

## Treasury and Federal Reserve Foreign Exchange Operations\*

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The dominant feature of the foreign exchange markets during the past six months has been the heavy flow of short-term funds across the exchanges in response to interest rate differentials. The swing in the official settlements balance of the United States from a surplus in 1969 of \$2.7 billion to a deficit in 1970 of \$10.7 billion did not reflect any deterioration in our underlying balance-of-payments position. But, as United States money rates and credit conditions progressively eased in 1970 and early 1971 while European rates lagged well behind, short-term money naturally flowed in heavy volume from the United States to the Euro-dollar market and on from there to the national money markets and central bank reserves of Europe. The great bulk of this flood of short-term money represented repayments by United States banks of earlier borrowings of foreign-owned funds from the Euro-dollar market. Thus, the Euro-dollar debt of United States banks to their overseas branches plummeted from a peak of \$15 billion outstanding in October 1969 to less than \$8 billion at the close of 1970 and has declined still further so far in 1971.

The resultant overflow of dollars from the Euro-dollar market into the European money markets was naturally attracted to the highest bidders. Throughout most of the period, German short-term rates exerted the strongest pull, with the result that German banks and industrial firms in seeking an escape from stringent credit conditions

in Germany borrowed well over \$6 billion abroad in 1970, thereby more than accounting for the \$6.3 billion increase in the reserves of the German Federal Bank. The second leading recipient of short-term money flows was the United Kingdom, where consistently high money rates in relation to the Euro-dollar market attracted a large volume of short-term money and thereby facilitated the remarkable progress of the United Kingdom in paying off \$3 billion of official debt. Other major recipients of the overflow from the Euro-dollar market were France, where flows into official reserves totaled some \$1.8 billion in 1970, Italy, Belgium, the Netherlands, and Switzerland.

As these flows of short-term dollar funds moved across the European exchange markets, all the major European currency rates were pushed up toward their official ceilings. At these levels, the European central banks were required to absorb dollars from the market and, in the process, were in some instances forced to dilute their own credit restraint policies by injecting new liquidity into their commercial banking systems. It is not surprising, therefore, that several European governments and central banks have taken action to restrain the access of their nationals to the short-term credit facilities of the Euro-dollar market. In the absence of similar restraining action by the German government, the Federal Bank felt it had no alternative but to mop up inflows of new liquidity by increasing bank reserve requirements and thus setting the stage for renewed inflows. On the United States side, the Federal Reserve sought to temper the rundown of Euro-dollar debt by United States banks by raising, on November 30, 1970, the marginal reserve requirements of United States banks on liabilities to their branches, and in early 1971 the Export-Import Bank offered the branches issues of three-month securities totaling \$1.5 billion. By amendment of Federal Reserve regulations

\*This report, covering the period September 1970 to March 1971, is the eighteenth in a series of reports by the Senior Vice President in charge of the Foreign function of the Federal Reserve Bank of New York and Special Manager, System Open Market Account. The Bank acts as agent for both the Treasury and Federal Reserve System in the conduct of foreign exchange operations.

these securities can be counted against the marginal reserve-base level. In effect, the operation absorbed dollars that otherwise might have flowed back to the Euro-dollar market.

Financing by the United States of the unusually high official settlements deficit in 1970 was facilitated by the fact that a substantial part of dollar reserve gains abroad favored those countries which were in the process of rebuilding depleted dollar reserves or were fully content to accumulate dollars in anticipation of scheduled debt repayments to United States official agencies or to the International Monetary Fund (IMF). Special financing arrangements previously negotiated by the United States Treasury with the governments of Canada and Germany took care of another important segment of the financing problem. On the other hand, Switzerland, Belgium, and the Netherlands had to purchase dollars in amounts exceeding their normal central bank holdings and, during 1970 and into early 1971, these central banks repeatedly requested the Federal Reserve to draw on the respective swap lines (see Table I) so as to absorb such surplus dol-

lars. In contrast to earlier experience, virtually none of these Federal Reserve drawings on the swap lines, totaling \$1,680 million since January 1, 1970, have proved reversible through market transactions.

In October 1970 and in early March 1971, the Federal Reserve drew a total of \$450 million equivalent on its swap line with the Swiss National Bank (see Table II). These drawings were paid off in their entirety in early March through a combination of a United States Treasury sale of \$75 million of gold, the issuance of a \$250 million Swiss franc security to the Swiss National Bank, and a direct purchase by the Federal Reserve from the Swiss National Bank of \$125 million equivalent of Swiss francs against dollars.

In the case of the Netherlands, the Federal Reserve in several transactions beginning in July 1970 drew the full \$300 million available under its swap line with the Netherlands Bank which also conducted market swaps in Amsterdam to deal directly with additional excess dollar inflows. This \$300 million of Federal Reserve debt—plus another \$25 million of surplus dollars on the books of the Netherlands Bank—was fully liquidated in a series of special transactions involving (1) a Federal Reserve sale of \$75 million equivalent of German mark balances to the Netherlands Bank, (2) a United States Treasury sale of \$25 million of gold and \$100 million of special drawing rights (SDR's) to the Dutch authorities, and (3) a United States drawing of \$125 million equivalent of guilders from the IMF.

The most intensive use of the swap facilities by the Federal Reserve occurred, however, in the case of Belgium where drawings of \$655 million of Belgian francs have been made since late June. Some progress was made in reducing these swap drawings by two special operations. On December 23, the United States Treasury sold \$110 million of SDR's to the National Bank of Belgium, and in January 1971 drew \$125 million of Belgian francs from the IMF. As of March 10, the Federal Reserve debt outstanding under the Belgian franc swap line amounted to \$420 million.

During the period under review, only one swap drawing was made by a foreign central bank on the Federal Reserve. This was a drawing of \$400 million by the Bank of England in September 1970 (see Table III). The primary cause of this drawing was speculation against the pound engendered by rumors of major moves toward greater exchange rate flexibility at the approaching IMF meeting in Copenhagen. With tight credit conditions in the United Kingdom, an acute shortage of sterling quickly developed, however, and helped choke off such speculation. The subsequent proceedings of the Copenhagen

**Table I**  
**FEDERAL RESERVE RECIPROCAL CURRENCY ARRANGEMENTS**  
March 10, 1971  
In millions of dollars

Institution	Amount of facility
Austrian National Bank .....	200
National Bank of Belgium .....	500
Bank of Canada .....	1,000
National Bank of Denmark .....	200
Bank of England .....	2,000
Bank of France .....	1,000
German Federal Bank .....	1,000
Bank of Italy .....	1,250
Bank of Japan .....	1,000
Bank of Mexico .....	130
Netherlands Bank .....	300
Bank of Norway .....	200
Bank of Sweden .....	250
Swiss National Bank .....	600
<b>Bank for International Settlements:</b>	
Swiss francs-dollars .....	600
Other authorized European currencies-dollars .....	1,000
<b>Total .....</b>	<b>11,230</b>

**Table II**  
**FEDERAL RESERVE SYSTEM DRAWINGS AND REPAYMENTS**  
**UNDER RECIPROCAL CURRENCY ARRANGEMENTS**

In millions of dollars equivalent

Transactions with	System swap drawings outstanding on January 1, 1970	Drawings (+) or repayments (-)					System swap drawings outstanding on March 10, 1971
		1970				1971	
		I	II	III	IV	January 1-March 10	
National Bank of Belgium .....	55.0	+ 50.0	{ + 45.0 - 130.0	+135.0	{ +165.0 -110.0	{ +335.0 -125.0	420.0
Netherlands Bank .....	130.0		- 130.0	+270.0	+ 30.0	-300.0	-0-
Swiss National Bank .....	145.0	- 145.0	+200.0	- 200.0	+300.0	{ +150.0 -450.0	-0-
<b>Total</b> .....	<b>330.0</b>	{ + 50.0 - 145.0	{ +245.0 - 260.0	{ +405.0 - 200.0	{ +495.0 - 110.0	{ +485.0 - 875.0	<b>420.0</b>

meeting then relieved market fears by ruling out the more extreme approaches to exchange rate flexibility. The Bank of England liquidated this \$400 million drawing in its entirety in October and November 1970. As of March 10, 1971 no foreign central bank drawing on the swap network was outstanding.

