar and gold, a serious decline in the U.S. gold reserves--even a temporary one--may produce speculative private or even official foreign sales of dollars for other currencies. Added to existing increased offers of dollars in the market, such sales would lead to further accumulation of dollars by foreign central banks, to additional demands for U.S. gold, and, in a self-feeding spiral, to further speculative sales of dollars.

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Among the variety of official actions available to reduce or postpone the demand for conversion of dollars into gold, two have been important in Federal Reserve operations:

(a) Market swaps of dollars against the foreign currency have been made jointly by the U.S. authorities and foreign central banks. In the resulting market operations, the foreign central bank would sell spot dollars to the market and the U.S. authorities would purchase the dollars forward in the market. Private holders would thus be able to acquire spot dollars at a favorable rate and, at the same time, cover them forward, in this way eliminating the exchange risk. Moreover, the private holders are encouraged not only to retain but perhaps to increase their dollar balances. At the same time, the level of the foreign central bank's dollar reserves would be held down or reduced.

(b) The System has drawn on its reciprocal currency agreements with foreign central banks and used the foreign currency proceeds of the drawing to purchase a portion of the foreign central bank's outright dollar holdings, thereby substituting covered for uncovered dollars in the foreign bank's reserves and effectively removing the immediate need for purchases of U.S. gold. This type of operation has been by far the most important part of Federal Reserve activities, as the description of operations in Appendix A and the tables in Appendix B indicate.

In view of the effectiveness of these temporizing operations in countering seasonal private flows of funds and their effects on

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foreign official reserves, the System has encouraged foreign central banks to undertake similar operations and thus to assist in counteracting such flows. Consequently, several foreign central banks have undertaken actions to cover temporary increases in their dollar reserves by making equivalent forward dollar sales to the market, thereby balancing their position and removing the need for purchases of U.S. gold.

Longer-run purposes. Two primary longer-run purposes of Federal Reserve exchange activities should be distinguished. First and most important, Federal Reserve exchange operations seek to encourage foreign central banks to maintain or increase their official dollar holdings over the long run as well as in periods of temporary strain on the dollar. In large part, all of the short-run purposes discussed above are directed to this end.

The second major long-term aim of System foreign exchange operations is to facilitate the growth in world liquidity. Federal Reserve activities seek to promote this growth in several ways:

- (1) By maintaining balances in other currencies and encouraging other central banks to do the same, thus encouraging private willingness to accept balances and payments in a variety of currencies;
- (2) By promoting arrangements between central banks that in effect provide reciprocal credits; and
- (3) By cooperating with other central banks, particularly during periods of crisis and of speculative attacks on currencies, thus demonstrating that virtually limitless resources can be found for the defense of a major currency in case of need.

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In addition to these overall longer-run aims in some instances, System operations have had the effect--if not always the purpose--of interim holdings actions in the exchange market, with System commitments in due course being liquidated by means of longer-term Treasury operations, such as drawings on the I.M.F. or the issue of non-marketable Treasury bonds ("Roosa-bonds") to foreign monetary authorities.

System operations and international financial developments.

The System's operations in foreign exchange are designed to be part of the larger framework of U.S. international financial policies. By influencing spot or forward exchange rates, they can modify incentives for flows of private funds to and from the United States; and thus, they may have an effect on the capital accounts of the U.S. balance of international payments.

Similarly, System operations can affect the balance of payments of foreign countries, both indirectly through the impact of changes in the U.S. payments balance and directly through support of foreign currencies under speculative attack. In this latter respect, the System has frequently engaged in cooperative efforts with foreign central banks to correct disequilibrium situations abroad, especially by providing resources to foreign banks under swap agreements or special arrangements, either alone or with other institutions. Outstanding in these latter arrangements is the part played by the Federal Reserve in the special assistance packages

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for the Canadian dollar in 1962, for the Italian lira in 1964, and for the pound sterling in the fall of 1965. In each of these instances, the System's central role in the assistance packages demonstrated its willingness, not only to defend the exchange value of the dollar, but, where feasible, to assist in defensive actions for other major currencies.

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Evaluation of Federal Reserve Foreign Currency Operations.

In undertaking an evaluation of the System's foreign exchange operations and their aims and purposes, it must be realized that any particular action may be designed to accomplish a variety of ends. Because of this complication and also because of the complexity of political and economic factors affecting the market, it is often difficult to reach an unqualified conclusion concerning the effectiveness or lack of effectiveness of particular activities in achieving their objectives. Equally important, however, it must be remembered that official intervention in the exchange market must often be based on uncertain and incomplete information. Therefore, despite the seeming wisdom of their use at the time, some operations may, in retrospect, appear to have met with less than complete effectiveness. In other instances, even though the operations were relatively effective, an ex post consideration of the situation may raise the question of whether alternative actions might have been preferable. In the greater number of cases, however, it will be seen that the choice of action has been confirmed by subsequent developments.

The purpose of this evaluation, in part, is to point to new directions which those activities may take in the future. In this regard the less completely effective operations of the past are more interesting than those which have adequately fulfilled

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their objective. Therefore, the discussion may, at times, seem to stress the limitations and shortcomings of the System's actions more than the accomplishments; this is not because the more effective operations have been any less important, but rather because it is in the areas of less than complete accomplishment that the greatest need for additional analysis and experience lies.

Needless to say, even the complete lack of effectiveness of an operation does not indicate that the action should not have been undertaken. First, it would be impossible, and if possible often inadvisable, to undertake an action only if attainment of the objectives of the action were completely certain. Second, in many cases the cost of failure is virtually nil while the gain from fulfillment may be substantial; in such cases, actions should be undertaken even though the chance of attaining their objectives would be rather slim. An example of that kind was the effort undertaken to bring the French franc down from its ceiling (See page 21, below); this effort did not cost the System anything, either in money or in prestige, and without the experiment it would have been impossible to find out whether the strong market position of the French franc at that time was or was not assailable.

It should be added in this connection that the whole undertaking of foreign currency operations by the Federal Open

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Market Committee was recognized at the outset as having many experimental aspects. The program was initiated in the light of the experience of the Treasury Stabilization Fund in such operations; and in view of the apparent successes of those actions--at least, from a short-run point of view--it was concluded by the Open Market Committee that the new experimentation by the System in such operations merited all of the risks to which the System Open Market Account might be exposed. In the last analysis, what was at stake was the integrity of the dollar internationally; and that being the case, the full faith and credit of the Federal Reserve as well as of the U.S. Government were necessarily involved.

System Operations.

Market operations by the System have comprised only a small portion of its total operations in foreign currencies compared with swap and inter-official transactions (See Tables 5 and 6, Appendix B). In fact, most of the market operations involving the dollar over the last four years have been conducted, not by the Federal Reserve directly, but by foreign central banks. This is not, however, to criticize System operations or to say that those market operations which did occur were any the less important, but it is rather a recognition of a fact learned from experience; namely, that the U.S. problem of market intervention contrasts sharply with that of other convertible currency countries and often requires use of different techniques for dealing with that problem.

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The Articles of Agreement of the International Monetary Fund established par values for the currencies of member countries in terms of the U.S. dollar, as well as of gold, and limited fluctuation in the spot exchange rates of a convertible currency to within one per cent of that par value (Art. IV., Sec. 1 and 3). This obligation made official intervention at the exchange rate limits necessary, except for the United States, which instead chose to maintain the par value of the dollar by freely buying and selling gold for the settlement of international transactions (Art. IV., Sec. 4).

Under this system, intervention by foreign authorities in their own markets has typically taken the form of purchases and sales of U.S. dollars. Official intervention by U.S. authorities in the market for dollars, however, has been more or less precluded by the dollar's position under the present system as the major reserve and vehicle currency, since such intervention, except on an unrealistically broad scale, could create a broad range of arbitrage incentives. These could be effectively offset only by simultaneous across-the-board intervention in at least all major currencies. Under the prevailing conditions of persisting deficits in the U.S. balance of payments intervention by U.S. authorities accordingly has had generally to be limited to situations of direct bear attacks on the dollar and market disorder.

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In addition to these general considerations, the continuing U.S. balance-of-payments deficit and the relative payments strength of a number of other major convertible currency countries has meant that since 1958 many foreign exchange rates have tended to be strong against the dollar and that foreign intervention in the exchange markets has resulted in sizeable net foreign official dollar purchases. These dollars have, in turn, formed the basis for continuing large demands for dollar conversions at the expense of U.S. gold reserves.

In this context, it is not surprising that swap and inter-official transactions have accounted for the largest portion of the Federal Reserve's foreign exchange activities. While providing balances for those market actions which were undertaken by the System--in line with the original conception of the purpose of the swap arrangements--swap drawings were soon found to be an especially useful expedient influencing the timing of, and thus for delaying, foreign official dollar conversions. Indeed, in a few cases, use of the drawings served to forestall such conversions altogether.

Equally important, the swap arrangements have also provided the System with a huge credit base from which exchange market intervention may be conducted if necessary. This presence of the System as a potential force in the market has no doubt conditioned operations

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in dollar exchange by foreign central banks and influenced them to operate within limits of reasonableness, considering both their own foreign exchange market problem and that of the dollar. Perhaps in evidence of this, foreign authorities have tended to keep an ever closer watch on their own markets, preventing or countering such disruptive conditions as have arisen and the effects of those conditions on the dollar/foreign currency spot and forward exchange rates, allowing System activities to be mainly concerned with the financing of these foreign official market operations through inter-central bank transactions.

It is clear from the foregoing that it is misleading to classify market operations and swap and inter-official operations by the System as entirely distinct and alternative activities. It is also misleading to contend that, because of their relative volume, market operations have been any less important or inter-official operations any more important in the Federal Reserve's activities. Nonetheless, market activities have raised quite a different set of questions and problems from swap and inter-official operations in the System's foreign exchange activities. For this reason, the following discussion treats the two separately.

