Treasury and Federal Reserve Foreign Exchange Operations*

By CHARLES A. COOMBS

In mid-July 1972 the exchange markets were still suffering under the impact of the massive flows of funds generated by the sterling crisis. As this speculative wave crested, the Federal Reserve for the first time since August 15, 1971 undertook active intervention in the exchange markets. On United States initiative and with the approval of the German Bundesbank, the first exchange operation was launched on July 19 in the form of repeated offerings by the Federal Reserve Bank of New York of German marks in the New York market. Subsequently, intervention was also undertaken in a second European currency, the Belgian franc. These actions, coupled with the demonstrated readiness of other central banks to defend their exchange rates, helped to generate a gradual strengthening of the dollar over the late summer, despite large accumulating deficits in the United States balance of payments on both trade and overall account. Consequently, fears of a breakdown in the Smithsonian arrangement that had plagued the market for so many months began to recede.

In this setting, the sharp rise in United States money market rates that began in late August was a further boost to market confidence. At about the same time, moreover, the market was beginning to react to signs of improvement in the United States trade position, which had deteriorated badly in the first half of the year. Finally, it became clear that the winds of inflation were blowing increasingly strongly throughout Western Europe at a time when United States efforts to curb inflation were demonstrating growing success. Thus, as the International Monetary Fund's annual meeting at the end of September approached, the dollar was showing increasing strength and the exchange markets were more relaxed than they had been for some time.

The IMF meeting was conducted in an atmosphere of cooperation that generated new optimism regarding progress on monetary reform and helped further to calm the exchange markets. In particular, the speech of Treasury Secretary Shultz to the meeting was seen as marking a major step forward, as the Secretary set forth a number of specific proposals for consideration in a statement that was widely regarded as conciliatory and cooperative in tone. The Fund meeting concluded with the appointment of a Committee of Twenty, broadly representative of the Fund membership, to consider monetary reform and the appointment of a Committee of Deputies to carry on the detailed discussions looking toward a preliminary report to be ready for the 1973 annual meeting.

At the beginning of October the Swiss authorities decided to sell off some of the dollars they had acquired earlier in the year, in large part with the objective of absorbing excess domestic liquidity. The market interpreted the sales, however, as putting a floor under the Swiss franc and as indicating that other European central banks also would take advantage of any further improvement in the dollar to reduce their holdings.

In general, European monetary authorities saw the improvement of the dollar as providing them with an opportunity to move more forcefully in the fight against increasingly virulent inflation. Thus, over the course of the fall monetary policy in Europe was tightened progressively, both through changes in reserve requirements and through increases in discount rates. The consequent rise in European interest rates became a disturbing influence

* This report, covering the period September 1972 to March 9, 1973, is the twenty-second 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.

Table I

FEDERAL RESERVE RECIPROCAL CURRENCY ARRANGEMENTS
March 9, 1973
In millions of dollars

Institution	Amount of facility
Austrian National Bank	200
National Bank of Belgium	600
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	1,000
Bank for International Settlements:	
Swiss francs-dollars	600
Other authorized European currencies-dollars	1,000
Total	11,730

on the exchange markets as it threatened to erode the inducement to move funds to the United States. Moreover, in the background loomed the persistent massive trade surplus of Japan. As Japanese official reserves rose steadily day after day, the markets became increasingly persuaded that a further adjustment in the yen exchange rate was unavoidable. Nevertheless, the growing inflow of funds for investment in United States securities markets helped hold the dollar steady with respect to most of the Continental currencies through December. In midmonth, however, there was a sharp setback to confidence with the release of figures showing a deterioration in the United States trade position in November, the first weakening after several months of steady improvement.

January began on a worrisome note, with no significant improvement in the dollar despite the passing of year-end pressures. Later in the month, the exchange market atmosphere deteriorated rapidly, in part because of apprehension over the risk of renewed inflationary pressures in the United States and the sharp drop in United States stock prices. The international financial community, which had been concerned almost exclusively with European inflation, shifted the focus of its attention once again to the problem of controlling the rise in prices in this country. In this context, the markets became concerned that interest rates in the United States might not be permitted to rise sufficiently, even though short-term market rates of interest were rising sharply at the time.

In this atmosphere, the January 20 decision of the Italian authorities to introduce a two-tier market for the lira had psychological repercussions extending far beyond the Italian market. The immediate impact was felt in Switzerland, in part because of the close financial ties between the two countries, but also because the Swiss franc among all the European currencies was the only one close to its Smithsonian ceiling. The battle against inflation in Switzerland had for some months been fought largely with monetary policy and, as liquidity conditions had tightened steadily, the Swiss franc had been bid up close to its ceiling. In these circumstances, efforts by Italian banks to adjust to the new exchange system by purchasing Swiss francs to cover outstanding indebtedness contributed to strong demand for francs, and the National Bank took in some $270 million as the rate moved up to its ceiling. With further heavy dollar inflows expected, the Swiss authorities feared that their anti-inflationary efforts would be undermined if they continued to defend the intervention level. It was decided, therefore, to permit the Swiss franc to float temporarily until the market had a chance to calm down. When the franc immediately jumped well above its Smithsonian ceiling, speculative pressures began to emerge in other markets, particularly in Germany where the mark began to advance rapidly.

In the nervous and uncertain climate that was beginning to develop, the United States and German authorities quickly agreed on a cooperative effort involving intervention in the market by the Federal Reserve to slow the rise in the mark and maintain an orderly market. When data were released on January 24 showing a further increase in the United States trade deficit for December, the mark began to rise more rapidly and the Federal Reserve Bank of New York began offering marks in the New York market. Over the course of the day, some $30 million of marks was sold at progressively higher rates, and by the close the mark had eased from its peak level of the day. Over the next two days, the Federal Reserve made further modest sales and the mark moved slightly lower.

On the following Monday, German trade data were released showing the substantial growth in the trade surplus during 1972, and the mark again began to move up strongly in heavy demand. The Federal Reserve intervened again in an effort to keep the mark off its ceiling, where a progressive buildup of speculation might well occur. The market became increasingly gloomy, however, and the mark reached its ceiling on Thursday, February 1, forcing the Bundesbank to intervene for the first time in this period. The Federal Reserve followed up this intervention with additional sales of marks in New York. At the same time, the Dutch guilder also began to rise sharply, and this Bank entered the market and sold guilders to slow the rise in the rate. Until this point, all intervention in the New York market had been for Federal Reserve account, based on existing mark and guilder balances accumulated during the latter part of 1972. On Friday, February 2, the last of the available mark balances was sold and, in addition, mark sales were made for United States Treasury account out of its existing balance.

Over the course of the following week, intervention continued in an effort to keep the mark from rising unduly high above its ceiling in New York in a deteriorating market climate. Reports, though false, that the United States had suggested a floating of the mark and that Germany was considering a two-tier market, and the assertion by a prominent United States Congressman that the dollar was still generally overvalued, contributed to the growing conviction in the market that the existing pattern of exchange rates would not survive. In this atmosphere the flow of funds into Germany assumed increasingly massive proportions. By the close on Friday, February 9, the Bundesbank's reserve gain for the seven trading days of the month had mounted to nearly $6 billion, while sales of marks in the New York market by the Federal Reserve Bank of New York came to a total of $318.6 million. These sales were covered by $167.4 million of Federal Reserve balances, $46.6 million of Treasury balances, and Federal Reserve drawings of $104.6 million on the swap line with the Bundesbank. In addition, $20.4 million worth of guilders had been sold.

With intensive international negotiations under way, the decision was made over the weekend to close the European and Japanese exchange markets on the following Monday and Tuesday. On the evening of Monday, February 12, Treasury Secretary Shultz announced that the dollar would be devalued by 10 percent and that, in addition to those currencies already floating, it was understood the Japanese yen would be allowed to float temporarily. During the international discussions, it became clear that there was widespread agreement that the exchange rate realignment should be fully adequate to accomplish the common objective of placing international payments firmly on the road to equilibrium. In recognition of this agreement, almost all developed nations then operating on the basis of par values or central values allowed the market relationships between their currencies and the dollar to reflect the full devaluation of the dollar. When the ex-

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, 1972	Drawings (+) or repayments (—)					System swap drawings outstanding on March 9, 1973
		1972				1973	
		I	II	III	IV	January 1-March 9	
National Bank of Belgium	455.0		— 20.0	+ 10.2 — 10.2	+ 35.0 — 55.0	— 25.0	390.0
Bank of England	715.0		— 52.0	—663.0			-0-
German Federal Bank	50.0			— 50.0		+104.6 —104.6	-0-
Swiss National Bank	1,000.0		—300.0		—130.0	— 5.0	565.0
Bank for International Settlements (Swiss francs)	600.0						600.0
Bank for International Settlements (Belgian francs)	35.0				— 35.0		-0-
Total	2,855.0	-0-	—372.0	+ 10.2 —723.2	+ 35.0 —220.0	+104.6 —134.6	1,555.0

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, 1972	Drawings (+) or repayments (—) 1972				Drawings on Federal Reserve System outstanding on December 31, 1972
		I	II	III	IV	
Bank for International Settlements (against German marks)	—0—	+8.0 −8.0	+6.0 −6.0	+1.0 −1.0	+4.0 −4.0	—0—
Total	—0—	+8.0 −8.0	+6.0 −6.0	+1.0 −1.0	+4.0 −4.0	—0—

change markets reopened, the European currencies traded well below their new central rates, but there was no immediate unwinding of the earlier flows of funds.