During the period covered by this report there were no swap operations with the central banks of Austria, Canada, Denmark, France, Germany, Italy, Japan, Mexico, Norway, or Sweden. The United States Treasury issued to the Swiss National Bank a Swiss franc-denominated security equivalent to \$250 million in March, while other foreign-currency-denominated securities were rolled over at maturity. The total of such securities now outstanding is \$1.6 billion (see Table IV).

#### EURO-DOLLAR MARKET

Euro-dollar rates declined fairly steadily through the second half of 1970 and the first two months of 1971, with only modest interruptions during September and December (see Chart I). From close to 9 percent at the end of June 1970 the three-month deposit rate fell to 5 percent by early March 1971, and through most of the period covered by this report was significantly below comparable rates in many European centers. Thus, in the space of only a few months, the pattern of interest rates in the major international markets had shifted profoundly. Where the Euro-dollar market previously had been exerting a substantial upward pull on European domestic interest rates,

it now was providing borrowers on the Continent with relatively cheap funds in heavy volume.

As in any market situation, this change in the direction of flows through the Euro-dollar market reflected a variety of factors on both the supply and demand sides, but clearly the most important single change was in United States domestic interest rates and credit demands. Throughout 1969 United States banks had borrowed extremely heavily in the Euro-dollar market, both through their own European branches and to some extent directly, in an effort to offset the effects of monetary stringency in this country. With credit demand in the Euro-dollar market already strong because of boom conditions prevailing in many European countries, the consequence was a sharp escalation of rates. Once excess demand was curbed in this country, some of the pressure on the Euro-dollar market was relieved, but it was not until the partial suspension of Regulation Q ceilings and the easing of liquidity conditions here following the Penn Central bankruptcy in June that a marked shift occurred in the behavior of United States banks in the Euro-dollar market. As banks found that they could once again write domestic certificates of deposit (CD's) at competitive rates, they began to reduce their dependence on the Euro-dollar market and to repay borrowings through their branches. From late June to the end of September 1970, the liabilities of United States banks to their own foreign branches declined by \$2.4 billion to below \$10 billion (see Chart II).

Interest rates in the Euro-dollar market naturally eased in the face of these repayments by United States banks,

but there was no precipitous decline, as demands for Euro-dollar loans on the Continent remained substantial. Most European countries still were pursuing policies of monetary restraint, either to combat continuing inflation and excess demand or to rebuild depleted monetary reserves. Consequently, any decline in Euro-dollar loan rates to levels below those prevailing in European domestic markets led to surges of borrowing from those markets and concomitant strains on the exchange markets as the loans were converted into local currencies. German business firms, in particular, were heavy borrowers—and remained so throughout the fall and winter months—but there were sizable flows to other countries as well.

Credit demands from Europe, while large, were not sufficient to stabilize the situation in the Euro-currency markets. The progressive easing of monetary policy in the United States, coupled with the continued slack in the United States economy, made it possible for United States banks to turn to relatively cheaper domestic sources for most of the funds they needed. A number of banks, therefore, continued to reduce their Euro-dollar positions through October and November, even though this meant eroding their reserve-free Euro-dollar bases established under amendments to Regulation M of the Board of Governors of the Federal Reserve System.

Several foreign central banks reduced their discount and lending rates during this period (see Chart III),

but the continuing decline in Euro-dollar rates, reflecting the outflow of funds from the United States, complicated the task of monetary management in a number of European countries. Consequently, the Federal Reserve Board moved at the end of November 1970 to moderate the pace of repayment by United States banks by raising from 10 percent to 20 percent the reserves required to be held against Euro-dollar borrowings in excess of the reserve-free base level and, at the same time, amended the regulations regarding the computation of the bases. The changes did not require any banks to put up reserves immediately, but they served to signal the Board's concern over the rapidity of repayments and encouraged banks to take a second look at the possible cost of borrowing should they need to have recourse to the Euro-dollar market in the future. The announcement of these changes came just when year-end demands were beginning to exert their usual tightening effect on the market, and there was a brief sharp upward move in rates, especially at the short end of the maturity spectrum. The year-end squeeze, nevertheless, was very much less marked than in 1969, and after peaking in mid-December, rates resumed their downward trend in the second half of the month and into the new year.

The further decline of rates in the Euro-dollar market in January reflected the continued slide of interest rates in the United States, as credit demand remained slack in

**Table III**  
**DRAWINGS AND REPAYMENTS BY FOREIGN CENTRAL BANKS**  
**AND THE BANK FOR INTERNATIONAL SETTLEMENTS**  
**UNDER RECIPROCAL CURRENCY ARRANGEMENTS**

In millions of dollars

Banks drawing on Federal Reserve System	Drawings on Federal Reserve System outstanding on January 1, 1970	Drawings (+) or repayments (—)				Drawings on Federal Reserve System outstanding on December 31, 1970
		1970				
		I	II	III	IV	
Bank of England .....	650.0	— 650.0		+ 400.0	— 400.0	
Bank of France .....		{+ 100.0 {— 100.0				
Bank of Italy .....		+ 800.0	{+ 200.0 {— 600.0	— 400.0		
Bank for International Settlements (against German marks).....		{+ 136.0 {— 136.0	{+ 77.0 {— 77.0	{+ 77.0 {— 77.0	{+ 44.0 {— 44.0	
<b>Total</b> .....	<b>650.0</b>	{+ 1,036.0 {— 886.0	{- 277.0 {— 677.0	{- 477.0 {— 477.0	{- 44.0 {— 444.0	<b>-0-</b>

Table IV  
 UNITED STATES TREASURY SECURITIES  
 FOREIGN CURRENCY SERIES

In millions of dollars equivalent

Issued to	Amount outstanding on January 1, 1970	Issues (+) or redemptions (-)					Amount outstanding on March 10, 1971
		1970				1971	
		I	II	III	IV	January 1-March 10	
German Federal Bank .....	1,081.6*	-542.0					539.6
German banks .....	135.5*						135.5
Bank of Italy .....	125.4	-125.4					-0-
Swiss National Bank .....	540.6					249.7	790.5
Bank for International Settlements† .....	204.4		-54.7				150.0
<b>Total</b> .....	<b>2,087.6</b>	<b>-667.4</b>	<b>-54.7</b>	<b>-0-</b>	<b>-0-</b>	<b>249.7</b>	<b>1,615.6</b>

Note: Discrepancies in totals result from minor valuation adjustments and from rounding.

\*Includes valuation adjustments subsequent to the revaluation of the German mark.

† Denominated in Swiss francs.