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Spot operations. Operations in spot exchange can be undertaken with the immediate intention of affecting the direction in which the spot rate is moving, the speed at which the rate is moving, and even the level of the spot rate in order to achieve one or more underlying policy goals.

The clearest example of a need for spot market intervention by the System in the New York foreign exchange market came in November 1963, at the time of President Kennedy's assassination. At that time, there was a danger of direct heavy and disorderly selling pressure on the dollar, and the System actively intervened in the exchange markets to avoid the risk of a disorderly market situation. Immediate offerings of sizeable amounts of all major currencies by the New York Bank at exchange rates existing immediately prior to the assassination absorbed the dollars that were offered and demonstrated an official determination to prevent any serious loss of market confidence in the exchange value of the dollar rate. These actions did serve to allay fears for the dollar's position; and altogether, only slightly more than \$26 million of foreign currencies were actually sold. This experience shows how a relatively small operation at a given time can contribute significantly to maintaining confidence in the dollar.

Several other spot market operations undertaken by the System are of particular interest. The first occurred during the

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Cuban crisis; the second two, in the summer and fall of 1963, when on two occasions the System decided to test the market for the dollar in Paris; the fourth, throughout 1963, when sizeable sales of marks were made by the System in New York and in Europe; and the latest in the fall of 1965, when the System placed bids for sterling in the New York market in order to support and encourage the appreciation of spot sterling.

(1) The news of a military buildup in Cuba and President Kennedy's announcement on October 23 of a U.S. quarantine of that country sparked a heavy flow of private flight capital to Switzerland, the traditional safehaven for funds during periods of international political tensions. In an attempt to relieve some of the upward pressure on the franc spot rate and to reduce the need for dollar purchases by the Swiss authorities, the Federal Reserve quickly entered the market and sold approximately \$9 million equivalent of Swiss francs in New York and Switzerland. Despite these sales, the Swiss authorities, acting on instructions from the New York Bank, intervened in the market, purchasing dollars against francs. Subsequently, a Federal Reserve swap drawing from the BIS and operations by the Treasury in the forward market were necessary to reduce Swiss official uncovered dollar holdings and avoid a U.S. gold sale to Switzerland.

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(2) and (3) In the summer of 1963 an apparent inflow of foreign investment funds into the French economy was adding to an already sizeable French balance of payments surplus and thus helping to keep the dollar rate persistently on the floor, with a possible build-up of uncovered dollar exchange positions by French traders. In July the System decided to test the firmness of this dollar quotation in the hope that, in the context of an increase in the discount rate in the United States, limited official intervention could spark some appreciation of the dollar rate. Consequently, the System drew \$12.5 million of francs from the swap line with the Bank of France and, through the Bank of France, sold them in the Paris market. Despite these sales, the dollar rate showed no lasting signs of improvement, and the System discontinued the operations. Then, in October, the dollar moved off the floor in the Paris market, and the System drew and sold \$9 million more of French francs in the hope of stimulating a further appreciation of the dollar. Again, however, the underlying strength of the franc prevailed in the market; the dollar returned to the floor; and the System's activities were stopped. The francs necessary for repayment of all of these swap drawings were acquired in the Paris market by forward market purchases.

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(4) The System's spot market activities in marks formed the major part of its spot transactions during the four year period. Most of these transactions occurred during 1963 when the combination of a favorable German balance of payments, tight money market conditions in Germany, and window-dressing activities by German commercial banks resulted in more or less continual demands for marks in the year. In response to these pressures, the System made spot sales of marks in the New York market and in the German market using the proceeds of swap drawings. In large part, the sales in the New York market were made after the close of the European market for the day; the New York Bank was, therefore, acting directly in support of the dollar rate in terms of the mark. The sales in the European markets, however, were generally made by the German authorities and then "taken over" entirely or in part by the System on the same day.

In a broad sense the aims of these System spot market activities in marks were the general goals of moderating fluctuations in exchange rates despite a heavy private flow of funds into the foreign currency and countering speculative forces directed against the dollar, with the fundamental objective of preventing or postponing sizable movements of U.S. gold in the expectation of some reversal in market pressures and flows of funds. In fact,

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exchange markets in 1963 did remain fairly orderly, although some speculation on a revaluation of the mark was seen; and movements in rates were relatively moderate. Although certainly not entirely the result of System operations, gold sales to Germany were avoided entirely during the year. And, although a portion of the System's exchange commitments on the swap lines used to finance market operations were eventually repaid out of the proceeds of medium-term Treasury operations in marks, well over \$100 million of the mark commitments were repaid with the proceeds of dollar purchases by German authorities--an indication of some reversal or cessation of the dollar inflow to German reserves.

(5) System purchases of sterling in the fall of 1965 came at a time when selling pressure on sterling was clearly diminishing, when it was known that the short position against sterling was extremely large, and when there was a very good chance that spot demand for sterling would induce a rush to cover open positions. Under the circumstances and following extensive discussions between Federal Reserve and Bank of England officials, the Bank of England requested the Federal Reserve and leading European central banks to join in outright purchases of sterling up to agreed amounts for which the Bank of England would in turn give an exchange guarantee. As a participant in this pool, the System placed fairly substantial bids for sterling in the New York market at continually increasing prices in an attempt to encourage the appreciation of the spot sterling quotation. In view of these rising bids, the dollar market

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for sterling tended to move ahead of the System's quotations so that actual purchases of sterling were limited.

Forward operations. Only a few forward market operations have been undertaken by the System. Three types of such operations may be distinguished:

- (1) Forward sales of foreign exchange in the market to provide cover for foreign private holders or purchasers of spot dollars;
- (2) Forward sales of foreign exchange in the market to influence exchange rates and arbitrage flows; and
- (3) Takeovers of forward market sales of foreign exchange from foreign authorities.

(1) Forward sales of foreign currencies by the System in the market for the purpose of providing foreign private dollar holders with exchange cover. These operations have taken the form of outright forward sales, alone and in concert with spot market purchases of foreign currencies by foreign central banks, and of market swaps wherein both spot purchases and forward sales of the foreign currency are made by the System. The effect desired in each case is the same: to encourage foreign market participants to retain or increase their spot dollar holdings by the provision of forward cover for those holdings through System forward sales of the foreign currency involved, with the final goal of offsetting or eliminating the dollar inflow to the foreign central bank until--it is hoped--the market pressures responsible for that inflow subside or are reversed.

The System's operations in forward guilders in late 1964 in response to flows of funds from sterling to the Netherlands, tight

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money market condition in the Netherlands, and to window-dressing pressures; and in the first part of 1965 as money market tightness continued in the Netherlands, are the clearest examples of these actions. In all, approximately \$100 million equivalent of forward guilder sales were made by the System for the last quarter of 1964 through the second quarter of 1965 as part of a program conducted jointly with the Netherlands Bank which undertook the spot market portion of what were in effect market swaps. During this same period, the Stabilization Fund also undertook such sales amounting to \$98 million.

The operations were effective in holding down the gain in official Dutch dollar holdings over the 8- to 9-month period; nevertheless, as it turned out, the System exposed itself to exchange risks (within the exchange spread) which persisted for a number of months. Granting that System foreign currency operations must inherently contain some element of risk and that the Committee, in undertaking such operations, fully recognized this risk element, this extended exposed position raises two technical questions relevant to System actions:

- (a) What is the limit for the term "temporary" in reference to flows of private funds or increases in foreign official dollar holdings? With regard to swap drawings, the provision of the current Guidelines requiring, as a rule, liquidation of swap drawings within 12 months, may be interpreted as implying that "temporary" means any action which may be reversed within a year. On the other hand, the fact that individual swap drawings have, as a rule, a maturity of only 3 months suggest a much more restrictive meaning of "temporary."

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- (b) When should actions be reassessed, even within the limits of the meaning of "temporary," so as to determine whether market conditions, flows of private funds, or increases in foreign official dollar holdings should continue to be considered "temporary?"

(2) Forward sales of foreign exchange in the market to

influence exchange rates and arbitrage flows. In the summer of 1964, the forward discount on sterling narrowed markedly, moving the covered interest arbitrage calculations between New York and London sharply in favor of U.K. investments and threatening to produce an unwanted outflow of short-term funds from the United States. In order to counteract this situation and to provide support for spot sterling, the System undertook market swaps in sterling, buying spot sterling and selling it forward. The result was a restoration of the forward discount spread against sterling and a return of the arbitrage incentive to New York's favor.

In their immediate objective, these operations proved effective; however, the forward contracts matured at the time of the market crisis in sterling. The System therefore appeared to be placed in the position of working at cross purposes with the Bank of England.

(3) Takeovers of forward market sales of foreign exchange from foreign authorities. In the fall of 1965, the System agreed to "take over" \$500 million of forward lire contracts with Italian commercial banks from the Bank of Italy. These contracts had originally been made with Italian commercial banks by the Italian

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Exchange Office as part of dollar/lire swaps aimed at offsetting the large spot dollar inflow experienced by the Bank of Italy. Despite the shifting forward of the dollar inflow, the Italian authorities continued to be under domestic political pressure to purchase U.S. gold to compensate for the expected uncovered, unguaranteed dollar inflow. Therefore, earlier in the year, the U.S. Treasury and, then, in the fall, the System agreed to take over technical responsibility for the contracts on the general grounds that the Bank of Italy had been acting responsibly in terms of the functioning of the international payments system and had been striving to avoid undue drains of gold from other monetary authorities, including those of the United States. The terms of the takeover, however, stated in a memorandum of understanding with the New York representative of the Italian Exchange Office (rather than in a cable exchange), were (1) that the contracts would be reacquired by the Italian authorities at final maturity and (2) that exchange-rate fluctuations within the limits set by the Fund Agreement would be at the expense of the Bank of Italy; the Bank of Italy would be guaranteed against loss only in the case of a dollar devaluation vis a vis the lira. Although the provision of an exchange guarantee against a dollar devaluation removed any rational basis for any Italian demands for gold purchases, the Italian authorities requested that the nature of the transaction not be publicly revealed and that the forward contracts be entirely removed from the statistics of the Italian authorities.