At the beginning of the following week, however, the dollar reached its ceiling against the mark and the Bundesbank was able to sell nearly $1 billion while the Federal Reserve covered its swap commitments. Nevertheless, it was clear already that the devaluation had come as a profound shock to dollar holders around the world. Thus, while some traders took profits in marks and Swiss francs, there were significant new flows of funds into those currencies. Despite the major adjustment in exchange rates as a result of the dollar devaluation, there continued to be widespread discussion of the possibility of a joint float of the European Community (EC) currencies in the event of any renewed inflow. Moreover, the market situation was exacerbated by the continued floating of the Swiss franc, which by then had appreciated significantly more than other European currencies.

In short, the markets were unconvinced that the crisis was over, and indeed by Friday, February 23, the dollar had fallen to its new floor against the mark, French franc, guilder, and Belgian franc. After the weekend there was a brief respite, but on Thursday, March 1, there was an unprecedented rush into the Continental currencies in which European central banks had to purchase more than $3.6 billion to maintain the exchange rate limits. That night it was announced that the exchange markets would be officially closed until further notice, and arrangements were made for an emergency meeting of the European Finance Ministers over the weekend. Exchange markets in Europe and Japan remained officially closed during the week of March 5-9, with the dollar generally quoted below its new floor rates in light trading.

During the period under review, the United States authorities made further progress in paying down foreign-currency indebtedness incurred prior to August 15, 1971. In view of the calmer conditions that emerged for the dollar late last summer, the Federal Reserve began a program of systematically purchasing in the market on a modest daily basis, first Swiss francs and later Belgian francs, and by early 1973 had made aggregate swap repayments of $135 million equivalent to the Swiss National Bank and $80 million to the National Bank of Belgium (see Table II). A $35 million equivalent Belgian franc swap commitment to the BIS was consolidated at maturity in November with commitments to the National Bank of Belgium. As of March 9, System swap commitments totaled $1,555 million equivalent, or 49 percent less than the $3,045 million peak of August 1971. For its part, the United States Treasury repaid at maturity three German mark-denominated securities with marks either in balance or purchased from the Bundesbank (see Table IV). Other foreign-currency-denominated securities were renewed when they matured. As of March 9, outstanding United States Treasury foreign-currency-denominated securities totaled nearly $1.6 billion equivalent.

GERMAN MARK

In June and July 1972, the German mark had borne the brunt of the massive speculative rushes, first out of sterling and then, after sterling was allowed to float, out of the dollar. In meeting this demand for marks while keeping the rate within official intervention limits—of both the Smithsonian agreement and the EC narrow band arrangement—the Bundesbank had been obliged to take in $4.5 billion of foreign exchange. Pressures remained strong until, in a meeting in London on July 17-18, the EC Finance Ministers made clear their determination to maintain the Smithsonian rate structure. Then, on July 19 the Federal Reserve resumed operations in defense of the dollar by offering marks in the New York market.

The System's total offerings of marks in July and August were fairly substantial but, as the market backed away from these offerings, the actual sales amounted to a modest $21.4 million equivalent. The sales were made out of previously accumulated balances. As the mark continued to decline, the Federal Reserve subsequently began to purchase marks in the market to build up its balances.

By early September, there was a decided improvement in the atmosphere for the dollar. At the same time that the markets tended to calm down, the exchange control measures taken by the German authorities earlier in 1972 began to bite. Consequently, during the course of September, the German mark continued to ease, along with most other continental European currencies. This decline accelerated late in the month, as the markets responded favorably to developments at the annual IMF meeting in Washington. The decline of the spot mark continued into early October and the rate reached $0.3109¼, only ¼ percent above its Smithsonian central rate.

Throughout the period of decline of the mark, traders had been watching for any sign that the Bundesbank might openly enter the market as a seller of dollars, and on October 2, when the Swiss National Bank sold a substantial amount of dollars, the market came to expect that the Bundesbank would soon follow suit. The selling of marks quickly dried up, some traders actually began buying marks in anticipation of somewhat higher rates, and the spot mark advanced to about ½ percent above the central rate before leveling off. By this time, Germany's current account had slipped into deficit—even though the trade account remained in substantial surplus—and German investors were purchasing an increasing volume of United States securities. With the mark still away from its ceiling, the Bundesbank took the opportunity to sell modest amounts of dollars on a day-to-day basis.

Meanwhile, the domestic economy had entered a new phase of expansion, accompanied by unrelieved upward pressure on wages and prices. In addition, as the domestic liquidity generated by previous hot money inflows had been only partly sterilized by higher reserve requirements, the money market remained relatively easy. Thus, the liquidity situation and economic tendencies in Germany suggested the need for policies of domestic restraint. To some extent, the movement of the mark away from its ceiling, together with tightened exchange controls, provided the authorities with room to maneuver, but the German authorities remained sensitive to the implications that a move to credit restraint might have for the exchange markets. The massive speculative inflows of 1971-72 were only slowly being unwound, and an increase in interest rates in Frankfurt could dampen any further reversal of the outflows and perhaps even trigger a new wave of money inflows.

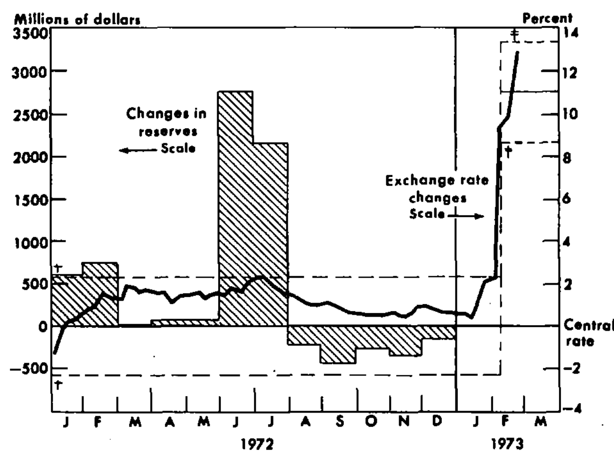
Against this background, the German authorities moved cautiously to tighten domestic liquidity. On three separate occasions, on October 9, November 3, and December 1, the Bundesbank raised its lending rates, hiking the discount rate from 3 percent to 4.5 percent and the Lombard rate from 4 percent to 6.5 percent. Moreover, significant reductions in the discount quotas of the banks were announced. The progressive tightening of monetary policy in Germany came at a time when other EC central banks were moving in the same direction, as had been agreed by the EC Finance Ministers in late October.

The market took this tightening of monetary policy in stride as the dollar continued generally firm in Europe. Despite occasional fluctuations in the rate provoked by

Chart I

GERMANY

MOVEMENTS IN EXCHANGE RATE AND OFFICIAL RESERVES *



* In this and the following currency charts, movements in exchange rates are measured as percentage deviations of weekly averages of New York noon offered rates from the middle or central rates established under the Smithsonian agreement of December 18, 1971. Changes in reserves are computed from the figures published in the International Monetary Fund's *International Financial Statistics*. Changes for January 1972 include that year's allocations of special drawing rights (SDRs).

† Upper and lower intervention limits established in December 1971.

‡ Upper and lower intervention limits around new central rate established on February 13, 1973 following proposed devaluation of United States dollar.

Table IV

UNITED STATES TREASURY SECURITIES
FOREIGN CURRENCY SERIES

In millions of dollars equivalent

Issued to	Amount outstanding on January 1, 1972	Issues (+) or redemptions (—)					Amount outstanding on March 9, 1973
		1972				1973	
		I	II	III	IV	January 1-March 9	
German Federal Bank	612.0	—76.5		—76.5	—153.0	—153.0	153.0
German banks	153.0				—153.0		-0-
Swiss National Bank	1,215.4						1,253.8
Bank for International Settlements*	164.8						171.6
Total	2,145.2	—76.5	-0-	—76.5	—306.0	—153.0	1,578.4

Note: Discrepancies in totals result from valuation adjustments and from rounding.
*Denominated in Swiss francs.

developments outside Germany, the mark traded in a range of ½ to ¾ percent above the Smithsonian central rate. It also remained comfortably within the EC band, trading during most of the fall below the Danish krone, the Belgian franc, and until December the French franc. Taking advantage of relatively attractive rates, the Federal Reserve continued to make small daily purchases of marks in the market to provide balances for intervention in the exchange markets should the need arise.

At the start of the new year, the mark eased further and by Friday, January 19, was trading only ¼ percent above its central rate, the lowest level since October. Over that weekend, however, the Italian authorities introduced a two-tier market for the lira, and on January 23 the Swiss authorities decided to allow the Swiss franc to float. In response to the sharp jump in the Swiss franc, the German mark was quickly bid up by 1¼ percent and other European currencies rose as well.