January. By midmonth, the liabilities of United States banks to their foreign branches stood at \$7.9 billion, some \$6.1 billion below the year-earlier figure, the three-month Euro-dollar rate had receded to 6 percent, and funds were continuing to move into European centers at a rapid pace. The United States authorities decided, therefore, that further action was necessary to moderate the impact of these flows of funds. On January 15 the Export-Import Bank announced that it would offer \$1 billion of three-month securities at 6 percent to the foreign branches of United States banks, and at the same time the Federal Reserve Board amended Regulation M to permit United States banks to count holdings of these securities toward maintenance of their reserve-free Euro-dollar bases. The issue was oversubscribed and was allotted to the branches on the basis of their outstanding lendings to their head offices. Thus, some \$1 billion that might otherwise have accrued to foreign central banks as a result of bank repayments was immobilized.

The decline in United States and Euro-dollar rates continued into February, however, and there were further reflows from the United States and into European centers where restrictive monetary policies were still being pursued. Consequently, on February 23 the Export-Import Bank announced an additional three-month borrowing of \$500 million at the then-prevailing market rate of 5½ percent. In early March the three-month rate eased to 5 percent.

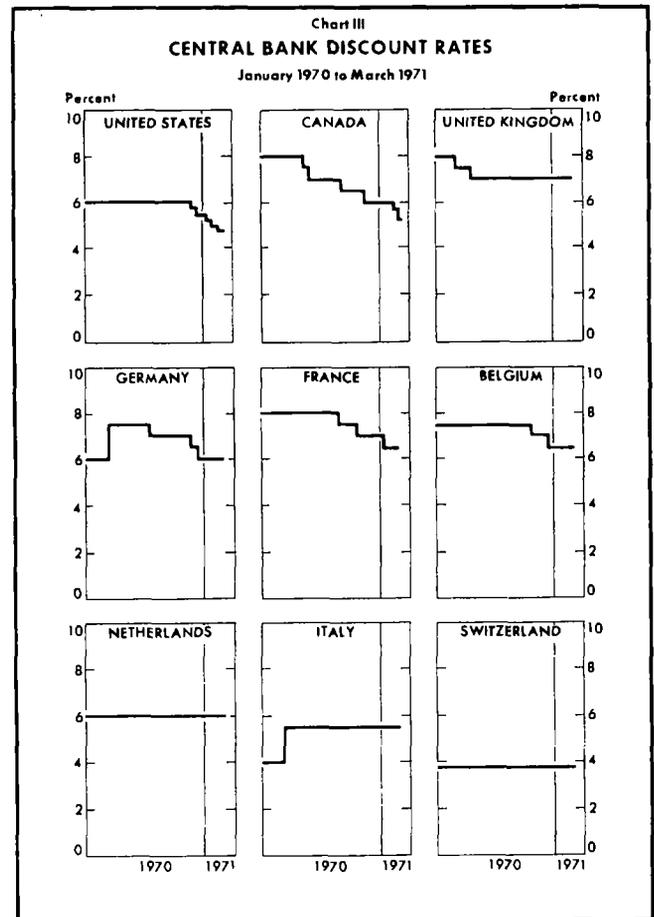
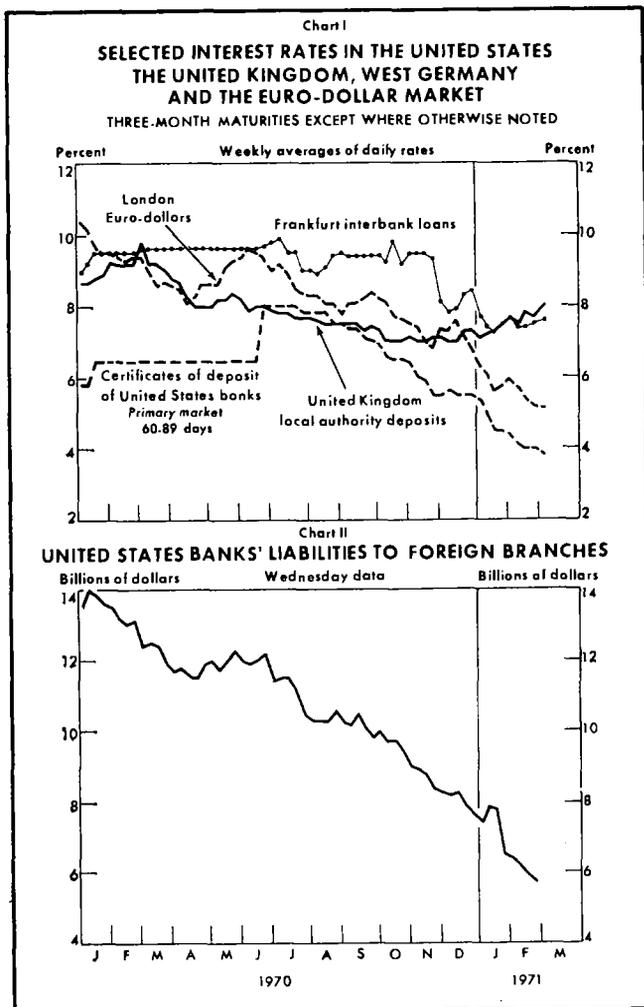
#### STERLING

Sterling was in strong demand in the early months of 1970, partly because of favorable seasonal factors but largely as a result of a major improvement in the British balance of payments on current account. Evidence of the underlying improvement helped to restore market confidence, and there were substantial flows of funds into the United Kingdom. With the spot sterling rate rising, the Bank of England was able to purchase large amounts of dollars and to repay a considerable portion of its international short-term indebtedness. In the spring, however, the market turned easier. By then, seasonal factors were no longer so favorable, while the trade account deteriorated in late spring, and deficits persisted in subsequent months. In addition, with the rise in prices in Britain already accelerating, the market showed concern over the implications of increasingly costly wage settlements. Spot sterling began to decline in May and moved generally downward during the summer months (see Chart IV). By the end of August the rate had fallen close to its lower limit.

Late in August and in the early days of September, when demand for sterling tends to be seasonally slack, market sentiment deteriorated sharply and the Bank of England had to provide considerable support to maintain the spot rate above the floor. This burst of selling reflected not only concern over the continued wage-price spiral in the United Kingdom, but also market fears over the out-

come of the IMF study on exchange rate flexibility to be discussed at the Fund's annual meeting later in the month. The underlying position of the pound was still firm, however, as the balance of payments on current account remained in surplus. Consequently, a shortage of sterling developed in the market soon after the wave of short selling, and beginning on September 8 the squeeze on sterling balances lifted the spot rate well above the floor. Nevertheless, the Bank of England was unable to recoup much of its earlier losses and reactivated its swap line with the Federal Reserve by drawing \$400 million at the month end.