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This transaction raises two difficult questions:

First, is it appropriate for the System to engage in a transaction which enables another central bank to obscure its published accounts even though the transaction will reduce or postpones demands on the U.S. gold stock? Since the System is, in accordance with the memorandum of understanding, under no obligation ever to provide the Italian banks with lire--even in the case of a devaluation of the dollar it would only need to make good the difference in dollars--it rightly excludes the obligation from the System's published liabilities. But since the Bank of Italy also excludes its forward obligations from its published accounts, the transaction--totalling \$1.5 billion equivalent for the U.S. Treasury and the System together, and one-third of that amount for the System alone--does not appear anywhere as a conditional obligation of any monetary authority although the accounts of the commercial banks in question presumably include the corresponding forward cover. This discrepancy is bound some time to attract the attention of some observer, with detrimental consequences for the credibility of System data.

Second, it can be questioned whether the guarantee against loss in the case of a dollar devaluation for so large a block of Italian forward contracts does not establish an undesirable precedent? This aspect of the Italian transaction would appear to be particularly serious in view of its non-disclosure in the current financial reports of the two banks. Once the secret is revealed--as may easily happen,

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e.g., in the course of Congressional investigations--other central as well as many commercial banks anywhere may well seek similar guarantees. No good reason could be given for a preferential treatment of Italian holdings, since Italy is a considerable net debtor in dollars (on longer-term account), and since only two years ago Italy's international financial situation was reversed by a dollar credit. If under these conditions Italian official and private dollar holders can successfully threaten to convert their dollar holdings unless they are given an explicit guarantee against devaluation losses, it is difficult to see why or how other foreign dollar holders could be prevented from uttering similarly successful threats.

Swap operations. As shown in Tables 1 and 2 in Appendix B, System drawings and repayments on the reciprocal currency lines totaled \$2,353 million and \$2,218 million, respectively; foreign central bank drawings and repayments amounted to \$3,735 million and \$3,080 million, of which the largest portion was accounted for by British swap utilization in 1964 and 1965. The System's reciprocal currency agreements with other central banks have, therefore served as the primary means for its foreign exchange activities. The balances obtained from these arrangements, however, were not primarily used in direct market operations. As shown in Tables 3A and 3B, Appendix B, only a small portion of the proceeds from System drawings were immediately employed in market operations. Most of the remainder of the proceeds were resold to the correspondent central bank in exchange for uncovered dollar holdings of that bank.

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This experience illustrates the inference drawn above; viz., that, because of the special nature of the U.S. exchange market problem, most of the market operations involving the dollar over the last four years have been conducted, not by the Federal Reserve directly, but by foreign central banks.

The distribution of the sources for System repayments of its swap drawings is also illustrative of this contrast between the System's activities of those of the central banks of other convertible currency countries. A large portion of System swap repayments were effected out of purchases from foreign central banks when those banks found their dollar holdings decreasing, in most cases because they, in turn, had had to supply dollars to their residents. In many cases, the market forces that gave rise to the original drawings by the System were reversed, and with the changes in the flows of dollars and in exchange rate pressures the foreign central bank found itself in need of dollars and the System was therefore able to liquidate its swap commitments.

It is sometimes difficult to assess clearly the reasons for individual System swap operations, especially in the cases in which the initiative for the System's actions came from the other party to the transaction rather than from the System itself. In general, however, System swap activities with other central banks were designed to achieve the following aims:

- (1) Offsetting of seasonal or other temporary accretions of dollar reserves to foreign countries. The System's swap drawings and sales of foreign currencies to foreign

authorities at times of seasonal window-dressing activities by foreign commercial banks or of temporary money market tightness in the foreign markets fall under this category. Despite the expected temporary and reversible nature of these flows, some repayments of the drawings were nonetheless accomplished only from exceptional sources or with the proceeds of third-currency swaps, and in several cases gold sales were needed to take up additional foreign dollar accumulations. These experiences suggest that, despite what was thought at the time of their execution, the System's operations did not always turn out to have been in response to temporary flows of funds, and that, even when the flows did prove temporary, the operations were not always entirely effective in offsetting the accruals of dollars to foreign official reserves.

- (2) Encouraging foreign willingness to hold dollars.
In one sense, the swap operations could not have failed in achieving this goal: they automatically encouraged foreign official dollar holdings by providing cover for those holdings and thus removing any exchange risk to the foreign official holder. In the more meaningful sense of encouraging foreign official holding of uncovered dollars, the effectiveness of System swap operations is more difficult to assess. Of the eleven countries with which the System has concluded swap arrangements, five (Belgium, France, Netherlands, Switzerland, United Kingdom) only hold necessary working balances in official dollar balances. Among the others, Germany has cut its dollar holdings in half since the end of 1961, and Australia and Canada have kept their dollar holdings at about their 1961 levels. Only Italy, Japan and Sweden have substantially increased their official dollar holdings, and only in the case of Italy has this behavior been clearly attributable to the cover given by inter-official transactions.
- (3) Aiding in short- and long-run growth of international liquidity. The size and frequency of both foreign and System use of the swap arrangements is ample proof of the usefulness of the swap arrangements in providing a flexible source

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of liquid funds for financing official exchange market activities. To the extent that official utilization of these facilities has resulted in more orderly exchange markets and greater world confidence in existing par values, the swap operations of the System and of foreign central banks have also encouraged growth in private lines of international credit and liquidity in the face of occasional uncertainties.

Other inter-official operations. The transactions between the System and other central banks, many of which have involved the sale of the proceeds of a swap drawing or the purchase of foreign exchange from these banks for the repayment of swap commitments, are summarized in Table 6, Appendix B. One transaction, however, does merit special attention.

In the summer of 1965, the System decided to reduce its balances of sterling. In late 1964, these balances had risen to an all-time high of \$56 million equivalent, but by July of 1965 \$14 million equivalent had been sold off. Then in July, when the Bank of England reserves were under heavy pressure as a result of renewed sterling sales in the exchange markets another \$14 million of these balances were sold to the Bank of England. There appear to have been two reasons for these sales: first, the Account Management felt the need for more "elbow room" under the \$150 million limit on the foreign currency balances which could be held; and second, there was evidently some concern by the Management, shared by other F.O.M.C. officials with whom he consulted, that a sizable exchange loss might be incurred on these balances in case of a new market crisis in sterling.

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This action, coming when it did, raises a question of policy: While there is little doubt that the System's foreign currency operations are not designed to be a profit-making enterprise, it is not reasonable to expect the System to strive to protect itself against every risk of loss or to cut back that risk when a friendly correspondent central bank finds itself under pressure and losing reserves. To be sure, the System should carefully weigh the alternatives of the possible exchange losses on its balances and of the impact of a sale of those balances on the foreign bank. But, however the sales were made and even if the other central bank concurred in them, they did put added pressure on that Bank's reserve position at a time potentially adverse to it.

Two other types of inter-official transactions are not summarized in the tables in Appendix B: (1) transactions with the Stabilization Fund and (2) transactions on third-currency swaps.

(1) On two occasions, in 1963 and 1965, the financing of System swap repayments was accomplished through a medium-term borrowing by the U.S. Treasury: in the one case, an issue of a mark-denominated bond and in the other, a drawing from the IMF. At these times it became clear that some System operations had involved attempting to offset flows which had proved to be long rather than short-term; and the longer-term facilities available to the Treasury were then thought more appropriate for financing such flows.

Two other transactions between the System and the Treasury are worth noting:

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The first was the simultaneous spot purchase of lire by the System from the Italian authorities and the forward sales of those lire to the Treasury in the winter of 1963-64. These actions not only provided the Italian authorities with funds necessary for support of the lira rate, but also built up needed Treasury balances in lire. Second, in the summer of 1963, the Treasury arranged for a sterling/Swiss franc swap with the Bank for International Settlements, the proceeds of which were sold to the System; the System used these proceeds, together with those of its own third-currency swap, for repayment of bilateral commitments in Swiss francs.

(2) Over the last four years, the System has arranged a total of \$90.5 million of third-currency swaps with the BIS. The first of them, in 1963, involved swapping \$13 million equivalent of sterling for Swiss francs; the francs were then used by the System for repayment of long outstanding drawings on its bilateral arrangements. Successive drawings, repayments (including repayments financed by additional third-currency swaps), and changes in the currencies involved in the swaps were made frequently during 1964 and 1965. At the end of 1965, the System still had outstanding a \$40 million third-currency swap under which it is to deliver Swiss francs for German marks, and by early March, 1966 this had been reduced to \$10 million.

It is difficult to assess the usefulness of the System's third-currency swaps. It is argued that the necessity for such operations arises from the limited willingness of foreign central banks to accept other foreign currencies in repayment of swap transactions.

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When a commitment to a foreign central bank matures, a third-currency swap is one way in which the System may acquire the needed currency without resort to gold sales. Opponents of third-currency swaps point out, however, that:

- (1) they do not discharge a short position in a currency, but only transfer the commitment to another creditor;
- (2) they act, therefore, to extend the maturity of the System's liability in a currency; and
- (3) they expose the System to an additional exchange risk in that the System has a "long" position with a fixed maturity--in contrast to "outright" holdings of a foreign currency, which can be liquidated at the System's pleasure.

Experience with third-currency swaps has so far been too limited, however, to permit a firm evaluation of the relative weight of these advantages and shortcomings.

Conclusion.