Over the next few days, in cooperation with the Bundesbank and with the full concurrence of the United States Treasury, the Federal Reserve intervened in the New York market, selling marks in order to prevent the rate from reaching its ceiling and generating more speculative flows. Although the rate backed off temporarily in response to this intervention, the continuing rise in the Swiss franc relative to other European rates tended to pull the mark and other currencies along. Moreover, the market was aware that the mark was now the major European currency which was neither floating nor on a split market basis, and there was widespread discussion of a test of the resolve of the German authorities to hold to the Smithsonian intervention point. Demand for marks continued to swell in a deteriorating market atmosphere. On February 1-2, the rate reached the ceiling and the Bundesbank was obliged to take in more than $1 billion over the two days. By that time, the Federal Reserve also was intervening in New York more forcefully than before in order to keep the mark from going through its ceiling.

That weekend, the German authorities imposed tough, new restrictions against capital inflows. Nevertheless, by the following Monday, the crisis had escalated with news reports that the United States had suggested a floating of the mark. Subsequent reports that Germany was considering a two-tier market and the assertion by a prominent United States Congressman that the dollar was overvalued stirred up even greater speculation in the market. Over the week of February 5-9, the Bundesbank purchased a further $4.9 billion in holding to the Smithsonian ceiling for the mark, while the Federal Reserve continued to intervene in New York on each day after the European close. For the period January 24–February 9, sales of German marks by this Bank amounted to $318.6 million equivalent, of which $167.4 million represented sales from System balances, $46.6 million from United States Treasury balances, and $104.6 million from Federal Reserve drawings under the swap line with the Bundesbank. Over that weekend, there were intensive international negotiations in an effort to resolve the crisis. Official exchange market dealings were suspended in Germany on Monday, February 12, although commercial banks traded marks at considerable premiums over the Smithsonian ceiling. That evening, Treasury Secretary Shultz announced the proposed devaluation of the United States dollar, and on the following day the German authorities announced that there would be no change in the gold value of the German mark. As a result, the central rate for the mark appreciated by the full 11.1 percent commensurate with the dollar's devaluation. At the same time, new intervention limits were set for the mark at 2¼ percent on either side of the central rate.

When regular trading in marks resumed on February 14, there was an enormous overhang of speculative holdings of marks, largely in the form of deposits with German banks. Thus, although the exchange markets remained nervous and unsettled, and other currencies traded well away from the new floors against the dollar, the mark came on offer. It reached its new floor on February 19-21, and the Bundesbank sold nearly $1 billion. At the same time, the Federal Reserve purchased sufficient marks from the Bundesbank to repay the swap drawings entered into prior to the devaluation of the dollar. Subsequently, in the continuing atmosphere of uncertainty in the exchange markets, the mark was bid up sharply, reaching its new ceiling on February 23. Although the rate was off the ceiling in the first part of the following week, the atmosphere continued to deteriorate, and on Thursday, March 1, the Bundesbank took in a record amount of more than $2.6 billion. The German authorities then closed the market, and a new round of discussions began.

During the period under review, the United States Treasury purchased from the Bundesbank sufficient marks to redeem at maturity in October and in February two $153 million equivalent mark-denominated securities held by that bank. In addition, the Treasury utilized balances acquired prior to the mark revaluation of 1969 to pay off at their December maturity $153 million equivalent of mark-denominated securities issued in 1968 to German banks.

SWISS FRANC

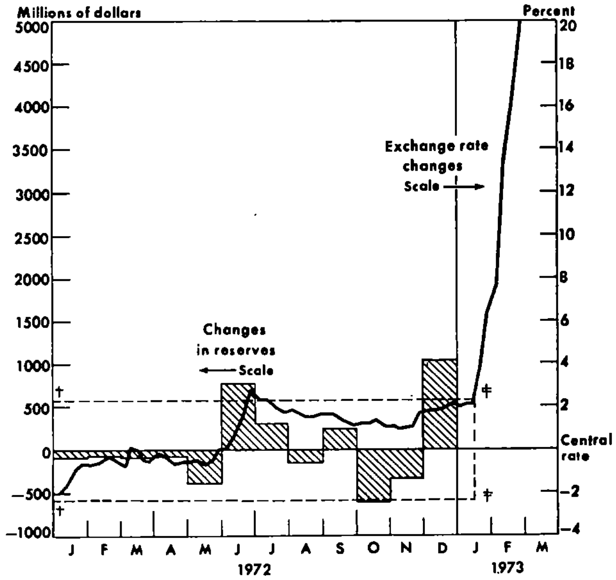
By early July, in the wake of sterling's float, the Swiss authorities had resumed official dealings on the basis of the Smithsonian central rate and limits but had also imposed a battery of new controls to discourage capital inflows. Nevertheless, in the generalized speculative turmoil that had continued through midmonth, the Swiss National Bank had been obliged to take in $1.3 billion at the Smithsonian ceiling. In the subsequent turnaround, the franc had edged away from its ceiling. The decline had been gradual at first but became more pronounced after mid-August, when the general atmosphere in the exchanges improved and traders reportedly were beginning to reduce some of the long positions in francs taken the month before. The Swiss franc liquidity generated by the July inflows also had helped soften the spot rate as there was some switching out of francs, on which interest rates were minimal. The reversal had been far from complete, however, and the franc had held well above its central rate.

The Swiss authorities had mainly relied upon adjustment in reserve requirements to mop up a portion of liquidity created by the July inflows of foreign exchange. These measures were not sufficient, however, to restrict credit expansion that, by September, had already exceeded the limits set forth in a previous gentleman's agreement. Consequently, the authorities feared that, in the absence of strong restraints on lending, the excess liquidity still in the hands of the banks would compound the severe inflationary pressures long troubling the economy. Several additional measures were discussed with the banks in late August and early September. But, as the exchange market was still in tenuous balance, the authorities chose simply to grant greater access to the Swiss capital market to foreigners and to increase the proportion of such borrowings that had to be converted into dollars at the central bank.

By late September the markets were responding favorably to the improved atmosphere of the IMF annual meeting. In the general strengthening of the dollar that developed at that time, the cutting out of long positions in francs accelerated and the franc rate dropped to within 1 percent of its central rate. As the rate continued to fall, the Swiss National Bank on October 2 sold more than $200 million in the exchange market, with the dual objective of mopping up excess bank liquidity and reducing its dollar reserves. This substantial intervention not only had its expected impact on domestic liquidity, but also tended to reinforce market expectations that a further strengthening of the dollar might be resisted by official dollar sales by the Swiss or by other European central banks. Consequently, the spot franc turned upward and remained away from the lowest point at which the National Bank had intervened, a level which traders began to view as an effective floor for the franc for the time being.

The markets were generally quieter in October, and the National Bank suspended the requirement that banks maintain either long or balanced overall foreign exchange

Chart II
SWITZERLAND
MOVEMENTS IN EXCHANGE RATE AND OFFICIAL RESERVES*



*See footnote on Chart I.
†Upper and lower intervention limits established in December 1971.
‡Intervention limits suspended on January 23, 1973.

positions. Nevertheless, by then the various measures taken by the Swiss authorities to absorb liquidity were beginning to bite. To prevent a squeeze from developing at the end of October, the National Bank provided some $145 million in short-dated swaps and released a further $100 million equivalent of francs through temporary adjustments in reserve requirements. With the demand for franc liquidity thus defused, the spot exchange rate moved on an easier trend into early November.

As Switzerland's rate of inflation was running in excess of 7 percent, political pressures were building for effective measures to bring it under control. In the absence of strong fiscal powers in the hands of the Confederation, the focus of the anti-inflationary effort turned increasingly to monetary policy. On November 22, the central bank informed the banks—which were already heavily loaned up and were beginning to position themselves for month-end needs—that it would not provide swaps as it had in October. The prospect of renewed pressure at the month end led to a brief run-up of the spot franc until a recalculation of required reserves led to a sufficient injection of francs by the National Bank to turn the situation around.

In late November, however, the Swiss National Bank indicated firmly that it would provide only part of the banks' year-end needs, with one-month swaps beginning on December 4 and with seven-day swaps later in the month. This move was intended to reinforce the central bank's earlier attempts to reduce bank liquidity at the same time that the government was developing a comprehensive anti-inflationary package to be presented to Parliament the following week. As the market assessed the need for francs for the year-end and awaited the government's package, rumors that the Italian lira would be allowed to float touched off rumors of a possible float or revaluation of the Swiss franc as part of the government's program. The Swiss franc rose to within ½ percent of its ceiling by the time the government formally announced its plans for curbing inflation on December 4. The package was heavily weighted with monetary measures, including proposed statutory authority for the National Bank to impose lending ceilings and new reserve requirements. In addition, it included controls of bond issues, a three-year extension of the export deposit scheme, limits on depreciation allowances, and the establishment of an office of price "surveillance". Since a float or revaluation of the franc had been excluded, the franc rate dropped back briefly. The rate firmed again after midmonth, however, as Swiss banks began bidding actively for francs for year-end purposes. The National Bank ultimately provided them with $1.2 billion in swaps and, although the franc reached its Smithsonian ceiling on December 27, the central bank did not have to take in dollars on an outright basis.

Meanwhile, from the late summer, the Federal Reserve had been making modest day-to-day purchases of francs in the market. These francs were used in partial repayments of outstanding swap drawings with the Swiss National Bank. By the year-end, outstanding drawings in Swiss francs had been reduced by $130 million, and a further $5 million repayment was made in early January. As a result, on March 9, 1973 total indebtedness in Swiss francs stood at $1,165 million, including $600 million with the Bank for International Settlements (BIS), all incurred before August 15, 1971.