Trading was quieter in early October. Demand then picked up when, on October 14, a small trade surplus was announced for September, contrary to the market's



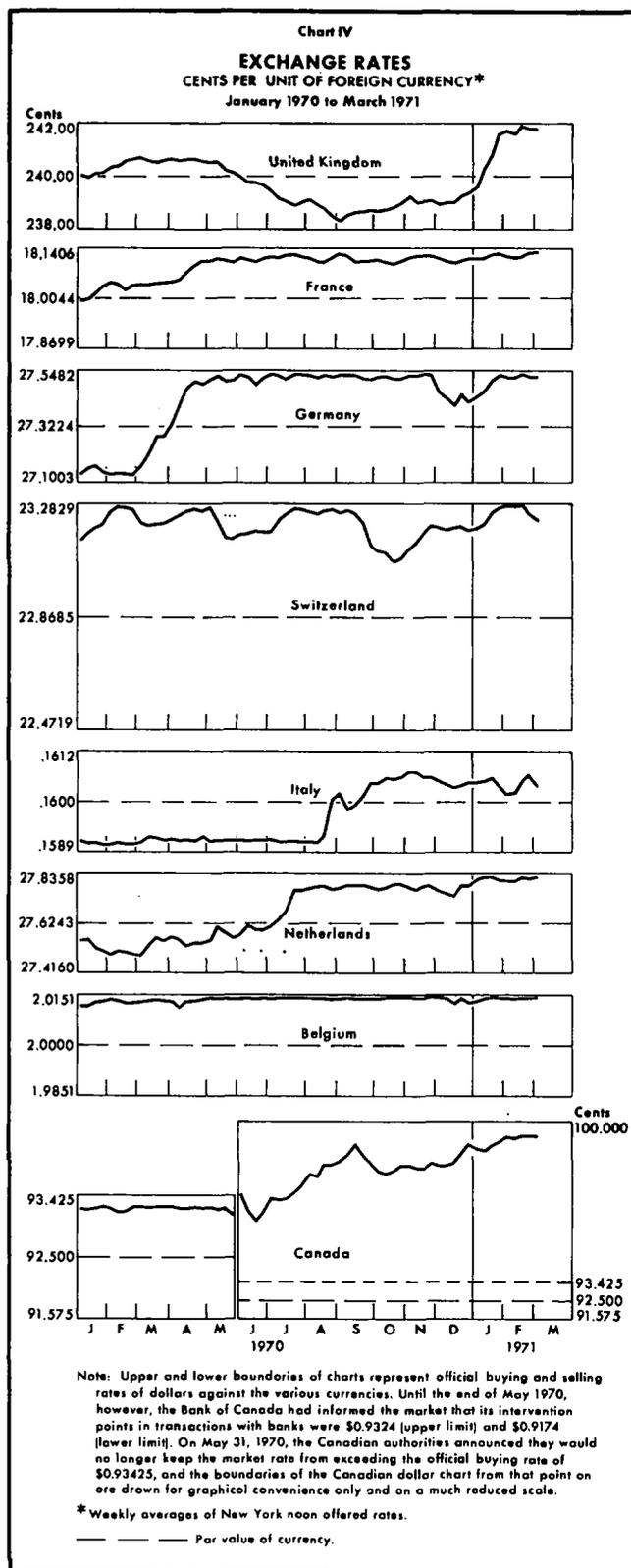
expectation of a large deficit. Moreover, Euro-dollar rates had been dropping while United Kingdom rates had been held firm, with the result that international interest rate comparisons had turned in favor of sterling. Toward the end of the month, the United Kingdom government announced an interim budget which mainly served to shift priorities somewhat among various revenue and expenditure items but was largely neutral in its immediate effects on aggregate demand. These fiscal measures were accompanied, however, by strong statements on the need to curb inflationary wage settlements and an indication that some tightening of monetary policy was forthcoming. Then on October 29 the Bank of England announced a substantial increase, effective November 11, in the amount of special deposits the London clearing and Scottish banks are required to hold with the central bank. Sterling immediately surged to \$2.39, and moved well above that level in early November, when a \$72 million increase in official reserves was announced for October.

Confidence in sterling improved further in November following the release of another set of good trade figures. Moreover, a further significant decline in Euro-dollar rates widened arbitrage differentials in favor of the pound. The Bank of England again gained reserves during November, and by the end of that month had repaid in full the \$400 million drawing under the Federal Reserve swap arrangement made in September. Also in November the Bank of England prepaid the year-end instalment due under the June 1966 Basle credit arrangement; of this payment the Federal Reserve and Treasury share was \$39 million.

Although developments in December were blurred by year-end factors, British reserves showed an increase of \$24 million for the month, after repayments of \$264 million to the United States and Canada on long-term debt outstanding from World War II and the early postwar period. This increase in reserves was well received by the market and, in heavy trading, the sterling rate moved up close to par in the early days of January.

Demand for sterling began to build up even further in January. Seasonal factors normally favor sterling early in the year. Moreover, United Kingdom interest rates were held firm in the face of further sharp declines in the Euro-dollar market, and interest arbitrage incentives widened in favor of sterling. Against this background the authorities became concerned over the danger of excessive inflows of "hot money" and, effective January 12, the exchange control regulations were modified so as to restrain new foreign currency borrowings by British corporations for domestic use. The market took this as a sign of official confidence, and the spot rate moved above par on that day. On January 14 a substantial trade surplus was announced for December, much larger than expected, and in heavy bidding the spot rate rose as high as \$2.41.

Over the rest of January and into February, interest rate relationships played a dominant role in the market. The continuing decline in Euro-dollar rates in the second half of January occurred at a time when a squeeze was developing in the London money market, widening even further the uncovered arbitrage incentives favoring sterling. Moreover, rumors abounded that the Bank of England's discount rate, held at 7 percent since last April, would be lowered, and this led to large-scale purchases of United Kingdom Treasury securities in the gilt-edged market, including the absorption of several tap issues; this flow into new gilt-edged securities tied up funds so that the money-creating effects of the inflow of foreign exchange was neutralized. Although a postal strike started on January 20, it did not seriously disrupt business correspondence, and seasonal tax payments to the United Kingdom Treasury by the British corporations were made



in heavy volume. Sterling rose steadily through January and by the month end was near its ceiling of \$2.42. For the month of January, British reserves rose by \$175 million, after repayment in full of the remaining \$226 million of international credits under the 1966 Basle arrangements (of this payment, \$76 million was equally shared by the United States Treasury and the Federal Reserve); the January reserve gain, however, included the \$299 million allocation of SDR's to the United Kingdom.

Spot sterling continued strong in February, quickly overriding a brief weakening following the announcement on February 4 that Rolls-Royce would go into receivership. The wide interest differentials between Euro-dollars and sterling continued to generate additional flows into sterling, while there evidently were very sizable repatriations of funds by United Kingdom corporations from their overseas subsidiaries. Activity in the market remained at high levels throughout February, and the rate held near the ceiling of \$2.42 through most of the second half of the month. British reserves rose by a further \$192 million in February after Bank of England repurchases from the Federal Reserve and the United States Treasury of some \$99 million equivalent of sterling held on a covered or guaranteed basis. This transaction liquidated the final portion of such Federal Reserve and Treasury sterling holdings.

#### GERMAN MARK

In the spring of 1970, German monetary policy moved forcefully toward restraint in an effort to counteract the inflationary forces unleashed by the excessive pace of economic expansion. With domestic credit conditions tightening sharply, the German mark rate rose rapidly from the floor, where it had held most of the time since the October 1969 revaluation, and in early April the Federal Bank again began absorbing dollars from the market. By mid-May, as the borrowings abroad of German industry reached major proportions, the spot rate rose to its ceiling and the Federal Bank had to absorb a large amount of dollars. The floating of the Canadian dollar on June 1 added a new speculative element to the continuing inflow of short-term funds stemming from interest rate considerations, and the Federal Bank made substantial reserve gains that month. In all, during the second quarter of 1970 the reserves of the German Federal Bank rose by \$1,450 million, with the largest part of the inflow occurring in June.