The foregoing discussion has brought out several points about the System's foreign currency operations over the last four years:

First, in part because of the dollar's special place in the present international financial system and in part because of the continuing U.S. balance-of-payments deficits, the problems confronting the U.S. authorities in the foreign exchange market contrast sharply with those facing the authorities of other convertible currency countries. In consequence of this situation, direct market operations by the System have been a relatively small part of its overall foreign currency activities, while the swap arrangements and other inter-official transactions have been more frequently employed.

Second, while most official market actions involving the dollar have been conducted by foreign central banks, the System has nevertheless undertaken significant market operations under special circumstances, such as at the time of the Cuban crisis, of the assassination of President Kennedy, and last fall, of the assistance to sterling.

Third, the System's activities in foreign exchange, in use of the swap arrangements, in other official transactions and in the market directly, have not always shown unqualified effectiveness; nevertheless, they have for the most achieved their objectives of helping to moderate destabilizing fluctuations in exchange rates and to reduce drains on U.S. gold reserves.

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Fourth, Federal Reserve operations have been of great importance in furthering inter-central bank cooperation in foreign exchange market actions. It is difficult to measure the System's exact contribution to such an intangible concept. Nonetheless, the increases in the size and number of the swap lines, the System's encouragement of other bilateral arrangements, its role--often as the initiating party--in a number of international financial assistance packages, and the forceful example which these actions have provided for other central banks, all stand in evidence of the System's crucial contribution to cooperative inter-central bank action in the foreign exchange market.

Fifth, since experience to date has been relatively short and has been limited to a situation of balance of payments deficits, there would seem to be a clear case for continuing the System's foreign currency operations as an experimental undertaking. A step that might be appropriate now would be to streamline the Committee's authorization, guidelines, and directive by consolidating these three instruments into two, an authorization and directive. A proposal to this end has been submitted by the Committee's Secretariat.

Sixth, the Committee may wish to direct its staff to give consideration in the months ahead to some such questions as the following:

- (1) The relation between the System's swap network and the proposed reform of the international payments mechanism;

- (2) The relative stress to be placed on market operations and on inter-central bank arrangements;
- (3) Possible expansion of the swap network by additions of other central banks or by increases in the individual amounts;
- (4) The circumstances under which System drawings and repayments under the swap arrangements are desirable;
- (5) The possible development of additional techniques to facilitate the use by the System of foreign currencies for settlement of obligations in other foreign currencies, supplementing third-currency swaps;
- (6) The role of special transactions such as the recent operations in sterling and the provision of forward cover for Italian lire.

Finally, System foreign-exchange operations since their resumption in 1962 have been conducted against the background of a large deficit in the U.S. balance of payments. A different set of problems will be posed when that deficit is eliminated. A full study of the basic long-range problems of official foreign-exchange operations should be undertaken, perhaps in one or two years, after the completion of other comprehensive System studies now under way, (e.g., the studies of the discount mechanism and of the Government securities market) with the dual aim of reviewing past aims and experience further and considering the role of operations under changed international financial conditions.

Appendix A:
Historical Survey of
System Foreign Exchange Operations

Background to System Operations.

The Federal Reserve undertook its first foreign exchange operations in 1918. In that year, under the direction of the Board's Division of Foreign Exchange and the Board's Agents at the Federal Reserve Banks, the Federal Reserve established balances with several foreign central banks and intervened directly in the market for foreign currencies for the purpose of administering exchange controls set up under the Trading with the Enemy Act of 1917 and the Executive Order of January 1918; dealing with sizable and apparently speculative movements of gold; and stabilizing the value of the dollar in the exchange markets. These operations were short-lived however; and not until the mid-1920's did the Federal Reserve again begin acquiring foreign currency denominated bills of exchange and balances with foreign central banks.

Federal Reserve foreign exchange activities in the later '20's were primarily for the purpose of providing stabilization credits for a number of European central banks for the defense of their currencies, and were largely conducted by the Federal Reserve Bank of New York, with only cursory supervision by the Board of Governors. By the fall of 1931, System foreign assets had reached a peak of nearly \$170 million, of which just over \$125 million represented sterling assets.

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The Federal Reserve's stabilization activities for currencies other than the dollar and especially the role of the Federal Reserve Banks in initiating such activities brought vehement criticism from Senator Glass on the grounds that such activities were alien to the intent of the Federal Reserve Act. The result of that denunciation of the Federal Reserve's policies was the enactment, in 1933, of Section 14(g) of the Federal Reserve Act, stripping the individual Banks of the authority to conduct foreign business without the "special supervision" and advance approval of the Board of Governors.

With the Gold Reserve Act of 1934, the Federal Reserve's authority to control gold movements to and from the United States, as well as title to the gold held by the System, was transferred to the Treasury. Moreover, Section 10 of the Act placed in the hands of the Treasury the responsibility for stabilizing the value of the dollar through dealings in gold and foreign exchange and established the Stabilization Fund for carrying out these responsibilities.

Despite the broad authority granted to the Secretary of the Treasury, Stabilization Fund activities in foreign exchange were fairly small during the 1930's and 1940's. In fact, as foreign countries established ever more rigid exchange controls in the late 1930's, U.S. official intervention in the exchange markets

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became more and more a matter of only academic concern. The onset of World War II removed any remaining vestiges of convertibility for most foreign currencies.

At the end of World War II there was very little need for official U.S. operations in the foreign exchange market, and the Stabilization Fund was almost solely concerned with currency stabilization agreements with Latin American countries.

The inactivity of U.S. authorities in foreign exchange markets in the years immediately following the war stemmed from three major and interrelated factors:

- (1) the strength of the U.S. payments position and the large increase in its gold reserves;
- (2) the emergence of the dollar as the world's major trading and reserve currency; and
- (3) the lack of convertibility of most non-dollar currencies.

After the mid-1950's, however, the situation in the world economy changed. Discussions of a "dollar shortage" waned and the recovery of the industrial economies of Europe made the case for a continued passive U.S. policy in foreign exchange markets less certain.

Recovery of the industrial European economies, furthered by the formation of the Common Market, increased world trade, and

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restoration of internal and external financial equilibrium in the leading foreign countries relieved the pressure for U.S. goods and services and for dollars to pay for such goods and services. In consequence, pressures for restoring the convertibility of other currencies increased until, in 1958, most major countries formally declared their currencies convertible under Art. VIII. of the Fund Agreement, and under Article IV were obliged to intervene to limit fluctuations in the spot rates. The reserve position of the European countries has continued to improve over the past 15 years as a result of increasingly favorable trade balances, and growing productive capacities and opportunities for investment, which has induced large capital flows to Europe.

In late 1960 and early 1961, three factors provided the final impetus for the active re-entry of the U.S. authorities into the foreign exchange market.

(1) As a result of continuing deficits in the U.S. balance of payments and heavy U.S. gold sales, speculation developed in late 1960 that the incoming Kennedy Administration would change the gold value of the dollar. Thus, for the first time since the 1930's, the position of the dollar as an unassailable store of value was seriously questioned. Although the statements of the President-elect dampened speculation, the underlying situation producing the speculation was not corrected; and anxiety about, and the threat of, renewed speculation against the dollar remained.

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(2) There was increased concern in a number of quarters that sterling might come under speculative selling pressure in early 1961. Since the dollar's position was also potentially subject to speculative pressures, it was felt that the two major trading and reserve currencies should negotiate some facility for mutual credit and assistance which would make gold movement between Britain and the United States unnecessary.

(3) The rapid economic growth of Continental Europe, together with speculation on a devaluation of the U.S. dollar, produced heavy inflows of private funds, to Germany, the Netherlands, and Switzerland. In order to reduce the surplus on both current and capital accounts, the Dutch guilder and the German mark were revalued in March, 1961. Contrary to intentions, the effect on the exchange markets of the revaluations was to induce even greater speculation about other, or further, changes in exchange rates, with private outflows of funds becoming particularly heavy from the United Kingdom. Under these conditions, spot and forward rates for many foreign currencies moved sharply away from par values, tending to reinforce the speculative rumors of further changes in par values and producing widespread market disorder.

While the Stabilization Fund actively entered the market to counter the immediate pressures on the mark, guilder, and Swiss franc, it was apparent that these three major factors posed more far-reaching questions about U.S. exchange market policy and

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activities. Consequently, the Federal Reserve began early in 1961 to consider reentry into the foreign exchange markets. After nearly a year of study, the Open Market Committee authorized in February, 1962, limited System operations in foreign exchange to be conducted on an experimental basis.

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System operations, 1962.

Background. System operations in 1962 were conducted in an atmosphere in which the U.S. payments deficit, while showing some improvement in the first part of the year, continued and even increased over the previous year. In the United Kingdom, too, the payments situation was of major concern, with emerging signs pointing to a worsening of the situation, although actual events in the year showed a slight improvement in the balance. In Continental Europe, the general tendency was toward reduced surpluses, with France as the major exception to this performance.

In addition to the influences exerted by these payments developments, the exchange markets were subjected in mid-summer to considerable pressure from speculative attacks on the newly established par value of the Canadian dollar, resulting in heavy flows of funds to Europe, and to Switzerland in particular. Earlier, widespread price declines in a number of stock markets had unsettled investor confidence, and repatriations of funds from those markets placed a number of currencies under pressure.

1/ Appendix B contains a series of tables presenting a statistical summary of System operations since 1962 and supplementing the material in this Appendix.

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Two political developments in particular added to the general speculative nervousness in the exchange markets: the Berlin crisis and the U.S.-Russian confrontation over Cuba.

Operations. In response to these events and to the resultant exchange market pressures, the System, together with the Treasury and foreign central banks, undertook a variety of operations. The larger part of the System's limited spot market operations was in Swiss francs, often in cooperation with the Swiss National Bank, and was in response to the speculative pressures arising from reactions to the stock market developments, the Berlin crisis, speculation against the Canadian dollar, and the Cuban situation. In addition to these selling activities in the spot market, market purchases of Swiss francs were made at times of reduced pressure on the rate for use in repayment of swap commitments.