Even after the passing of the year-end, the Swiss franc remained firm as the liquidity squeeze at the banks continued unabated. Early in January, before the year-end swaps had been liquidated, the banks began to position themselves once more against the possibility of a squeeze for balances at the month end. Under its new powers the National Bank established a stiff 6 percent limit on credit expansion by the banks for the year ending July 31, 1973. Nevertheless, with heavy loan commitments already on their books, the banks were hoping for a permanent infusion of franc liquidity through outright dollar purchases by the National Bank. Instead, the National Bank announced that it would provide temporary assistance at the end of January and would lift the requirement that a proportion of all loans to foreigners be converted into foreign exchange at the central bank. Despite these measures, the banks' appetite for liquidity was not satisfied, and by midmonth the franc was just ¼ percentage point away from its upper limit.

On Friday, January 19, the National Bank announced increases in its discount rate by ¾ percentage point to 4½ percent and in its Lombard rate by ½ percentage point to 5¼ percent. These increases, the first since 1969, reinforced the Swiss banks' concern over their liquidity positions, especially as the hikes were to come into effect just as the bulk of the remaining year-end swaps was to be unwound on the following Monday, January 22.

Over that weekend, the Italian authorities announced that they were instituting a two-tier market for the lira. This immediately added to tensions in the market for Swiss francs, mainly because it introduced a new element of uncertainty, but also because Italian banks began buying Swiss francs to repay indebtedness. The franc thus quickly moved toward its upper limit. The Swiss National Bank tried to stop the rise by purchasing $200 million, thereby supplying enough francs for the banks to unwind their remaining swap commitments. The pressure continued, however, and with growing evidence of speculative demand developing the central bank announced that the franc counterpart to further intervention would be placed in blocked accounts on its books. The National Bank then purchased another $70 million, while dealers quickly began to trade unblocked balances at rates as high as 1 percent above the Smithsonian ceiling amidst rumors that the franc would be floated. At the opening the next morning, the Swiss National Bank announced:

> Monetary measures abroad caused on Monday, January 22, a heavy demand for Swiss francs which is partly of a speculative nature. In view of the risk of fresh massive inflows of foreign exchange which would entail a corresponding money creation, the Swiss National Bank in agreement with the Federal Council has today decided not to take up intervention purchases in the dollar market. It will stay away from the market until things have quieted down again.

This action effectively allowed the Swiss franc to float in the exchanges. Later in the day, the Swiss authorities followed up by reimposing the requirement that banks maintain balanced or long foreign currency positions.

With a substantial amount of unsatisfied demand for francs already overhanging the market, and with the possibility of a further rise in the rate now attracting other bidders, the spot franc shot upward and continued to climb throughout that week. The rise in the Swiss franc in turn put upward pressure on the currencies of Switzerland's major trading partners, which were still committed to the Smithsonian central rates and intervention points. As time passed and the Swiss authorities took no further action either to bring the franc rate down or to fix a new central rate and limits, the Swiss franc rose to nearly 8 percent above the Smithsonian central rate by February 9, even as the focus of speculative attention shifted to the German mark. With the United States announcement on February 12 of a proposed new special drawing right (SDR) parity for the dollar which would correspond to an 11.1 percent appreciation of foreign currencies against the dollar, the Swiss franc moved up quickly to trade 0.6 percent above such a level. Although the authorities of several of Switzerland's major trading partners quickly set new central rates and limits based on the United States devaluation, the Swiss government decided to wait until the market had settled down before establishing new benchmarks for the franc. The markets did not settle down, however, and with the heavy new flow out of dollars the spot franc was pushed up to about 24¾ percent above the Smithsonian central rate.

STERLING

Following the British government's decision in June to allow sterling to float, the rate had dropped sharply, reaching as low as $2.41¼ before firming up to trade in a wide range around $2.45. Although the British current account had slipped into deficit, the gradual covering of short positions taken in June tended to buoy the rate. A rough balance lasted well into September, but late that month the technical support that had been provided by the unwinding of speculative positions dried up, and sterling became more vulnerable to downward pressures.

By then, the government was engaged in extensive negotiations with the leaders of industrial and labor organizations in a final effort to slow an escalating domestic wage-price spiral through voluntary restraints. At times, negotiations seemed to be showing signs of progress and sterling would be bid up sharply in the market, but at other times there were indications of a possible stalemate and sterling would come on offer. On balance, market pessimism dominated, and by the first week of October sterling had fallen to around the $2.42 level.

In the meantime, the British authorities were also striving to check excessive monetary growth. In the summer and early fall the Treasury bill rate had risen sharply to a level well above the bank rate, which remained at 6 percent. On October 9 the Bank of England announced that in lieu of the bank rate it would adopt a floating minimum lending rate, to be fixed at ½ percentage point above the average discount rate set on the weekly tender for Treasury bills rounded up to the nearest ¼ percentage point. The traditional method of setting the central bank's lending rate remained available to the authorities, but they indicated that reliance would be placed on the minimum lending rate which would follow market rates. That week, the rate was set at 7¼ percent, 1¼ percentage points above the previous bank rate.

Rising interest rates in London, however, were unable to offset the growing pessimism over the inflationary outlook and the escalation of wage demands, as the government's wage-price negotiations with labor and industrial leadership dragged on through mid-October without signs of any success. The market was becoming increasingly skeptical that anything positive would come out of these talks and feared that, if the negotiations should fail and the government should impose statutory controls, disruptive action by militant labor groups could weaken or undercut the controls.

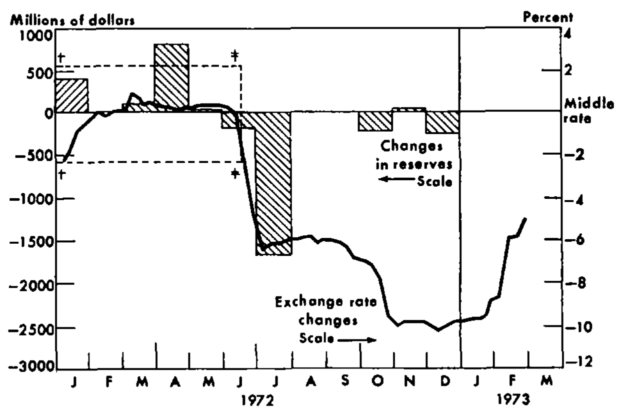
In this atmosphere, new selling pressure developed on October 19, triggered by reports of a possible slowdown by electrical workers and the release of figures showing a marked increase in the rate of wage inflation to 16½ percent for the preceding twelve months. Over the next several days, spot sterling spiraled downward, passing through several expected resistance points—including the $2.40 and $2.38 pre-Smithsonian parity and floor, respectively—while press and market commentary now suggested that a new parity might eventually have to be set as low as $2.25 or even $2.20. The actual low point was hit on Friday, October 27, when the spot rate reached $2.32 in London before recovering to trade a cent or two higher. During the downswing, the Bank of England sold moderate amounts of dollars but did not attempt to hold the rate at any particular level.

Shortly thereafter, the British government's efforts to negotiate voluntary restraint on prices and wages broke down completely when the labor leadership formally rejected the government's proposed price-wage guidelines. This rejection initially led to a new sell-off of sterling. Later on, when it had become apparent that the government would turn to statutory controls and that such controls would not generate widespread labor unrest, sterling recovered to around $2.35. On November 6, Prime Minister Heath introduced legislation calling for a comprehensive standstill of prices, wages, rents, and dividends. The standstill was effective immediately and was to have an initial term of ninety days following the passage into law of legislation, with provision for a sixty-day extension. During the period of the standstill, the government would continue negotiations with unions and the employers to work out a longer term incomes policy..

As the market took stock of the prospects for success of this policy, spot sterling traded over a fairly wide range. At first, it dropped in response to labor's highly critical initial reaction to the government's standstill. Then, sterling was boosted by a further rise in domestic interest rates sparked by the Bank of England's November 9 call for special deposits of 1 percent of total bank liabilities. By midmonth, with labor seemingly more resigned to the inevitability of the standstill, sterling began to show a somewhat firmer undertone for a time and the spot rate rose to $2.35¾. But some dealers remained unconvinced and began to increase their short positions in sterling, taking the rate down below $2.34 before a modest demonstration of support by the Bank of England steadied the rate.

On December 21 the Bank of England again tightened the monetary screws, issuing a call for additional special deposits amounting to a further 2 percent of eligible liabilities. Domestic credit markets responded strongly to this announcement, and the next tender rate was pushed sharply higher. Consequently, the Bank of England's floating minimum lending rate, which had earlier increased in several steps to 8 percent, rose a full percentage point to 9 percent. As these increases spread to bank lending and

Chart III
UNITED KINGDOM
MOVEMENTS IN EXCHANGE RATE AND OFFICIAL RESERVES *



* See footnote on Chart I.
† Upper and lower intervention limits established in December 1971.
‡ Intervention limits suspended June 23, 1972.

deposit rates more generally, sterling was bid up again over $2.35 and held firm around that level through the year-end and into January.