The heavy movements of funds clearly illustrated the difficulties of fighting inflation with monetary policy alone in an environment of declining interest rates abroad. Early

in July, therefore, the German cabinet moved to tighten fiscal policy, thereby allowing some easing of monetary restraint, and effective July 16 the Federal Bank reduced its discount and "Lombard" rates by  $\frac{1}{2}$  percentage point, to the still very high levels of 7 percent and 9 percent, respectively. German money market rates nevertheless remained firm, ranging above 9 percent, so that with the gradual easing of Euro-dollar quotations a considerable interest-arbitrage incentive in favor of Germany persisted. As a consequence, demand for marks dipped but briefly, and the central bank again made large dollar gains in the latter part of July.

By late July the German money market began to respond to the influx of liquidity from abroad; domestic interest rates eased and the demand for marks lessened, so that in August the central bank's dollar purchases tapered off. The expansion of domestic liquidity by then had become excessive, however, and threatened to thwart the German authorities' anti-inflationary efforts. The Federal Bank Council therefore announced in mid-August that, effective September 1, increases in bank liabilities above the second-quarter average would be subjected to heavy new reserve requirements.

The tighter domestic credit conditions brought about by this measure strengthened the demand for marks, and the Federal Bank again had to absorb dollars from the market, especially at the time of the mid-September tax payments in Germany. For the third quarter as a whole, the Federal Bank's reserve gain amounted to \$2,485 million. This influx of liquidity eased domestic monetary conditions, and the spot rate declined in the latter part of September.

The somewhat softer tone continued through October, although the mark was bid up quite sharply at times. There were recurrent market expectations that the Federal Bank's lending rates would be cut, so as to reduce the widening gap between domestic money market rates and declining Euro-dollar rates, and each time these anticipations were proved wrong there was a brief surge of demand for marks. This was notably the case when on October 21-22 the Federal Bank Council, rather than lowering its rates, took the alternative route of attempting to curb inflows by modifying minimum reserve requirement rules. This was done mainly by placing such requirements against certain interest-arbitrage transactions and the guarantees extended by banks on the rapidly growing borrowings abroad by German firms. Indeed, the volume of foreign credit taken up by German institutions between July and October was not far below the net growth in lending by the German banking system. Fears that these new reserve measures presaged further and more drastic

limitations led to a brief, but strong burst of demand for marks.

With German money market rates commanding increasingly wide premiums over rates in most other major countries and in the Euro-dollar market, rumors of a cut in the Federal Bank's lending rates naturally flourished. The spot mark moved up close to the ceiling at the end of October, and during the first half of November the German authorities again began to take in dollars. Then, on November 17, the Federal Bank Council cut the discount rate from 7 percent to 6½ percent, and the Lombard rate on secured advances from 9 percent to 8 percent. The Council also announced a restructuring of reserve requirements: the additional reserve requirement on increases in domestic liabilities was abolished on December 1, but the funds thus released were fully tied up (for the banking system as a whole) by raising the minimum reserves required against the banks' total liabilities by 15 percent. The special marginal reserve requirement on external liabilities was reduced slightly to 30 percent, and the base for calculating the growth of the external liabilities was updated.

The commercial banks apparently feared that this restructuring of reserve requirements would prove restrictive, especially toward the year-end when liquidity needs are heavy in Germany, and they began to repatriate funds from abroad, while German corporations stepped up their Euro-dollar borrowings. This set off a ground swell of demand for marks, which was further intensified as some traders, who had gone short of marks in the expectation that the news of a bank rate cut would weaken the spot rate, scrambled to cover their positions. As a result, in just over one week, the Federal Bank had to absorb more than \$1 billion from the market.

This large influx of liquidity eased domestic credit conditions and, with the late-November rise in Euro-dollar rates, the interest-arbitrage incentives in favor of Germany narrowed, bringing the Federal Bank's dollar purchases to a temporary halt. The spot rate drifted down to \$0.2751¾ by December 1, when the discount rate cuts in the United States bolstered expectations of similar action in Germany. The Federal Bank Council did, in fact, announce the following day that the discount and Lombard rates would again be reduced, by ½ percentage point to 6 percent and 7½ percent, respectively. Although primarily motivated by balance-of-payments considerations, these relatively small cuts were also consistent with developments in the domestic economy. Demand pressures had begun to relax, while strains on productive capacity and the labor force, albeit still strong, were becoming less acute. Cost pressures, notably wage increases, continued

to be great, however, and the monetary authorities felt that a more general easing of their policy was as yet unwarranted.

On December 3, the day when the cuts in the central bank's lending rates became effective, the spot mark rate broke sharply. The drop reflected the considerable over-estimation by German banks and business firms of their December needs in the context of the restructured reserve requirements; having previously brought in more funds than they could use domestically, they now began exporting some of their excess liquidity. With domestic interest rates easing further, the differentials over Euro-dollar yields narrowed sharply—disappearing or even turning against the mark at the very short end of the maturity range—and this induced the banks to shift some funds on a covered basis to the Euro-dollar market; as a result, the premium on the one-month mark surged by ¾ percentage point that day to 1.21 percent per annum. Finally, some traders who had established long positions in marks began to unwind them. This snowballing effect gained momentum the following morning in Frankfurt, and in very heavy and somewhat erratic trading the rate fell all the way to par (\$0.2732¼). Trading remained very active for about a week and, with considerable uncertainty as to the outlook for interest rates in Germany and in the Euro-dollar market, the spot rate continued to fluctuate widely. By mid-December a much calmer tone had emerged in the market, although the spot rate remained soft. When Euro-dollar yields fell off in the latter part of December, however, German banks withdrew funds from that market and the mark began to firm.

Over the fourth quarter, the reserve gains of the Federal Bank amounted to \$2,309 million; for 1970 as a whole, reserves rose by \$6,481 million (including an allocation of \$202 million of SDR's) to \$13.6 billion. There had been a substantial deterioration on current account during the year, essentially on service items, but this was more than offset by the various forms of capital inflows. The German authorities have estimated, on the basis of both recorded and unrecorded flows, that German banks and business firms borrowed some \$6.6 billion abroad during the year.

German money market rates came down further in January, but an even sharper decline in Euro-dollar rates further increased the incentive to borrow abroad. The spot rate for the mark rose steadily during the month, while the forward rate moved to a discount. By late January, the spot rate had risen to its ceiling and the Federal Bank again began to absorb substantial amounts of dollars from the market. Euro-dollar rates continued to ease through February, while German money market rates remained firm,

with the inevitable consequence of additional large flows of funds into the official reserves. Through the end of February, Germany's gold and foreign exchange reserves had risen by a further \$1 billion. In early March the Federal Bank continued to take in dollars. The spot rate generally remained at or near the ceiling, while the forward discount widened from about 1.1 percent per annum on three-month marks to close to 2.0 percent.

#### BELGIAN FRANC

During last summer Belgium's balance of payments on current account was in substantial and growing surplus, as the pace of the domestic expansion had moderated while price inflation was substantially less than in most other industrial countries. The inflation was nevertheless cause for concern to the Belgian authorities, and as interest rates in other centers moved down, particularly in the Euro-dollar market, Belgium's interest rates were kept relatively steady. This resulted in a narrowing of the earlier large uncovered arbitrage differentials against Belgium, thereby lessening the scope for capital outflows that could offset the marked strengthening of the current-account surplus in the third quarter. Throughout the summer, therefore, the Belgian franc rate held close to its upper limit and the National Bank of Belgium purchased substantial amounts of dollars. To provide cover for the bulk of these reserve gains, the Federal Reserve reactivated its swap line in June and had drawn a total of \$95 million equivalent of francs by the end of August. In September, when some nervousness developed prior to the IMF meeting, there was a further flow of funds to Belgium and the Federal Reserve drew an additional \$60 million, bringing its Belgian franc swap drawings to \$155 million.