The System also engaged in a few spot operations in marks and guilders. In the first instance the mark transactions were designed to counter speculative flows to and from Germany, in reaction to the stock market declines and to the Berlin situation. System purchases of guilders were made to acquire balances at times of ease in the rate for repayment of swap drawings made in the spring and early summer.

System operations in the spot market were quite limited. In all, gross market transactions in marks totaled \$20 million; in guilders, \$26 million; and in Swiss francs, about \$9 million. These operations formed only a small part of a more comprehensive

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program conducted by the System, the Treasury and foreign officials to moderate or prevent outflows of U.S. gold. The larger part of the System's participation in the program was in its use of swap arrangements.

During 1962, the System negotiated reciprocal currency ("swap") agreements with ten foreign central banks, including the B.I.S.; three of these were increased in size from their original amounts during the year. For the most part, the swap arrangements were initiated at the request of the Federal Reserve in reaction to, or in anticipation of, heavy inflows of dollars to the foreign central bank and the consequent threat of purchases of U.S. gold. A notable exception was the arrangement with the Bank of Canada.

The role of the Federal Reserve as the initiating bank in the swap network is not surprising. The general weakness of the dollar throughout the year made it necessary for the System to acquire foreign balances for market actions and for covering foreign official dollar accruals. It was, therefore, usually more in the interest of the System than of the foreign banks to negotiate such arrangements. On the other hand, when the Canadian dollar came under attack, it was necessary for the Canadian officials to secure resources to turn back the attack, and it was they who initiated the swap arrangement with the Federal Reserve.

Utilization of the swap lines in 1962 was almost entirely through System drawings, which amounted to \$420.5 million, most of which was repaid within six months of the original drawing. A

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total of \$130 million in Swiss franc drawings were made by the System in the year, of which \$110 million took place during the summer months at a time of heavy speculative inflows to Switzerland. Market purchases of francs in the late summer as pressure on the rate eased permitted repayment of part of these drawings. In the fall, however, the Cuban crisis brought renewed stress on the dollar's position and increased dollar accumulations by the Swiss authorities. A \$30 million swap drawing by the System and Treasury forward operations were used to reduce the pressure on the dollar and to purchase uncovered dollar balances held by Swiss authorities.

In the early summer, swap drawings in guilders provided cover for dollars held by the Dutch authorities; then, with an easing in market pressures on the guilder in the late summer, the System made spot purchases of guilders to repay these swap commitments. At the end of the year, a precautionary drawing from the Dutch swap line was made by the System in anticipation of possible year-end pressures on the rate; however, the pressures did not develop and the guilders were not needed.

In October, the System negotiated a swap agreement with the Austrian authorities, and the total amount of the facility, \$50 million equivalent, was immediately drawn by the System with the purpose of at least delaying an Austrian gold purchase. A series of drawings and repayments on the Belgian swap arrangement was also made by the System during the year, reflecting the changing pressures on the Belgian position. In all slightly more than

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\$30 million in such drawings were made. However, unlike the Austrian transaction, the activities of the System on the Belgian swap line were designed to finance what were considered temporary swings in the Belgian payments situation without resort to frequent gold sales and purchases between the two countries. In the Austrian case, the movement of funds was expected to be of more than a temporary nature, and settlement of the System's swap commitment was eventually made with the proceeds of a gold sale to that country.

Only a single foreign drawing on the swap lines was made in 1962: by Canada for \$250 million. Reversal of the speculative pressure on the Canadian dollar and a return of more normal flows of funds to Canada allowed the Canadian authorities to repay their drawing before the end of the year.

System operations, 1963.

Background. After having worsened markedly during 1962, the U.S. balance of payments in 1963 first continued the deterioration of the previous year and then, after the announcement of President Kennedy's balance-of-payments program in July, showed a rather substantial turn-around in the latter half of the year. Nevertheless, for the year as a whole, the U.S. position remained one of continued deficit in its international accounts.

In Europe and elsewhere the picture of payments movements was rather mixed. France continued to run a substantial surplus but the British situation began to deteriorate; and the

1/ Activities in Belgian francs represented disbursements and acquisitions under the fully drawn part of the swap.

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Italian surplus declined sharply under pressure of rising import demands accompanying the steady rise in real incomes in Italy. In large part in reflection of the Italian situation, Germany saw the slight deficit of the previous year turn to a surplus of major proportions. Finally, despite a large and troublesome deficit on current account, international tensions and mounting capital flows from Italy produced an overall surplus for Switzerland throughout the year.

There were three economic events of more than routine interest for the exchange markets:

- (1) the negotiation by the Soviet Union of grain purchases valued at about \$500 million from Canada;
- (2) the announcement by the United States of the proposed imposition of an Interest Equalization Tax, within the framework of President Kennedy's balance-of-payments program; and
- (3) the rejection of Britain's bid for membership in the Common Market.

From the viewpoint of System exchange market transactions, one political event was of overshadowing importance: the assassination of President Kennedy in November.

Operations. Spot market transactions by the System in 1963 expanded both in volume and in the number of currencies involved; for the most part, they consisted of sales of foreign currencies. Such sales were, in almost every case, undertaken as a part of a coordinated program of support for the dollar rate,

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involving the System, the Treasury, and foreign authorities, and utilizing a variety of market and inter-central bank operations. Occasional easing of the selling pressures on the dollar rate during the year and the reversal of the strength in sterling in the spring permitted limited purchases of foreign currencies by the System. These were used largely to replenish balances and to acquire currencies for repayment of outstanding commitments; however, the purchases also served to support the sagging sterling quotations as part of a cooperative policy with the Bank of England.

Spot sales of foreign currencies by the System during the year totaled more than \$175 million and were designed to serve a variety of purposes:

- (1) to counter seasonal pressures; sales of marks and Swiss francs at year-end are examples of this type of action;
- (2) to counter pressures arising from foreign payments imbalances; the heavy sales of marks in the first half of the year (totaling \$99 million equivalent) in cooperation with spot and forward operations of the Treasury and with market activities of the Bundesbank serve as the major examples of this type of action;
- (3) to meet temporary pressures arising from differential money market conditions; part of the summer sales and later purchases of guilders may serve as examples;
- (4) to meet speculative pressures directed in favor of a foreign rate; as in 1962, the Swiss franc sales by the System were largely designed to counter these pressures, and in the fall of the year, rumors of a guilder revaluation also made such sales advisable;

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- (5) to meet speculative pressures against the dollar; the System's actions at the time of the President's assassination may be cited in this case;
- (6) to test the dollar's market rate by official intervention; the sale of French francs in Paris, designed to see if the dollar could be pulled off the floor, was such an action.

The System-foreign central bank network of reciprocal currency agreements was considerably expanded in 1963:

- (1) Two new agreements, with the Bank of Sweden and the Bank of Japan, were negotiated.
- (2) The size of several agreements was increased; the increase in the swap line with the Bank of England from \$50 million to \$500 million was the most outstanding of these increases.
- (3) The maturities of several agreements was increased from the typical 3-month term to six months in the case of the arrangement with the Bank of Italy and twelve months for the agreements with the Bank of England and the Bank of Canada.

Some of these expansions in the bilateral swap network in the year were again initiated by the Federal Reserve; the most outstanding increase, however, that of the arrangement with the Bank of England, was at the request of the British authorities. The negotiation of the Japanese swap and the expansion in the Italian arrangements also were at the initiative of those banks.

During the year the Committee explicitly put into the Guidelines the requirement that outstanding swap drawings be generally liquidated within twelve months, thereby underscoring the

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short-term nature of System operations. In addition, authorization was given to make simultaneous forward purchases and sales in one foreign currency for another -- "third-currency" swaps -- for the purpose of utilizing balances in one currency for acquiring needed balances in another.

System drawings on the swap lines in 1963 were heavily concentrated in marks, Swiss francs and guilders. German mark drawings in the first half of the year were largely used to provide spot balances for the System's market activities. Later in the year, drawings served to purchase uncovered dollar holdings accruing to the German authorities from the window-dressing activities of German commercial banks. Most swap commitments in marks were repaid by the end of the year, utilizing market-acquired balances, the proceeds of medium-term Treasury mark bonds issued to Germany, and the proceeds of dollar purchases of the German Defense Ministry.

During the first five months of the year the System repaid its outstanding Swiss franc indebtedness on the swap lines, using balances acquired in the New York market, from the Swiss National Bank, and through a third-currency swap of sterling for Swiss francs made with the B.I.S. However, renewed speculative pressures in the market and window-dressing activities by Swiss banks produced a considerable appreciation in the franc rate and dollar accruals to the Swiss authorities increased in the summer and fall months. The System made sizable swap drawings from both the Swiss National

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Bank and the B.I.S. for direct purchase of uncovered dollars from the Swiss authorities and for use in limited market operations. Some repayments of these drawings were made in the fall, but additional drawings were needed at the end of the year to offset the effects of window-dressing by Swiss banks.

In 1963, there was a succession of System guilder drawings and repayments in response (1) to varying degrees of tightness in the Dutch money market and the accompanying pressures on the dollar/guilder rate and threat of dollar accruals to the Dutch authorities, and (2) to pressures on the exchange rate arising from speculation concerning revaluation of the guilder. The proceeds of the drawings were about evenly divided in their use between market transactions conducted in concert with the Treasury and direct transactions with the Dutch authorities.

In the summer, the System drew on the swap arrangement with the Bank of France and used the proceeds for market operations in Paris. These activities were designed to test the market for dollars in Paris in the context of the higher U.S. discount rate to see if the dollar rate could be pulled off the floor by official intervention. However, the position of the franc in the market proved too strong to be amenable to such actions; the dollar rate returned to the floor; and the System's operations in francs were suspended. In October, a similar operation was again undertaken in the Paris market. Once more, the gains were short-lived, and the operations were discontinued.