On January 17, Prime Minister Heath announced the government's plans for a longer term anti-inflation policy. The current price standstill would be extended through April, and the freeze on wages and dividends would be extended through March. In the meantime, Parliament would be asked to pass legislation for Phase II statutory controls. The legislation provided for a price commission and a pay board to enforce a series of interim limits on price and pay increases. Also in the package were limits on dividends, business profit margins, and rents. Although provisions were made for possible modifications of these limits next fall, the legislation was drafted in terms of a three-year period. The program was well received in the market, and sterling edged up to $2.35¼ by January 19.

Following the introduction of a dual exchange market in Italy and the floating of the Swiss franc, sterling was caught up in the growing turmoil in the exchanges. Traders had to weigh several conflicting considerations. Sterling had effectively depreciated by some 10 percent against other currencies, and this was expected to improve the competitiveness of British exports. On the other hand, there was still no way of knowing how effective the Phase II measures might be in curbing the entrenched inflation. In the meantime, liquidity conditions in London were likely to be extremely tight, partly because of the special deposit calls by the Bank of England and partly because of normal seasonal factors. Moreover, the United Kingdom had become an EC member and the pound now appeared linked more than ever to the other EC currencies, although sterling remained outside the EC currency support arrangements. As one or another of these considerations dominated the market, sterling moved erratically but, when strong demand emerged for continental European currencies and particularly for the German mark, the sterling rate was ratcheted upward, reaching as high as $2.39 by Thursday, February 1. Over the next few days, sterling fluctuated along with Continental currencies as the exchange crisis intensified but by February 9 was trading at $2.38¾.

While the negotiations which led to the devaluation of the dollar were proceeding, the London exchange market was closed on February 12 and the British authorities announced that sterling would continue to float for the time being. When the market was reopened the following day, sterling quotations were higher, and on February 14 the pound reached $2.47¾, some 5 percent below its Smithsonian central rate. As the exchanges remained highly nervous in the wake of the dollar devaluation, sterling moved widely from day to day and even from hour to hour between $2.43 and $2.48. Then, as the turmoil built up to a peak on Thursday, March 1, the rate moved above $2.50. Early in the following week, with the markets officially closed, sterling settled back to trade around $2.46.

ITALIAN LIRA

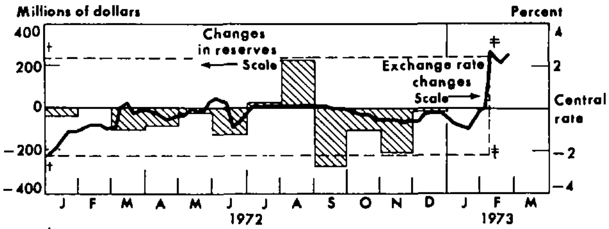
Through most of 1972 the Italian authorities faced the policy dilemma of economic stagnation coupled with strong wage and price inflation. A severe profit squeeze cut into investment, and sporadic strikes tended to keep one sector or another of the economy operating below full capacity. The Italian current account remained in surplus, but the general nervousness over the situation led to a buildup of adverse leads and lags on commercial transactions. Moreover, private capital outflows from Italy remained substantial, in reaction to the political and economic uncertainties, to recurring rumors that the lira would be devalued or floated, and later to widening differentials between domestic and foreign interest rates.

Following the floating of sterling in June, the Italian authorities had been given an exemption from the formal EC procedures for intervention to maintain the 2¼ percent band. This exemption permitted intervention in defense of the lira to be carried out in dollars rather than in other EC currencies in order to avoid using gold in repayments of possible debts in those currencies. Heavy intervention had been necessary in July, but the markets had calmed down by early September and the Italian authorities had more than offset the July reserve losses with borrowings in Euro-dollar markets by Italian entities.

The lira continued at or near the bottom of the EC band throughout the early fall, and as the dollar strengthened against other EC currencies the lira dropped below its Smithsonian central rate. The exemption from intervention in EC currencies was extended for another three months at the end of September, and the Italian authorities were obliged to sell dollars from time to time to keep the lira rate within the 2¼ percent EC band.

Meanwhile, negotiations had begun on new wage contracts for nearly one quarter of Italy's labor force and, with price inflation running about 8 percent per annum, labor threatened to strike if its substantial claims were not met. At the same time, the persistent economic sluggishness and high unemployment rate had not responded to the expansionary monetary and fiscal policies then in force. In these circumstances, the Italian authorities did not join other EC governments in tightening domestic monetary conditions, thereby underscoring the serious problems in the Italian economy.

Chart IV
ITALY
MOVEMENTS IN EXCHANGE RATE AND OFFICIAL RESERVES*



*See footnote on Chart I.
† Upper and lower intervention limits established in December 1971.
‡ Intervention limits suspended on February 13, 1973.

By late November, commentators in the market, the press, and political circles were talking increasingly of an exchange rate adjustment through devaluation, a float, or complete withdrawal from the EC arrangements. As this talk became more widespread, heavy leads and lags built up against the lira and speculative capital outflows accelerated. At the same time, the Danish krone, then at the top of the EC band, strengthened markedly on a covering of short positions in that currency and the lira required a sizable amount of support to remain within the band. The situation came to a head on November 30, when rumors that Italy was planning to withdraw from the EC band or to float generated heavy selling in New York. In short order the rate was pushed sharply lower, and the Bank of Italy had to intervene very heavily to bring it back within the EC band the next day.

This speculative squall passed quickly, however. The Italian authorities, aware that much of the selling of lire had reflected adverse leads and lags, raised the domestic Lombard rate from 3½ percent to 5½ percent in an effort to discourage Italian banks from lending lire for such purposes. In financing the outflows, Italian banks had experienced a sharp increase in foreign currency liabilities to residents, while building up correspondingly large increases in foreign currency claims on nonresidents. Since the authorities had directed the banks not to maintain net foreign asset positions *vis-à-vis* nonresidents, the exchange authorities provided swaps to the banks, taking in dollars and supplying lire at current rates. These measures helped calm the market and allowed the authorities to recover the recent reserve losses. Toward mid-December, the banks found themselves short of lira liquidity because of a bank strike, and the Bank of Italy provided additional lire against dollars swapped on a similar basis.

At the beginning of the new year, Italy's partial exemption from the EC intervention arrangements lapsed. The Italian authorities were once again obliged to support the lira in Community currencies rather than dollars, it having been agreed, however, to postpone gold settlements of possible debts with other EC countries. The lira came on offer and the rate quickly dropped to the point of requiring support against the Danish krone and the Belgian franc, the two currencies at the top of the EC band. By the end of the first week in January, this intervention had tended to pull the band down relative to the dollar and, as the band moved, the lira slid to roughly 1 percent below its Smithsonian central rate. Intervention was substantial at times, and there were growing expectations in the market that the Italian authorities would soon be obliged to take exchange rate action to resolve the situation.

On Saturday, January 20, the Bank of Italy announced a two-part package to contain speculative pressures. First, a two-tier market was established in which all current-account transactions would be channeled through the officially supported commercial market and all capital transactions would pass through a financial market in which the exchange rate would float. Second, the Italian authorities sharply reduced the period for settlement of export and import payments in an effort to stop and even reverse the buildup of leads and lags against the lira.

There was initial confusion in the market, as traders had to sort out the new accounting procedures as well as to evaluate their positions in connection with the split market for a lira payment. The commercial lira moved sharply above its central rate, while the financial lira dropped to a substantial discount. Then, when the Swiss franc was floated and the exchanges generally were dominated by speculative flows, the lira fell off, once again extending the EC snake to its limit. The other EC currencies rose and eventually reached their upper limits against the dollar, with the result that the commercial lira was correspondingly pulled to its Smithsonian central rate. Further intervention in the EC currencies was required to keep the rate from falling below that level, but not on a massive scale.

Following the announcement on February 12 of the proposed devaluation of the United States dollar, the Italian authorities responded by allowing the commercial lira to float rather than moving directly to a new central rate *vis-à-vis* the dollar. They nevertheless maintained the distinction between the commercial and financial markets, both of which were now on a floating rate basis. The commercial lira did not join in the general rise in rates against the dollar until early March, and during the first week in March it was still trading only some 4 percent above its Smithsonian central rate.

FRENCH FRANC

By late summer, economic activity in France was advancing rapidly, spurred in part by a strong rise in exports. At the same time, however, inflation had begun to accelerate and, in view of the large inflows of funds in June and July, the monetary authorities were struggling to maintain control over domestic liquidity. The French money market was nevertheless firmer than those in several other European centers, and that firmness, together with the strong underlying payments position, helped to keep the franc at the top of the EC band and close to its Smithsonian upper limit. Indeed, as the atmosphere for the dollar generally improved in September and early October, the Bank of France moved to tighten monetary conditions further by progressively raising its money market intervention rates and by raising reserve requirements against bank loans above a base level to 15 percent. Consequently, although the franc remained comfortably away from its upper intervention point, it did not get so low as other continental European rates relative to the dollar.

The sudden sharp downturn of sterling after mid-October forced market participants to reassess their views of the relationship between the pound and continental European currencies. The French franc, which was still at the top of the EC band, was particularly vulnerable. Consequently, on October 26, the commercial franc came on offer and dropped sharply, reaching about 1¼ percent above its central rate before leveling off. On October 30, the EC Finance Ministers met and agreed on the need for concerted action to combat inflation in their countries. Subsequently, on November 2, the Bank of France announced a ¾ percentage point increase in its bank rate to 6½ percent, a move which was explained by Finance Minister Giscard d'Estaing as illustrative of the French government's willingness to cooperate with recommendations of the EC ministers. The French authorities subsequently followed up with further measures of restraint, including another increase in reserve requirements against loans by banks, and these actions helped keep the commercial franc firm in quiet trading through mid-November.