As Euro-dollar rates resumed their decline in October and Belgian money market rates continued high, interest-arbitrage incentives in favor of Belgian franc placements emerged. This situation persisted even after the National Bank had lowered its discount rate from 7½ percent to 7 percent effective October 22. The spot rate remained at or close to its ceiling, and the National Bank continued to take in dollars on a substantial scale until the end of November. To provide cover for the National Bank's dollar intake over the autumn months, the Federal Reserve drew repeatedly on the swap facility: \$70 million equivalent was drawn in October, \$65 million in November, and \$30 million in early December, thereby bringing Belgian franc commitments to a total of \$320 million.

In early December the firming of Euro-dollar rates led to some softening of the demand for francs. The spot franc rate eased further after the central bank cut its dis-

count rate by another ½ percentage point on December 10. There was no reflux of funds from Belgium, however, and on December 23 the United States Treasury sold \$110 million of SDR's to the National Bank of Belgium in order to enable the Federal Reserve to buy from that bank the francs necessary to liquidate an equivalent amount of swap drawings that had been outstanding since the summer.

The Belgian franc began to strengthen again early in January. With the passing of year-end demands and a further drop in interest rates in the United States, Euro-dollar rates declined rapidly, once again opening an interest-arbitrage incentive in favor of Belgium. Moreover, in January, the Belgian Treasury made two large domestic borrowings which absorbed liquidity from the Brussels money market and attracted funds from abroad. At the same time, Belgium's current account remained strong. By midmonth the spot rate had returned to the ceiling and, with the interest differential widening further, the National Bank absorbed large amounts of dollars, for which the Federal Reserve provided cover by drawing a total of \$145 million equivalent on the swap line. Thus, by January 27, \$355 million equivalent of the \$500 million facility was in use. On January 29 the United States Treasury obtained \$125 million of Belgian francs under a multicurrency drawing on the IMF and sold these francs to the Federal Reserve, thereby enabling the System to reduce its Belgian franc swap commitments to \$230 million. The National Bank continued to absorb large amounts of dollars from the market, however, and the System drew \$155 million in February and an additional \$35 million in early March, bringing swap commitments to the National Bank up to \$420 million equivalent as of March 10, 1971.

#### DUTCH GUILDER

The Dutch guilder began a period of sustained strength last summer, despite continuing strong domestic inflationary pressures and a deteriorating current account. In early summer the financing of a major industrial take-over in the Netherlands through the repatriation of funds from abroad pushed the guilder rate up and brought the Netherlands Bank into the market to slow the rise in the rate. But interest rates were the dominant factor in sustaining the firmness of the guilder during the second half of 1970 and into this year. Monetary policy in the Netherlands remained tight in the face of continued excess demand, while interest rates in the Euro-dollar market declined, thus reducing the incentive for Dutch banks to hold their liquid funds abroad. At the same

time, considerable foreign interest developed in guilder-denominated bond issues being floated in the Dutch and international capital markets.

By mid-July, the guilder had moved up well above par and the Netherlands Bank was purchasing considerable amounts of dollars from the market. The Federal Reserve was soon called upon to reactivate its swap line with the Netherlands Bank. The System drew a total of \$75 million equivalent of guilders in July and an additional \$145 million in August, when the capital inflow intensified. In late August, credit conditions eased in the Netherlands and the guilder market turned quieter. A renewed demand for guilders emerged in the second half of September, primarily as a result of domestic money market developments. To provide cover for the Netherlands Bank's latest acquisition of dollars, the Federal Reserve drew another \$50 million on the swap line. Consequently, by September 28, \$270 million out of the \$300 million facility was in use.

The Netherlands Bank was faced with the prospect of a further large intake of dollars during the fourth quarter. The Dutch current account, to be sure, was progressively moving into deeper deficit as the growth of domestic demand pressed against productive capacity, but this seemed likely to be more than offset by continuing large capital inflows. The strong foreign demand for guilder-denominated bond issues showed no signs of abating and, furthermore, domestic monetary conditions were likely to be kept very taut by large tax payments made in September and October. To avoid increasing its uncovered dollar reserves during this period, while giving some temporary relief to the money market, the Netherlands Bank decided to offer, starting on October 1, to buy dollars spot against sale for delivery in three months' time at rates favorable to the Dutch banks. Consequently, the spot guilder rate softened in the early part of October. Around midmonth, however, the combination of tight money market conditions in the Netherlands and still lower Euro-dollar rates shifted the short-term interest-arbitrage incentives in favor of the guilder, while the large demand from abroad for guilder-denominated bond issues continued. The spot rate rose to the then-current intervention level of the Netherlands Bank, a few points away from the \$0.2783½ ceiling. After purchasing a sizable amount of dollars, the Netherlands Bank decided in early November to let the rate move to the ceiling, and demand soon eased. To absorb the latest dollar gains by the Netherlands Bank, the Federal Reserve drew the remaining \$30 million equivalent available under the swap facility, while the Treasury sold to the Netherlands Bank \$30 million of gold and \$30 million of SDR's. After softening a bit around mid-

November, the guilder fell fairly sharply in early December; trading was not heavy, however, and the spot rate soon firmed.

Toward the end of 1970 the Dutch authorities took several anti-inflationary measures, to become effective at the start of the new year: taxes were temporarily increased, quantitative restrictions for credit expansion were extended through January and February, and ceilings were placed on wage increases in the first half of 1971.

In January, new tap issues by the Dutch Treasury were heavily subscribed while the commercial banks sought guilders to liquidate the swaps entered into with the Netherlands Bank in October. As a result, liquidity conditions remained tight in January, contrary to their usual sharp seasonal easing. With demand for guilders therefore very strong and the spot rate close to the ceiling, the Netherlands Bank undertook a new series of three-month swaps with the commercial banks and also purchased some dollars outright. These market swap transactions were continued through February, with the result that the guilder remained below its ceiling through the month and into March.

By January, a considerable portion of the Federal Reserve's swap drawings on the Netherlands Bank had been outstanding for some six months, and the sustained strength of the guilder had left no opportunity for the System to acquire guilders through the market. In keeping with the principle that use of central bank credit should not be unduly prolonged, United States reserve assets were employed to reduce the swap commitments. On January 22 the Treasury sold to the Netherlands Bank \$100 million of SDR's, and on January 29 the Treasury drew \$125 million of guilders from the IMF and sold \$25 million of gold to the Netherlands Bank. Through these transactions, \$25 million of excess dollars was absorbed directly from the Netherlands Bank and the Federal Reserve was able to purchase sufficient guilders to liquidate a total \$225 million of swaps, thereby reducing System guilder commitments to \$75 million equivalent. Then on March 5 the Federal Reserve sold to the Netherlands Bank from balances \$75 million equivalent of German marks for guilders and paid off the remainder of the swap drawings, thereby restoring the line to a fully stand-by basis.