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Other System drawings on the swap lines were almost entirely in support of market operations, many of which occurred at the time of the President's assassination.

Foreign central bank drawings on the swap lines were made (1) in the spring, by the Bank of England as sterling came under pressure; and (2) late in the year, by the Bank of Italy, as the deteriorating Italian payments balance put downward pressure on the lira rate which the Italian authorities wished to maintain. In both cases, the proceeds of the drawings were used to support market activities by the foreign bank.

The funds for System repayment of swap liabilities came from several sources:

- (1) from reversal of market forces which had led to the original drawing, allowing market purchases or purchases from the other central bank of the needed foreign currencies; the System's repayment of obligations in sterling, some Swiss franc commitments, and some guilder commitments were accomplished in this manner;
- (2) from the proceeds of a Treasury foreign currency-denominated bond; repayment of mark obligations was made in this way;
- (3) from funds received as part of a foreign debt payment to the U.S.; some of the System's guilder swap liabilities were repaid from such a transaction;
- (4) from the proceeds of a "third currency" swap drawing; liabilities in Swiss francs were met by such a drawing.

In all, \$460 million of System swap repayments were met by the first of the above methods; whereas, \$87 million were repaid by use of one of the remaining "special" types of transactions.

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Two specially authorized transactions were made in 1963:

- (1) the forward purchase of French francs for the purpose of covering swap drawings made for System spot market intervention in Paris in testing the dollar rate as described above;
- (2) the simultaneous System purchase of \$50 million of lire from the Bank of Italy and sale of the lire to the Treasury for its use in reducing outstanding Treasury obligations in that currency, thereby placing the System in the role of intermediary between the Italian and U.S. Treasury authorities aiding in the Italian policy of bolstering their reserve position and in the Treasury policy of reducing its outstanding foreign commitments where feasible.

System operations in 1964.

Background. After some improvement in the early months of 1964, the U.S. balance of payments deteriorated further from its 1963 position as a result of heavy capital outflows -- despite measures taken to restrain a portion of these flows. By the latter part of the year, the size of the U.S. deficit, together with side effects arising from the sterling crisis, caused serious concern about the dollar. In Europe, the payments surpluses of the preceding year continued, though with some easing in the German and Dutch positions. The Italian deficit was gradually eliminated with U.S. financial assistance and the institution of a program of general domestic and trade restraint; by the end of the year Italy's balance of payments had returned to substantial surplus.

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In addition to the increased U.S. balance-of-payments deficit, a major, and perhaps the most important, development affecting the exchange market during the year was the burgeoning British payments deficit, arising from both mounting trade and current account deficits and from large long-term capital outflows. The result was a crisis of confidence and a bear attack of unparalleled magnitude on the pound in exchange markets.

Operations. Reflecting the growing recognition of the special problems of the United States in exchange market operations, market operations were less frequently employed by the System in 1964 than in other years relative to transactions conducted directly with foreign central banks under the reciprocal currency arrangements. On many occasions, the market transactions were part of market swap activities, i.e., simultaneous market spot and forward currency sales and purchases, conducted jointly with foreign authorities.

Outright sales of marks were made by the System in the first months of the year and in June in support of the dollar rate against speculation on a possible revaluation of the mark. In all, these sales totaled \$20 million equivalent. System sales early in the year were also reinforced by cooperative actions of the Treasury and the German Federal Bank in the spot market.

Market swap contracts in sterling (\$55 million equivalent) and in Canadian dollars (\$2 million equivalent) were made by the System in the spring and summer, selling spot dollars and purchasing them forward with the dual aim of reducing the incentive for

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arbitrage movements and of supporting the foreign spot rate. At the end of the year, under a new Committee authorization and with the cooperation of the Netherlands Bank and the Swiss National Bank, the System undertook forward sales of guilders and Swiss francs in the respective foreign markets for the purpose of encouraging dollar retention or spot dollar purchases in a period of foreign window-dressing and pressure on the dollar.

In 1964, System drawings on the swap lines with other central banks decreased considerably from the 1963 level; however, the swap lines themselves were expanded in both size and maturities during the year, with increases of \$250 million and \$50 million in the British and Belgian lines and extensions in the maturities of five of the arrangements to twelve months. System drawings during the year totaled \$475 million equivalent, in marks, guilders, Belgian francs, and Swiss francs, the currencies in which most drawings had been made in previous years. While providing some resources for market intervention, these drawings were almost entirely used to purchase excessive outright dollar holdings of foreign central banks, the result of speculative or other private dollar sales during the year.

Repayment of System obligations on the swap arrangements was accomplished through an even greater variety of transactions than seen in other years, many of which were the result of changing payments conditions and dollar needs in other countries. In

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addition to repayments from balances acquired in market transactions when reversals of flows of private funds occurred, repayments were made:

- (1) by using the proceeds of third-currency swaps with the B.I.S., selling balances of one currency for needed balances of another, with corresponding reciprocal forward repurchase contracts;
- (2) by purchasing with dollars the foreign currency proceeds of a foreign drawing from the IMF;
- (3) by purchasing the foreign currency proceeds of a foreign bank's swap drawing from a third foreign bank;
- (4) by purchasing the proceeds of a Treasury bond denominated in a foreign currency; and
- (5) by using the proceeds of a gold sale.

Three foreign central banks made use of the swap arrangements with the System in 1964: the Bank of Japan, in the summer and fall; the Bank of Italy in the spring; and the Bank of England in the summer, the fall, and into the following year.

The Japanese drawing on the swap line served primarily to boost their reserve figures during the summer and early fall months after the Bank of Japan had sustained reserve losses in support of the yen. These drawings were fully repaid soon after the beginning of the fourth quarter.

Deepening Italian balance of payments difficulties placed the lira under considerable selling pressure in the fall of 1963 and winter of 1964. Swap drawings were made by the Italian authorities as they incurred sizable reserve loses while engaging in support of the rate above par. The System provided further aid to

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the Italian authorities by purchasing lire in advance of U.S. needs and selling the lire immediately to the Treasury. After a brief exchange crisis in early March, broken by the announcement of a \$1 billion assistance package for the Italian authorities and their initiation of a number of measures to counter the deficit, the outflow of funds from Italy slackened and the pressure on the rate eased. By the early summer, Italian commitments to the System had been repaid and Italy had made substantial progress in correcting its payments deficit.

The sterling crisis which began in earnest in the fall of 1964 has been well described in many places, and a further recital will not be attempted. The British drew on the swap arrangement with the System in 1964 and later in 1965 with two basic purposes in mind: (1) to replace reserves lost in spot or earlier forward support of the pound in the world's exchange markets; and (2) to window-dress reserves in the hope of effecting some restoration of market confidence. British drawings for these purposes dominated the Federal Reserve's foreign accounts in both 1964 and 1965. In 1964, gross drawings by the Bank of England totaled \$1,370 million, of which all but \$100 million were in the fourth quarter. However, all but \$230 of these drawings were repaid by the end of the year.

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System operations in 1965.

Background. After the sharp worsening of the U.S. payments position in the last quarter of 1964, heavy capital outflows from the U.S. developed in the early weeks of 1965 in anticipation of some forms of controls. A modest tightening of the interest equalization tax and a program of voluntary restraints on capital outflows were announced in February; and these measures produced some improvement in the U.S. position and in world confidence in the dollar.

Elsewhere, the United Kingdom continued to experience difficulties; and sizable trade deficits and reserve losses, in spite of proliferating government programs to counter them, continued to undermine market confidence in sterling. France remained in surplus throughout most of the year, although some indications of a slackening of the inflow were seen in the fall; Italy's surplus, which had developed toward the end of 1964 as measures to correct the previous deficit took full hold, mounted through the spring and summer; in contrast, Germany, the Netherlands and Switzerland were in better balance than in many earlier years.

U.S. capital outflow restraint programs had a considerable effect on the exchange markets in 1965 through their impact on short-term interest rates, particularly in the Euro-dollar market, as well as through their diversion of many financing needs from New York to other markets. The exchange and capital markets were also

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influenced by unusually large grain purchases of Communist countries and by increasing tensions in Southeast Asia. Finally, money and credit markets both in the United States and abroad showed a general tendency to tighten in the year; their different rhythms, however, produced at times substantial but often quickly reversed, private flows of funds between markets and fluctuations in exchange rates.

Operations. At the end of 1964 the System had net foreign exchange liabilities of almost \$350 million, reflecting liabilities assumed under reciprocal currency agreements, under third-currency swaps and in uncovered forward transactions.

By the end of 1965, these net liabilities -- abstracting from the technical forward transaction in Italian lire, described below -- had been reduced to about \$40 million.

Market operations by the System in 1965 were more extensive than in 1964 and involved sterling, marks, Swiss francs and guilders. For the most part they were concerned with:

- (1) spot purchases of exchange for meeting maturing swap and forward commitments, and
- (2) forward sales of foreign exchange as part of market swaps conducted jointly with the Treasury and foreign central banks for the purpose of encouraging spot dollar purchases or retention by private foreigners.

These latter operations were undertaken in Swiss francs (\$32 million equivalent) and in guilders (\$100 million equivalent) at the end of 1964 and early in 1965.

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System gross drawings on the swap lines increased over 1964 by about one-half, totaling \$690 million equivalent; \$150 million of such drawings were in Swiss francs, \$350 million in lire.

Swiss franc drawings reflected the need to purchase, early in the year, uncovered dollar holdings accumulated by the Swiss authorities at the end of 1964 (1) as a result of Swiss bank window-dressing operations and (2) as a result of the dollar's role as a vehicle currency in the transfer of assets to Switzerland at the height of the sterling crisis. Later, tight conditions in the Swiss money market and speculative flows arising from general international tensions required additional System drawings for the purchase of increased Swiss official dollar holdings.