By that time, interest rates elsewhere in Europe had risen to the extent that there was no longer much relative advantage in holding French francs, and funds were accordingly switched out of the financial franc and into other European currencies. Moreover, the United States securities markets were attracting investment money from Europe, and French investors were moving large amounts into Wall Street at a time when nonresidents of France were also selling French securities. Consequently, the financial franc, which for sometime had been trading at a substantial premium over the commercial rate, had fallen back sharply to trade occasionally at a small discount *vis-à-vis* that rate.

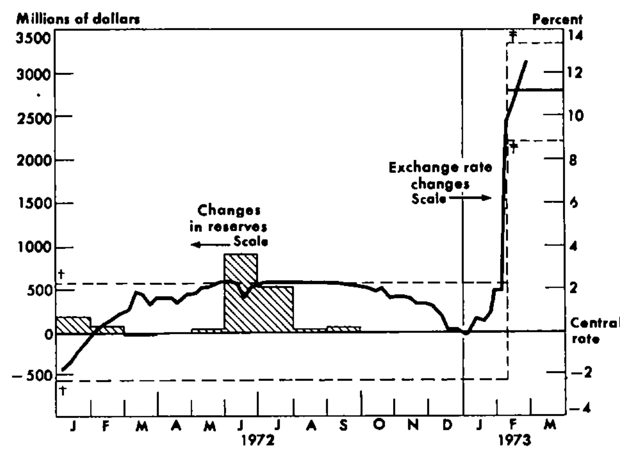
By late November, there was renewed concern over inflationary pressures in France, especially after the release of the consumer price index for October showing a rise of 11 percent on an annual basis, and the authorities took further steps to reverse the trend. On November 30, the Bank of France raised its discount and Lombard rates by a full percentage point to 7½ percent and 9 percent, respectively. Then on December 7 the government announced a new anti-inflationary program, including the imposition of ceilings on the expansion of bank credit and a cut in the value-added tax (with a special public bond issue to offset the revenue shortfall resulting from the tax cut).

These measures bolstered the franc only temporarily, however, as the market had already become nervous over election polls in France indicating the growing potential vote for the parties of the left in the March parliamentary elections. Toward mid-December, such polls set off a sharp spasm of selling, which pushed the commercial franc down by more than a full percentage point against the dollar to below the Smithsonian central rate and temporarily to the bottom of the EC band. Simultaneously, the financial franc also moved down sharply, with a widening discount against the commercial franc. Selling pressure did not last, however, and the markets turned quieter toward the end of

Chart V

FRANCE

MOVEMENTS IN EXCHANGE RATE AND OFFICIAL RESERVES *



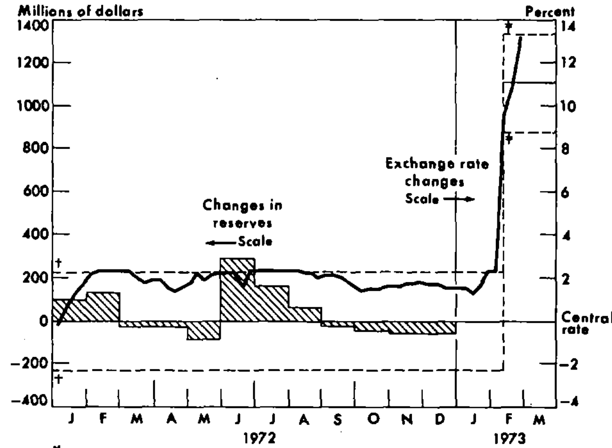
* See footnote on Chart I.
† Upper and lower intervention limits established in December 1971.
† Upper and lower intervention limits around new central rate established on February 14, 1973.

December and in early January, with the commercial franc hovering close to the central rate. The next round of polls was somewhat more favorable to the government, and President Pompidou and Finance Minister Giscard d'Estaing made strong statements arguing the fundamental strength of the franc. The spot franc then recovered somewhat, and by mid-January was holding around ½ percent above its Smithsonian central rate.

In the speculative turmoil following the introduction of a split market for the Italian lira and the subsequent floating of the Swiss franc, the French franc was bid up sharply to trade once again at or near its Smithsonian upper limit. The financial franc also rose and moved to a premium over the commercial rate once again. There was no significant flow of funds into France, however, and during the next three weeks the intervention of the Bank of France at the Smithsonian limit was very small. In part, continuing uncertainties over the election outcome tended to give pause to the market. In addition, much of the speculation was over the possibility of the introduction of a two-tier market in Germany, and the French two-tier system already in force tended to divert speculative pressures away from the franc.

Following Secretary Shultz's announcement of the devaluation of the United States dollar, the French authorities quickly reaffirmed the franc's gold parity and established a new central rate of $0.2172 for the French franc, allowing the full 11.1 percent appreciation in terms of the dollar. The franc immediately moved up to trade well within its new band and, although the market was still somewhat nervous over the upcoming elections, the spot rate was bid up to its ceiling on February 23. The Bank of France intervened on a small scale that day, and the rate eased. Then, on March 1 and 2, before the market was closed, the Bank of France had to take in nearly $500 million.

Chart VI
BELGIUM
MOVEMENTS IN EXCHANGE RATE AND OFFICIAL RESERVES*



*See footnote on Chart I.
†Upper and lower intervention limits established in December 1971.
‡Upper and lower intervention limits around new central rate established on February 14, 1973.

BELGIAN FRANC

The Belgian franc emerged from the turmoil of last July relatively strong and traded near its Smithsonian upper limit through early August, even though the dollar was improving against most other major European currencies. In part, the commercial franc was bolstered by a steadily increasing current-account surplus, reflecting significant export growth at a time when Belgium's imports were still cyclically low. At the same time, a special deposit of reserves at the central bank absorbed the excess liquidity created by earlier official purchases of dollars and sterling.

With the franc rate holding at the ceiling while exchange rates elsewhere in Europe were easing, on August 10 the Federal Reserve initiated a probing action in the New York exchange market to see whether some shift of expectations could be generated that would pry the Belgian franc loose from its ceiling. Over the course of several days, the Federal Reserve placed offers of Belgian francs in the New York market at the current rate and, as the market backed away, moved these offers down. On this basis, $10.2 million equivalent was sold and, as had been agreed at the outset of the operation, the Federal Reserve covered these sales by drawing on its swap line with the National Bank of Belgium. As the dollar improved generally over the next weeks, the franc continued to ease on its own and the Federal Reserve was able to purchase sufficient amounts of francs in the market to repay the swap drawings by early September. The financial franc, which had been trading at a premium of ½ percent above the commercial rate in mid-August, dropped almost to parity with the official rate by early September.

Over the next two months the Belgian franc, while holding at or near the top of the EC band, moved roughly in sympathy with the other continental European currencies. Thus, the commercial franc declined sharply in late September and the early days of October, before firming to about ¾ percent from its ceiling through the end of October. Meanwhile, the financial franc had fallen quite sharply, to trade at a discount *vis-à-vis* the commercial rate, in response to sizable Belgian purchases of United States securities and corporate outflows.

Throughout last fall, economic activity in Belgium expanded, led in part by the rise in exports, but—as elsewhere in Europe—the rate of inflation also was rising sharply. Consequently, the Belgian authorities were quite prepared to join with other EC central banks in anti-inflationary measures. The National Bank hiked its lending rates by ½ percentage point on November 23 and by another ½ percentage point on December 21, bringing the basic discount rate to 5 percent. The National Bank also negotiated new provisions for special deposits, this time to include financial institutions other than commercial banks. The announcement of these measures, which would ultimately absorb domestic liquidity, contributed to keeping the franc firm in the exchange markets, with the commercial rate trading in a range of ½ to ¾ percent from its Smithsonian ceiling until late in December, when it eased slightly.

Meanwhile, beginning in early October, the Federal Reserve had begun a program of modest daily purchases of Belgian francs in the market to repay drawings outstanding on the swap line since prior to August 15, 1971. Using the francs thus acquired, the System repaid $55 million of Belgian franc swap indebtedness through the end of 1972 and $25 million more in early 1973. These repayments reduced total commitments to the National Bank to $390 million equivalent, including $35 million originally drawn on the BIS but consolidated in November into System swap commitments to the National Bank of Belgium.

At the start of 1973 the Italian authorities resumed full participation in the EC currency support arrangements—the "snake in the tunnel"—thereby undertaking to support the lira in EC currencies rather than exclusively in dollars. As the EC band became extended to its full 2¼ percent width, with the Belgian franc (and the Danish krone) at the top and the lira at the bottom, the arrangements obliged the National Bank of Belgium and the Bank of Italy to intervene in each other's currency (providing francs against lire). This infusion of francs into the market tended to drag the franc rate down against the dollar to a low of 1¼ percent above its Smithsonian central rate at one point in mid-January.