#### SWISS FRANC

During the second half of 1970, movements in the Swiss franc exchange rate again mainly reflected changing liquidity conditions in Switzerland. In July the Swiss banks were generally short of franc liquidity; at the end of the

month the spot franc rate was bid up to the ceiling, and the National Bank had to absorb \$120 million from the market. Demand for Swiss francs subsequently lessened, and a somewhat easier tone prevailed until mid-September. (As noted in the previous report, in August the Federal Reserve completed the repayment of a \$200 million equivalent swap drawing of last May on the Swiss National Bank.) By September, however, much of the earlier liquidity had been gradually absorbed, and there was the possibility of a considerable tightening at the quarter's end. To help the Swiss banks meet their end-of-September liquidity needs, the central bank rediscounted a substantial amount of domestic paper, entered into \$425 million of swaps (buying dollars spot against sale for delivery in early October), and purchased outright \$180 million from the banks. Following this injection of liquidity in late September, the spot franc rate declined sharply. To provide cover for the Swiss National Bank's outright dollar purchases during the third quarter, the Federal Reserve reactivated its swap facility with that bank, drawing \$300 million equivalent on October 1.

With domestic liquidity conditions now much easier, in early October the Swiss banks once again began to place funds abroad in considerable volume. Their offerings of francs progressively depressed the spot rate, which dipped to a twelve-month low of \$0.2306 at the end of October. Strong credit demand in Switzerland soon began to pick up the slack, and the banks started to bring funds home again in November and early December, bidding up the spot franc rate in the process. Year-end repatriations were expected to be sizable, and the National Bank again offered assistance to the banks through swaps, providing Swiss francs against dollars for up to a month's maturity. The National Bank did a total of \$1,116 million of swaps, a new record. As before when the dollars were taken in on a swap basis, the National Bank simultaneously placed them in the Euro-dollar market to avoid serious disturbance of that market by the year-end flows to Switzerland. The spot franc continued to rise in December but did not reach the ceiling, and the National Bank did not have to take in dollars on an outright basis.

Liquidity conditions in Switzerland in January were heavily influenced by the efforts of the Swiss banks to repay the swaps, as continued strong domestic credit demand had further absorbed their franc availabilities. Moreover, with the continued decline in Euro-dollar rates there was less incentive to make placements abroad. As a result, the Swiss franc rate continued to rise in January and February, and on February 24 it reached the National Bank's intervention level. At that point, the National Bank purchased \$150 million, and the rate dropped away once

again. To provide cover for this latest intake, the Federal Reserve drew an equivalent amount on March 1, bringing its Swiss franc swap commitments to the National Bank to \$450 million. In early March, the United States Treasury sold \$75 million of gold to the Swiss National Bank and issued to it a \$250 million equivalent franc-denominated security. The Federal Reserve in turn purchased \$200 million equivalent of francs directly from the National Bank and acquired from the Treasury the proceeds of the security issue. The System then paid off the entire \$450 million equivalent of swap drawings outstanding.

#### FRENCH FRANC

The French balance of payments moved into substantial surplus in early 1970, and by midyear the French authorities had liquidated the remaining short-term debt to foreign central banks and had begun to relax somewhat their severe domestic restraints. Over the course of subsequent months a somewhat easier policy was adopted, and on August 27 the Bank of France cut its rates on discounts and secured advances, by  $\frac{1}{2}$  percentage point to  $7\frac{1}{2}$  percent and 9 percent, respectively. The spot franc was exceptionally strong in the next few days, largely because of the conversion of export receipts accumulated during the August vacation period, and the rate reached \$0.1814 in early September, only slightly below the ceiling. Subsequently, with Euro-dollar rates firming in September, the spot franc rate backed down. Nevertheless, French reserves posted a modest increase over the month and, on the basis of the reserve gains over the past year, France was required in September to make a \$246 million repayment of debt to the IMF.

The market for francs was relatively quiet in October. Euro-dollar rates were falling sharply, however, once again widening interest-arbitrage spreads in favor of the franc and raising the possibility of additional inflows of liquid funds. Moreover, the French authorities decided that there was scope on the domestic side for a further modest easing of monetary policy. On October 20, the Bank of France's rates on discounts and advances were lowered by a further  $\frac{1}{2}$  percentage point. A few days later, all quantitative restrictions on bank credit expansion were eliminated. The French move on interest rates closed the gap vis-à-vis Euro-dollar rates once again, but only temporarily. Euro-dollar rates continued to head downward, and with French interest rates holding steady the franc was strongly bid once again in November. No further change was made in the central bank's rates on discounts and advances, but the Bank of France did re-

duce its domestic intervention rate to bring domestic money market rates more in line with those in the Euro-dollar market. Then in early December Euro-dollar rates firmed on year-end demand and the franc eased, but as Euro-dollar rates resumed their decline later that month the franc began to strengthen once again. Over the fourth quarter, French reserves rose by \$217 million; for the year as a whole the total reserve increase was \$962 million, excluding a \$165 million SDR allocation.

Strong demand for francs continued into January with the sharp drop in Euro-dollar rates, and was not slowed by a further  $\frac{1}{2}$  percentage point cut in the Bank of France's rates on discounts and advances to  $6\frac{1}{2}$  percent and 8 percent, respectively, on January 8. Indeed, demand for French francs was very heavy in the second half of the month and abated only after the French monetary authorities, by repeatedly reducing their domestic intervention rate on government paper, again narrowed the interest-arbitrage spread over Euro-dollar placements. Once a closer rate relationship had been reestablished, the exchange market moved into better balance through the end of February. Thus, whereas reserves rose by \$224 million in January (excluding a SDR allocation of \$161 million), the increase in February was only \$59 million, to \$5,078 million.

#### ITALIAN LIRA

Beginning in the fall of 1969 the Italian lira had come under recurrent heavy selling pressure, owing to a growing impasse on social and economic issues in that country. The stalemate was reflected in a wave of strikes which severely impeded production and in the dissolution of two cabinets by July 1970. A number of measures were taken in late 1969 and early 1970 to stem the outflow of funds: Italian interest rates were raised into better alignment with those abroad; the export of Italian bank notes was discouraged through tighter procedures regarding the conversion of such notes; the potential for large shifts in commercial leads and lags was curtailed by shortening the periods in which export proceeds had to be repatriated or for which imports could be prepaid; and official entities were encouraged to meet their capital needs by borrowing abroad. By the summer these measures were beginning to show results. At the same time the strike situation improved and Italian production began to show signs of picking up once again. Moreover, early August saw the installation of a new government, headed by former Finance Minister Colombo. As the new government's programs began to be formulated in mid-August, market confidence began to recover from the ex-

tremely pessimistic state it had reached, in which imminent devaluation of the lira was widely expected, and there was some covering of short positions as well as some unwinding of leads and lags. Late in the month the government announced its new fiscal program—including a hike in gasoline prices, higher excise taxes, and several measures designed to shift resources from the private to the public sector and to encourage investment. The spot rate then rose above par, for the first time in a year and a half, and the Italian authorities began to accumulate dollars from the market. The rally faltered temporarily in the first half of September, but the recovery regained momentum by midmonth and, with market sentiment becoming very buoyant, the lira moved well over par again.

Demand for lire strengthened further in October and early November. The unwinding of leads and lags was in full swing. Italian banks, for their part, had to follow the rule imposed by the central bank to balance their foreign positions, so that there was a substantial inflow of funds deriving from the elimination of previous surpluses, while at the same time investment possibilities at home were becoming increasingly attractive. Furthermore, Italian corporations and official entities resumed making substantial longer term borrowings abroad. In mid-November, however, a softer tone developed in the market as the government's efforts to enact tax measures and to resolve other political issues, such as the divorce question, reached a crucial stage in Parliament. The parliamentary deadlock was broken at the end of November and this again improved market atmosphere, but rising Euro-dollar rates depressed the lira a bit further until mid-December. When Euro-dollar rates resumed their decline in late December, however, the demand for the lira picked up again and the rate ended the year on a strong note. From the end of July through December, Italian reserve gains amounted to \$1.1 billion, after a net loss of \$0.9 billion in the earlier months of the year.