Drawings by the System during the year on the arrangement with the Bank of Italy were used to purchase part of the heavy dollar inflow experienced by the Italian authorities on the shift from a large payments deficit to an even larger surplus. In an attempt to lessen the inflow of dollars to official holdings, with corresponding pressures for gold purchases, the Italian authorities engaged in dollar/lira swaps with the Italian banks. However, pressure on the Italian authorities to convert more dollars into gold continued, and in the fall the System assumed responsibility for \$500 million of the lira forward contracts. Earlier in the year, the Treasury had assumed responsibility for approximately

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twice that amount. A similar operation with the Italians had been conducted by the Treasury at the time of the preceding Italian surplus.

As in earlier years, the System made considerable use of the fully drawn portion of the swap facility with the Belgian National Bank and also made \$65 million of drawings under the stand-by swap arrangement. However, unlike earlier years, the inflow of dollars to the Belgian authorities was not quickly reversed and repayment was slow.

The only foreign utilization of the swap lines in 1965 was by the Bank of England; and heavy dependence by the British authorities on the swap arrangement with the System was a cornerstone of their defense of the sterling parity. In all, \$1,765 million of drawings and \$1,490 million of repayments were made by the Bank of England. British transactions in other currencies allowed the System to repay commitments in other currencies, as the System acquired from the Bank of England some foreign-currency proceeds of bilateral credits and of British drawings on the Fund. At the close of the year, \$475 million in British drawings were outstanding, over \$200 million more than at the end of 1964.

System repayment of swap drawings was again effected in a variety of ways.

- (1) Balances acquired in market transactions played an even smaller role in these repayments in 1965, amounting to only \$7.3 million equivalent.

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- (2) Obligations in Swiss francs were repaid during the year with the proceeds of spot market purchases, of dollar sales to the Swiss authorities, of the conversion of part of a British credit, and of a third-currency swap.
- (3) Guilder commitments of the System were, in large part, eliminated in the course of a reversal of market conditions when a deficit appeared in the Dutch balance of payments and guilders could be purchased from the Dutch authorities. Guilders totaling \$45 million equivalent from the British IMF drawing were also used to repay some of these commitments.
- (4) The System repaid part of its lire commitments with lire received from the Bank of England in conversion of the British IMF drawing, and the rest in the summer with the proceeds of the U.S. drawing on the IMF. In this way, the System's short-term intervention obligations were for the first time funded by means of the medium-term facilities of the IMF. Previously, medium-term funding of System obligations had been achieved on occasion through the issuance of Treasury bonds denominated in foreign currencies, the so-called "Roosa" bonds.

Appendix B

Statistical Tables of Federal Reserve Foreign Exchange Operations

The Tables in this Appendix are designed to supplement the main part of the paper and the historical survey given in Appendix A. They were derived from the weekly reports of the Special Manager of the Federal Reserve's foreign exchange operations. The Foreign Department of the Federal Reserve Bank of New York was kind enough to check the data for accuracy.

Tables 4A and 4B, summarizing the utilization of swap drawings, may contain some double counting because of the method used in calculating the "Balances" item as a residual of reported utilization of swap-derived foreign currencies subtracted from total drawings for the given quarter.

Because System activities in Belgian francs have largely been in the form of disbursement and reconstitution of balances held under the \$50 million portion of the swap arrangement with the Belgian National Bank which is fully drawn by both parties at all times, a separate table, Table 7, has been provided to summarize the transactions in that currency.

TABLE B2

System Drawings and Repayments
on Reciprocal Currency Agreements
1962 - 1965, quarterly
(In millions of dollars equivalent)

1962		Pounds	D.	Swiss	Belgian ^{1/}		Can.	French	Austrian			
		Sterling	Marks	Guilder	Francs	Lire	Francs	Dollars	Francs	Yen	Schillings	Total
Quarter I	Drawings	--	--	--	--	--	--	--	50.0	--	--	50.0
	Repayments	--	--	--	--	--	--	--	--	--	--	--
Quarter II	Drawings	50.0	--	10.0	--	--	--	--	--	--	--	60.0
	Repayments	--	--	--	--	--	--	--	--	--	--	--
Quarter III	Drawings	--	--	40.0	110.0	--	10.5	--	--	--	--	160.5
	Repayments	50.0	--	50.0	10.0	--	10.5	--	50.0	--	--	170.5
Quarter IV	Drawings	--	--	10.0	20.0	50.0	20.0	--	--	--	50.0	150.0
	Repayments	--	--	--	15.0	--	5.0	--	--	--	--	20.0
Year	Drawings	50.0	--	60.0	130.0	50.0	30.5	--	50.0	--	50.0	420.5
	Repayments	50.0	--	50.0	25.0	--	15.5	--	50.0	--	--	190.5
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1963												
Quarter I	Drawings	25.0	--	--	--	--	5.0	--	--	--	--	30.0
	Repayments	25.0	--	10.0	9.5	50.0	19.4	--	--	--	50.0	163.9
Quarter II	Drawings	--	150.0	50.0	--	--	5.0	--	--	--	--	205.0
	Repayments	--	--	--	95.5	--	5.0	--	--	--	--	100.5
Quarter III	Drawings	--	--	40.0	50.0	--	--	--	12.5	--	--	102.5
	Repayments	--	113.0	50.0	--	--	.6	--	--	--	--	163.6
Quarter IV	Drawings	10.0	136.0	60.0	180.0	--	15.0	20.0	9.0	--	--	430.0
	Repayments	10.0	113.0	20.0	10.0	--	--	20.0	12.5	--	--	185.5
Year	Drawings	35.0	286.0	150.0	230.0	--	25.0	20.0	21.5	--	--	767.5
	Repayments	35.0	226.0	80.0	115.0	50.0	25.0	20.0	12.5	--	50.0	613.5

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TABLE 1 (Cont.)

System Drawings and Repayments
on Reciprocal Currency Agreements
1962 - 1965, quarterly
(In millions of dollars equivalent)

			Pounds	D.	Swiss	Belgian/ Lire	Can.	French	Austrian	
			Sterling	Marks	Guilder	Francs	Francs	Francs	Schillings	Total
1964										
Quarter I	Drawings	--	55.0	--	--	--	--	--	--	55.0
	Repayments	--	115.0	55.0	15.0	--	15.0	--	9.0	209.0
Quarter II	Drawings	--	--	--	25.0	--	--	--	--	25.0
	Repayments	--	--	25.0	230.0	--	--	--	--	255.0
Quarter III	Drawings	--	--	95.0	--	--	37.5	--	--	132.0
	Repayments	--	--	--	--	--	--	--	--	--
Quarter IV	Drawings	--	50.0	5.0	100.0	--	107.5	--	--	262.5
	Repayments	--	--	--	--	--	100.0	--	--	100.0
Year	Drawings	--	105.0	100.0	125.0	--	145.0	--	--	475.0
	Repayments	--	115.0	80.0	245.0	--	115.0	--	9.0	564.0
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1965										
Quarter I	Drawings	--	15.0	--	150.0	100.0	55.0	--	--	320.0
	Repayments	--	60.0	50.0	20.0	--	10.0	--	--	140.0
Quarter II	Drawings	--	--	--	--	150.0	10.0	--	--	160.0
	Repayments	--	5.0	50.0	130.0	82.0	40.0	--	--	307.0
Quarter III	Drawings	--	--	25.0	--	100.0	75.0	--	--	200.0
	Repayments	--	--	--	52.0	168.0	80.0	--	--	300.0
Quarter IV	Drawings	--	--	--	--	--	10.0	--	--	10.0
	Repayments	--	--	25.0	48.0	--	30.0	--	--	103.0
Year	Drawings	--	15.0	25.0	150.0	350.0	150.0	--	--	690.0
	Repayments	--	65.0	125.0	250.0	250.0	160.0	--	--	850.0

1/ Represents disbursements and reconstitution of balances under the \$50 million fully drawn portion of the swap arrangement and drawings and repayments under the \$50 million stand-by agreement.

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TABLE 2

Foreign Bank Drawings and Repayments on Reciprocal
Currency Agreements, 1962-65, quarterly
(In millions of dollars, equivalent)

		Pounds	D.	Swiss	Belgian ^{1/}	Can.	French	Austrian		
		Sterling	Marks	Guilder	Francs	Lire	Francs	Francs	Schillings	Total
1962 -	I Drawings	--	--	--	--	--	--	--	--	--
	Repayments	--	--	--	--	--	--	--	--	--
	II Drawings	--	--	--	--	--	250.0	--	--	250.0
	Repayments	--	--	--	--	--	--	--	--	--
	III Drawings	--	--	--	--	--	--	--	--	--
	Repayments	--	--	--	--	--	--	--	--	--
	IV Drawings	--	--	--	--	--	--	--	--	--
	Repayments	--	--	--	--	--	250.0	--	--	250.0
	Total Drawings	--	--	--	--	--	250.0	--	--	250.0
	Repayments	--	--	--	--	--	250.0	--	--	250.0
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1963 -	I Drawings	25.0	--	--	--	25.0	--	--	--	50.0
	Repayments	--	--	--	--	12.5	--	--	--	12.5
	II Drawings	--	--	--	--	10.0	--	--	--	10.0
	Repayments	--	--	--	--	12.5	--	--	--	12.5
	III Drawings	--	--	--	--	10.0	--	--	--	10.0
	Repayments	25.0	--	--	--	5.0	--	--	--	30.0
	IV Drawings	--	--	--	--	50.0	--	--	--	50.0
	Repayments	--	--	--	--	15.0	--	--	--	15.0
	Total Drawings	25.0	--	--	--	50.0	45.0	--	--	120.0
	Repayments	25.0	--	--	--	45.0	--	--	--	70.0

See following page for footnotes.