The Belgian franc snapped upward temporarily after the introduction by the Italian authorities of a dual market system for the lira on January 22. Then, in the more generalized unsettlement following the floating of the Swiss franc, the rate for the Belgian franc continued to rise, in concert with other European currencies. Late in January the Belgian franc reached its upper limit, and the Belgian authorities took in some $250 million through February 9.

Following Treasury Secretary Shultz's announcement of the proposed devaluation of the dollar, the Belgian authorities set a new central rate of $.024793 for the franc which allowed fully for that devaluation. New intervention points were also established at 2¼ percent on either side of the new central rate. In the subsequent period of disorderly trading the commercial franc was also bid up to its upper limit, with substantial intervention by the Belgian authorities on March 1. Thereafter, the exchange market was officially closed and the franc traded slightly over its new ceiling.

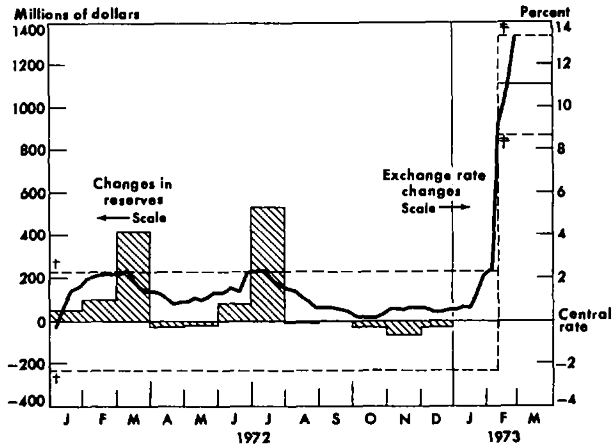
DUTCH GUILDER

Following the large foreign exchange inflows of the early summer, the money and credit markets in the Netherlands were awash with liquidity. Consequently, there was an outflow of funds from the Netherlands, which led to an easing of the guilder despite improvement in the underlying balance-of-payments situation. By the end of August the guilder had fallen to within ½ percent of its Smithsonian central rate. Since the Belgian franc had remained close to its ceiling, the spread between the two currencies reached 1½ percent and, under the terms of the Benelux agreement linking the two currencies, the Netherlands Bank was obliged to sell Belgian francs against guilders to prevent the spread from widening still further.

Early in September, the Netherlands Bank moved to reassert greater control over domestic credit conditions in view of the persistence of a high rate of inflation, since inflation remained a major problem even though economic activity continued sluggish. Under a gentleman's agreement with the commercial banks and postal authorities, minimum reserve requirements against deposit liabilities were introduced for the first time since 1963. The bank made it clear, however, that it intended to allow the market to remain sufficiently liquid to avoid triggering new inflows of foreign funds. It underscored this intention by cutting its discount rate from 4 percent to 3 percent and, similarly, by lowering other lending rates 1 percentage point to bring them more into line with the very low rates prevailing in the Amsterdam market.

Domestic liquidity remained plentiful for the time being, however, and the guilder declined even further. The Belgian franc also eased somewhat during this period, but the Benelux band was still stretched to its limit and the Netherlands Bank continued to have to intervene in francs. The Dutch authorities then moved to speed up their absorption of domestic liquidity by undertaking open market sales of securities on September 12. In response, the Dutch money market tightened, the guilder steadied, and with the Belgian franc weakening the spread between the

Chart VII
NETHERLANDS
MOVEMENTS IN EXCHANGE RATE AND OFFICIAL RESERVES*



*See footnote on Chart I.
†Upper and lower intervention limits established in December 1971.
‡Upper and lower intervention limits around new central rate established on February 14, 1973.

two currencies narrowed. During subsequent weeks the Netherlands Bank was able to purchase francs to settle with the National Bank of Belgium part of the debt arising out of the earlier intervention; nevertheless, a portion of the obligation was settled in reserve assets.

Late in October, the EC Finance Ministers agreed on a combined effort to bring inflation under control in their respective countries. On November 3 the Netherlands Bank raised its discount rate by 1 percentage point, back to 4 percent. At the same time the Dutch government continued discussions with labor and employer groups to negotiate voluntary limits on wage and price increases. With these negotiations at a critical stage and the recovery of the Dutch economy still tentative, the Netherlands Bank did not follow the next rounds of increases in discount rates on the European continent in December and early January. Even so, the money market in Amsterdam held firm, and the guilder remained steady *vis-à-vis* the other EC currencies and the dollar.

After January 22, the guilder was caught up in the generalized rush into European currencies that followed the introduction of a split market for the Italian lira and the floating of the Swiss franc. As the movement out of dollars gathered steam, it tended to focus on those currencies that were neither floating nor trading in split markets. The guilder, with only a very limited version of the two-tier market (the "O" guilder circuit for foreigners' purchases of Dutch securities), and also with close traditional ties to the German mark, came into relatively heavy demand. By the end of January, the guilder was bid up to its Smithsonian ceiling. In the opening days of February, the Federal Reserve, utilizing $20.4 million equivalent of balances accumulated in the market last fall, began to sell guilders in the New York market to provide some resistance to this advance and maintain an orderly market. Nevertheless, as the mark came under unusually heavy pressure, the Netherlands Bank was forced to take in sizable amounts of dollars. By Friday, February 9, its intervention had swelled to just under $400 million.

After Secretary Shultz announced the proposed change in the United States parity on February 12, the Netherlands authorities set a new central rate which fully reflected an 11.1 percent appreciation of the guilder relative to the dollar. There were no reflows, however, and the guilder quickly moved up to trade near its new central rate. As the market situation deteriorated over the next weeks, the guilder continued to rise and, by February 28, the Netherlands Bank was obliged once again to absorb dollars. After taking in more than $750 million by the close on March 1, the Dutch authorities joined other European governments in suspending official dealings as intensive international negotiations began.

JAPANESE YEN

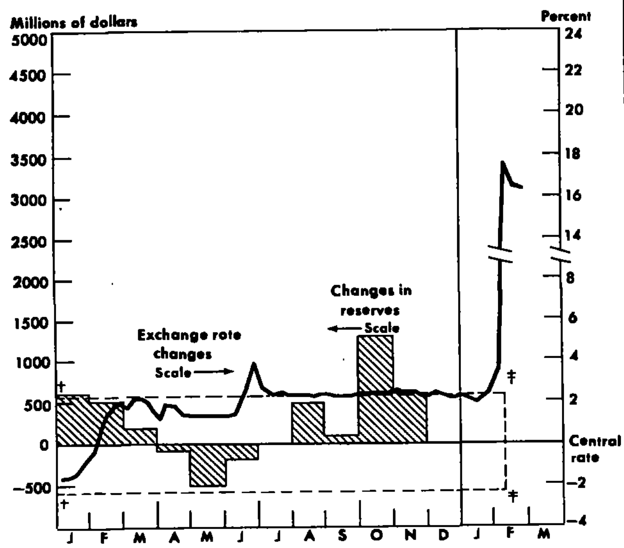
Japan remained in massive payments surplus throughout 1972, as the trade surplus grew further. To be sure, some of this widening reflected the immediate terms-of-trade effects of the 1971 revaluation and, for the early part of the year at least, the sluggishness of the Japanese economy. Nevertheless, there was a general conviction in the exchange markets that the yen was still undervalued. Consequently, the yen continued in strong demand throughout the late summer and early fall, partly because of the underlying payments surplus, but also because of commercial leads and lags and outright speculation in favor of the yen.

While rejecting further direct action on the exchange rate, the Japanese authorities took several measures during the fall to bring Japan's external position into better balance. In September, the Bank of Japan abolished the remaining vestiges of long-standing export promotion measures, whereby the authorities made low-interest loans against export trade bills and discounted yen-denominated export usances. Then, on October 20 the Japanese government announced a five-point program, including across-the-board reduction in import duties, increases in some import quotas, a voluntary export restraint plan, and a supplemental budget designed to shift resources out of export production and into public goods and services. On the same date, it decided to impose statutory controls on foreign portfolio investments in Japan. Nevertheless, the yen remained pinned to its upper limit, and the Bank of Japan continued to purchase sizable amounts of dollars almost daily. To slow the growth of official reserves, the Ministry of Finance continued its program of depositing dollars with the Japanese exchange banks so as to enable them to repay short-term dollar liabilities to United States banks. Taken together, in September and October a further $600 million was so deposited, while official reserves increased by a net of $1,424 million.

The massive inflows continued through November and into December, although the Bank of Japan's daily dollar purchases tended to slacken somewhat. In part, this slowdown reflected the Finance Ministry's efforts to prevent abnormal prepayments for Japanese ships and to promote outflows of Japanese funds for investment abroad. Moreover, speculation on an early revaluation of the yen died down when parliamentary elections were scheduled in Japan for early December and traders began to believe that action on the exchange rate was not likely until after those elections. Furthermore, the Japanese economy was expanding rapidly by then and there was an unusually sharp jump in wholesale prices. The trade accounts, while still in substantial surplus, were beginning to show some influence both of the revaluation itself and of the pickup in the Japanese economy. The yen nevertheless remained at its ceiling until late in December, when the Japanese banks found themselves short of dollars for year-end needs. The spot rate then eased below its ceiling for the first time since June, and the Bank of Japan was able to sell modest amounts of dollars. In November-December, official reserves showed a further rise of $569 million after the placement of an additional $800 million of special deposits by the Ministry of Finance with the exchange banks.