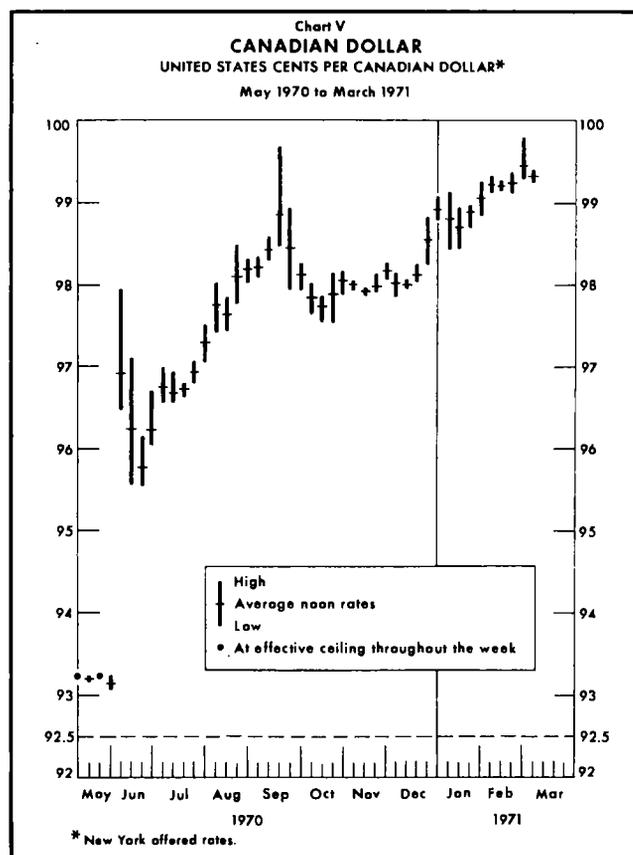
The winter months are a seasonally slack period for the Italian balance of payments, but as 1971 began interest rates in Italy remained relatively high and Italian firms continued to be heavy borrowers in the Euro-dollar market. The resultant strength of the lira enabled the authorities on January 7 to restore the time in which export earnings must be repatriated to 360 days from the date of shipment. Shortly thereafter the Bank of Italy, continuing with the easier policy inaugurated in October through changes in regulations concerning the composition of compulsory reserves, took another small step in the same direction of easing monetary restraint by reducing its rate on secured advances by  $\frac{1}{2}$  percentage point to 5 percent effective January 11. The discount rate was kept

unchanged at 5½ percent, as were the additional penalties of up to 1½ percentage points on borrowings by banks making large and frequent use of central bank credit. Late in January, when there was some slight firming of Euro-dollar rates, the lira rate eased, but in February, with the renewed decline of Euro-dollar rates, demand for lire strengthened once again. The Italian authorities continued to accumulate dollars from the market in January and February and into March.

### CANADIAN DOLLAR

Over the early months of 1970, the Canadian dollar had been in heavy demand, reflecting a strong trade performance, substantial long-term capital inflows, and mounting short-term inflows that eventually included an element of speculation over the possibility of a revaluation. Canadian official foreign exchange reserves had risen strongly—some \$1.2 billion over the first five months—and further large reserve increases seemed likely. Domestically, this situation had threatened not only to create massive excess liquidity in the Canadian economy, but also to become a budgetary problem since the Canadian dollars supplied to the market by the Bank of Canada would eventually have to be financed out of general market borrowings by the Canadian government. Against this background, the Canadian government had announced on May 31 that it would no longer defend the established parity limits for the Canadian dollar, effectively setting the rate free for the time being to seek its own level. As related in the previous report, trading had been very active in the first days of June, quieter later that month and into July, with the rate settling above \$0.96½, but then more active through August as a wave of demand pushed the rate to around \$0.98½ (see Chart V). The advance mainly reflected the continuing strength of the trade balance and an inflow of short-term funds resulting from a sharp squeeze for balances in Canada. Day-to-day rate movements were fairly wide and the Bank of Canada intervened on both sides of the market to avoid even wider swings. On balance, however, the Canadian authorities took in United States dollars as the rate tended to move up.

On August 31 the Bank of Canada announced that, in view of both external and domestic economic developments, it was cutting its discount rate by ½ percentage point to 6½ percent. The spot rate dipped only slightly for a few days, and it soon turned back upward once again. Demand quickly snowballed, as traders who had gone short of Canadian dollars in anticipation of some eventual easing of the rate sought to cover their positions



or, in some instances, to establish long positions; the spot rate surged to \$0.9969 by the morning of September 17. The buying wave then broke, however, and the market turned around. Sensing that the rate might have peaked, many traders hastened to cover themselves against a further drop in the rate, thereby sharpening its fall. By the morning of the next day, the spot rate had tumbled a full cent to \$0.9869. Shortly thereafter, on September 22, Finance Minister Benson said in his speech at the IMF meeting in Copenhagen that the current quite exceptional strength in Canada's payments position did not provide a good basis for the choice of a rate that would be viable for an appreciable period. The spot rate then dropped further, dipping below \$0.98 before leveling off.

From late September to mid-December the Canadian dollar market, although fairly active, was well balanced and, except for occasional flurries, day-to-day rate movements were more moderate; the spot rate held within a fairly broad range around \$0.98. With international and domestic interest rates declining, the Bank of Canada cut

its discount rate by  $\frac{1}{2}$  percent to 6 percent on November 12, but the market took this move in stride. Normally, December is a weak month for the Canadian dollar, with heavy dividend and interest payments to foreigners, and many professional traders had established short positions on the expectation of a fall in the rate. Nevertheless, in mid-December, good commercial demand appeared in the market and figures were released indicating continued strength in Canada's trade balance and in the overall payments position. With heavy bidding leading to an acute squeeze for Canadian dollar balances, the spot rate broke out of its previous pattern and was on an upswing at the year-end. On January 6, the rate hit \$0.9912. Once again, the market turned quite suddenly when the squeeze for balances ended, and the spot rate dropped precipitously, reaching \$0.9844 by the morning of January 8. The rate then firmed until midmonth but held below \$0.99.

With interest rates falling sharply in the United States

through most of January and February, there was a widening of arbitrage incentives for funds to flow into Canada; at the same time, the decline in Euro-dollar rates may have led to some repatriation of previous outflows to that market from Canada. These factors, in addition to continued strong commercial demand for Canadian dollars, helped lift the spot rate above \$0.99 once again on January 26. It held quietly just above that level until mid-February. Despite a  $\frac{1}{4}$  percent cut in the Bank of Canada's discount rate, effective February 15, a new surge of demand developed and pushed the price even higher, to a peak of \$0.9979 on February 22. At that point the Bank of Canada lowered its discount rate by  $\frac{1}{2}$  percentage point to  $5\frac{1}{4}$  percent, and major Canadian commercial banks reduced their prime rates. This easing of interest rates was immediately followed by a drop in the Canadian dollar spot rate to just above \$0.99 $\frac{1}{4}$ , but in early March it moved up once again.