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TABLE 2 Con't.

Foreign Bank Drawings and Repayments on Reciprocal
Currency Agreements, 1962-65, quarterly
(In millions of dollars, equivalent)

		Pounds	D.	Swiss	Belgian 1/	Can.	French	Austrian		
		Sterling	Marks	Guilder	Francs	Lire	Francs	Francs	Schillings	Total
1964 -	I	Drawings	--	--	--	100.0	--	--	--	100.0
		Repayments	--	--	--	--	--	--	--	--
	II	Drawings	15.0	--	--	--	--	--	--	65.0
		Repayments	--	--	--	150.0	--	--	--	150.0
	III	Drawings	85.0	--	--	--	--	--	--	115.0
		Repayments	65.0	--	--	--	--	--	--	95.0
	IV	Drawings	1,270.0	--	--	--	--	--	--	1,270.0
		Repayments	1,075.0	--	--	--	--	--	--	1,125.0
	Total	Drawings	1,370.0	--	--	100.0	--	--	--	1,550.0
		Repayments	1,140.0	--	--	150.0	--	--	--	1,370.0
1965 -	I	Drawings	605.0	--	--	--	--	--	--	605.0
		Repayments	485.0	--	--	--	--	--	--	485.0
	II	Drawings	610.0	--	--	--	--	--	--	610.0
		Repayments	570.0	--	--	--	--	--	--	570.0
	III	Drawings	475.0	--	--	--	--	--	--	475.0
		Repayments	85.0	--	--	--	--	--	--	85.0
	IV	Drawings	75.0	--	--	--	--	--	--	75.0
		Repayments	350.0	--	--	--	--	--	--	350.0
	Total	Drawings	1,765.0	--	--	--	--	--	--	1,765.0
		Repayments	1,490.0	--	--	--	--	--	--	1,490.0

^{1/} Represents disbursements and reconstitution of balances under the \$50 million fully drawn portion of the
arrangement and drawings and repayments under the \$50 million stand-by agreement.

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Table 3 A.
 Utilization of Swap Drawings
 All currencies, 1962-65 quarterly
 (In millions of dollars)

	Market Operations ^{1/}	Sales to Foreign Authorities	Balances ^{2/3/}
1962 - I)			
II)	--	--	110.0
III	--	170.5	-10.0
IV	--	140.0	10.0
Year	--	310.5	110.0
1963 - I	--	10.6	19.4
II	84.7	94.3	26.0
III	17.2	80.5	4.8
IV	59.4	392.5	-21.9
Year	161.3	577.9	28.3
1964 - I	15.5	35.0	4.5
II	4.5	25.0	- 4.5
III	--	130.5	2.0
IV	--	237.5	25.0
Year	20.0	428.0	27.0
1965 - I	12.3	305.0	2.7
II	--	160.0	--
III	--	200.0	--
IV	--	10.0	--
Year	12.3	675.0	2.7
Total	193.6	1991.4	168.0

^{1/} Includes only operations in the New York market.^{2/} Residual item of total drawings in quarter.^{3/} Balances acquired in one quarter may be used in succeeding quarters for one of the other purposes.

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Table 3 B.
 Utilization of System Swap Drawings
 Total, 1962-65, by currencies
 (In millions of dollars)

	Market Operations ^{1/}	Sales to Foreign Authorities	Balances ^{2/}
1962-1965			
Pounds Sterling	8.0	5.6	71.4
D. Marks	132.4	270.9	2.7
Guilders	50.9	268.9	15.2
Swiss Francs	--	635.0	--
Lire	--	400.0	--
Belgian Francs	--	325.5	25.0
Canadian Dollars	2.3	14.0	3.7
French Francs	--	21.5	50.0
Yen	--	--	--
Austrian Schillings	--	50.0	--
Total	193.6	1991.4	168.0

^{1/} Includes only operations in the New York market.

^{2/} Residual item from total drawings.

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Table 4 A.
 Source of System Swap Repayments ^{1/}
 All currencies, 1962-65, quarterly
 (In millions of dollars, equivalent)

	Market Purchases ^{2/}	Purchased from Central Banks	Balances ^{3/}	Treasury	Other	Total
1962 - I						
II	--	--	--	--	--	--
III	--	85.8	84.7	--	--	170.5
IV	--	20.0	--	--	--	20.0
Year	--	105.8	84.7	--	--	190.5
1963 - I	8.4	126.4	29.1	--	--	163.9
II	3.3	56.0	4.2	24.0	13.0	100.5
III	--	113.6	--	50.0	--	163.6
IV	13.0	164.1	8.4	--	--	185.5
Year	24.7	460.1	41.7	74.0	13.0	613.5
1964 - I	2.0	172.5	-20.6	--	55.1	209.0
II	--	63.5	22.0	69.5	100.0	255.0
III	--	--	--	--	--	--
IV	--	75.0	25.0	--	--	100.0
Year	2.0	311.0	26.4	69.5	155.1	564.0
1965 - I	14.1	110.0	- 4.1	--	20.0	140.0
II	4.7	210.6	10.1	--	81.6	307.0
III	--	52.0	--	203.0	45.0	300.0
IV	1.2	102.0	- .2	--	--	103.0
Year	20.0	474.6	5.8	203.0	146.6	850.0
Total	46.7	1351.5	158.6	346.5	314.7	2218.0

^{1/} Excludes third-currency swaps totalling \$90.5 million equivalent.

^{2/} Includes only operations in the New York market.

^{3/} May include balances originally acquired from one of the sources.

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Table 4 B
 Source of System Swap Repayments^{1/}
 Total, 1962-65, by currencies
 (In millions of dollars)

	Market Purchases ²	Purchased from Central Banks	Balances ³	Treasury	Other	Total
1962-65						
Pounds Sterling	13.6	--	71.4	--	--	85.0
D. Marks	15.0	303.3	2.7	50.0	35.0	406.0
Guilders	--	299.4	.2	--	20.0	335.0
Swiss Francs	18.1	360.5	5.2	93.5	173.0	635.0
Lire	--	50.0	.4	163.0	86.6	300.0
Belgian Francs	--	250.5	25.0	40.0	--	315.5
Can. Dollars	--	16.3	3.7	--	--	20.0
French Francs	--	21.5	50.0	--	--	71.5
Yen	--	--	--	--	--	--
Austrian Schillings	--	50.0	--	--	--	50.0
Total	46.7	1,351.5	158.6	346.5	314.7	2,218.0

1/ Excludes third-currency swaps totalling \$90.5 million equivalent.

2/ Includes only operations in the New York market.

3/ May include balances originally acquired from one of the sources.

Table 5
 System Foreign Exchange Transactions in Market Operations ^{1/}
 Total period, 1962-65, by currencies
 (In millions of dollars, equivalent)

	Spot Operations ^{2/}			Forward Operations		
	Sales	Purchases	Gross Total	Sales	Purchases	Gross Total
1962-65						
Pounds Sterling	17.1	156.8	173.9	63.6	--	63.6
D. Marks	161.8	37.2	199.0	---	--	---
Guilders	51.6	99.9	151.5	99.9	--	99.9
Swiss Francs	5.8	50.5	56.3	32.5	--	32.5
Lire	---	---	---	500.0	--	500.0
Belgian Francs	---	---	---	---	--	---
Can. Dollars	2.3	1.9	4.2	1.9	--	1.9
French Francs	---	---	---	---	--	---
Yen	---	---	---	---	--	---
Austrian Schillings	---	---	---	---	--	---
Total	238.6	346.3	584.9	697.9	--	697.9

1/ Spot operations do not include deliveries or receipts under earlier forward contracts.

2/ Includes only operations in the New York market.

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Table 6.
Inter-Official Transactions between the System and Foreign Authorities
other than on reciprocal currency lines, by currencies for 1962-65^{1/}
(In millions of dollars)

	Spot Transactions			Forward Transactions		
	Purchases	Sales	Gross Total	Purchases	Sales	Gross Total
1962-65						
Pounds Sterling	8.4	20.9	29.3	--	8.7	8.7
D. Marks	372.3	270.9	643.2	--	--	--
Guilders	347.2	293.9	641.1	--	--	--
Swiss Francs	375.4	643.0	1,018.4	--	--	--
Lire	269.6	400.0	669.6	--	--	--
Belgian Francs	280.6	326.6	607.2	--	--	--
Can. Dollars	16.3	14.0	30.3	--	--	--
French Francs	--	21.5	21.5	21.5	--	21.5
Yen	--	--	--	--	--	--
Austrian Schillings	50.0	50.0	100.0	--	--	--
Total	1,719.8	2,040.8	3,760.6	21.5	8.7	30.2

^{1/} Excludes \$90.5 equivalent in third-currency swap transactions.

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Table 7
 System Transactions in Belgian Francs
 Annually, by type of transaction, 1962-65
 (In millions of dollars)

	1962	1963	1964	1965
Drawings on Swap line ^{1/}	30.5	25.0	145.0	150.0
Repayments on Swap line ^{2/}	15.5	25.0	115.0	160.0
Sales of Belgian Francs:				
To Market	--	--	--	--
To Belgian Authorities	30.5	25.0	145.0	150.0
To U.S. Authorities	--	--	0.5	--
To Other	--	--	--	--
Purchases of Belgian Francs:				
From Market	--	--	--	--
From Belgian Authorities	15.5	25.0	90.0	120.0
From U.S. Authorities	--	--	--	40.0
From Other	--	--	25.0	--

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- 1/ Represents both disbursements of swap balances under \$50 million equivalent portion of the swap agreement which remains fully drawn at all times and drawings under the \$50 million equivalent stand-by arrangement.
- 2/ Represents both reconstitution of balances under the \$50 million equivalent portion of the swap agreement that is fully drawn at all times and repayments of drawings on the \$50 million equivalent stand-by portion of the swap agreement.