Early in 1973, the yen held marginally away from its ceiling, reflecting seasonal slack in conversions of Japanese export receipts and a partial unwinding of leads and lags. The yen continued to trade quietly, even as the turmoil in the European exchange markets flared up after mid-January. It was only after continental European currencies had reached their Smithsonian limits, requiring massive official intervention, that the Japanese yen returned to its ceiling and the Bank of Japan also began to absorb dollars. In the eight trading days through February 9, total intervention by the Bank of Japan amounted to $1.1 billion. With negotiations among governments on the question of the alignment of exchange rates then in progress, the Japanese authorities closed the exchange market on Saturday, February 10, until further notice. In the course of these discussions, the Japanese government decided that the yen would be allowed to float temporarily, although the Bank of Japan was still prepared to intervene to moderate movements in the rate. When full-scale trading resumed on February 14, the yen rose sharply and soon reached 17¾ percentage points above its Smithsonian central rate. The market then quieted and the yen tended to settle back. However, in the renewed crisis atmosphere that developed in the exchanges at the end of February, the yen again rose sharply.

Chart VIII
JAPAN
MOVEMENTS IN EXCHANGE RATE AND OFFICIAL RESERVES*



* See footnote on Chart I.
† Upper and lower intervention limits established in December 1971.
‡ Intervention limits suspended on February 14, 1973.

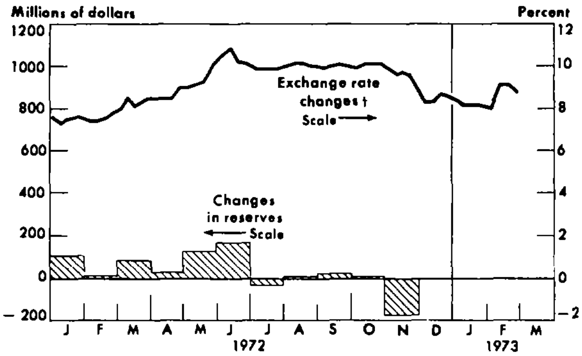
CANADIAN DOLLAR

Through the late summer and early fall the market for the Canadian dollar remained in rough balance, with the rate moving narrowly between $1.01½ and $1.01¾. Canadian money market rates were generally lower than those elsewhere, and the Canadian current-account deficit had deepened, but substantial long-term capital inflows continued to support the exchange rate. The parliamentary election of October 30, in which neither major party in Canada achieved a clear majority, was a jolt to the market. The immediate response was heavy professional selling,

Chart IX

CANADA

MOVEMENTS IN EXCHANGE RATE AND OFFICIAL RESERVES*



*See footnote on Chart I.

†Measured as percentage deviations from the $0.92½ official parity established in May 1962. The Canadian dollar has been floating since June 1, 1970.

and the Bank of Canada acted to steady the market. The pressure soon passed, however, and the rate settled around the $1.01½ level through much of November. The political situation nevertheless continued to be a matter of concern in the market, as traders expected that the new Canadian minority government would pursue more expansionary economic policies in response to the evident concerns of the electorate.

On November 27, the Canadian chartered banks announced a reduction in their CD rates by ⅛ to ¼ percentage point. These reductions, though modest in size, had a substantial impact on the exchange market, as they were unexpected and occurred at a time when interest rates were rising sharply in the United States and Europe. Consequently, on the next trading day, the Canadian dollar came on offer in the market. Meanwhile, traders were still concerned over the political situation in Canada, United States commercial interests were beginning to repatriate funds for year-end purposes, and conversions of Canadian borrowings abroad had tapered off. Thus, when offers appeared in the market, there were few buyers, and the selling snowballed. The Bank of Canada continued its policy of intervening to maintain an orderly market, but the rate dropped 1½ cents, reaching $0.99¾ on December 7 before staging a partial recovery. There were, however, wide fluctuations in the rate through the balance of the year. Over November and December, Canada's official reserves declined by $180 million.

By early January the market had settled down, with trading generally around the $1.00 level. At that point, expectations were for a continuing softness of the Canadian dollar, partly for seasonal reasons and partly because there were still a few large foreign borrowings by Canadian entities in the pipeline. Moreover, Canadian credit markets were liquid, and there were continuing expectations that the government's upcoming budget message would chart an expansionary course. Consequently, the Canadian dollar was largely ignored in the speculative turmoil that erupted in late January in the markets for European currencies and for the Japanese yen, and the spot rate for the Canadian dollar continued to fluctuate narrowly near $1.00 through February 9.

The following Monday, however, with widespread reports that the United States Government was negotiating an exchange rate realignment with the governments in Europe and Japan, the Canadian dollar came into strong demand. After Secretary Shultz's announcement that night of the proposed devaluation of the United States dollar, Canadian Finance Minister Turner issued a statement that the Canadian authorities were prepared to take strong measures to keep the Canadian dollar from rising relative to the United States dollar. When a wave of demand for Canadian dollars developed on the following day, the Bank of Canada intervened heavily, buying United States dollars. The spot rate reached $1.01¼ before turning around following the reopening of European exchange markets. The rate then fell sharply, and the Bank of Canada was just as active in the market as the Canadian dollar moved down as it had been on the way up. The rate bottomed out just below $1.00¾, fluctuating within a relatively narrow range through the rest of February and closing the month at that level.

EURO-DOLLAR

During the closing months of 1972, Euro-dollar rates tended to rise more in line with the gradual advance of money rates in the United States than with the steeper upswing of interest rates in major European financial centers. Throughout the year the supply of Euro-dollars had steadily expanded. The continuing United States payments deficit had further increased the volume of dollars in foreign hands, and some of those funds were deposited in the Euro-dollar market. Moreover, private and official sources in countries outside the Group of Ten that had significant balance-of-payments surpluses added to the Euro-dollar pool. The Japanese banks, their resources bolstered by dollar deposits with them by the Japanese authorities, were notably active in the market, stepping up both their direct loans to customers and their loan participations. Further, there was a record volume of new issues in the

Euro-bond market in 1972, and issuers placed large portions of the proceeds of these bond sales in the Euro-dollar market until needed for actual outlays. Partly offsetting these new supplies of funds were withdrawals from the market by investors wishing to take advantage of the higher interest rates in domestic European money markets or, in view of continuing currency uncertainties, to reduce their dollar exposure.

On the demand side, the sharply tightened credit conditions in European financial centers might have led to even greater borrowings of Euro-dollars during the fall and early winter, except for the various measures taken in almost every European country to prevent inflows from abroad. The impact of controls was most strongly felt in Germany, where the Bardepot—a 50 percent reserve requirement against new foreign borrowings—often inhibited German firms from borrowing Euro-dollars. Constraints on capital inflows were enforced in other Continental countries and, consequently, demand from European corporate customers expanded at only a fraction of the rate of domestic credit expansion. By contrast, the demand from the developing countries and, to a growing extent, from eastern European countries expanded greatly. These borrowers, mostly public or semipublic enterprises, raised funds principally for medium-term maturities.

United States banks continued to be active on both sides of the Euro-dollar market but did not add greatly to the net supplies coming into the market or to demands on the market. Thus, although United States banks' liabilities to their branches showed fairly wide week-to-week fluctuations, outstanding liabilities at the year-end were still around $1.5 billion. The United States banks tended to be most active at the short end of the maturity structure, borrowing overnight Euro-dollars from foreign banks or their foreign branches to meet immediate reserve needs. In addition, for protracted periods the New York agencies of Canadian banks and branches of other foreign banks took advantage of arbitrage opportunities afforded by lower rates on overnight Euro-dollars to make placements in the Federal funds market.

The general balance of demand and supply in the Euro-dollar market that had prevailed during most of the fall months was upset during the massive rush out of dollars and into European currencies that developed in January and early February 1973. As the crisis in the foreign exchange markets gathered strength, traders liquidated earlier placements in the Euro-dollar market or even bid for additional Euro-dollars to finance purchases of other currencies. This subjected the Euro-dollar market to a severe squeeze, and rates rose across the board. Even after the announcement of the proposed devaluation of the dollar on February 12, Euro-dollar rates continued to shoot upward, with the three-month rate reaching as high as 9¼ percent by March 1. Thereafter, the immediate pressures eased somewhat, and early in the following week the three-month rate declined somewhat.

Chart X

INTEREST RATES IN THE UNITED STATES AND THE EURO-DOLLAR MARKET

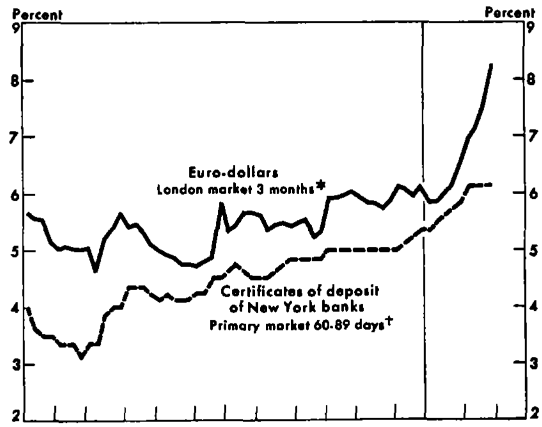
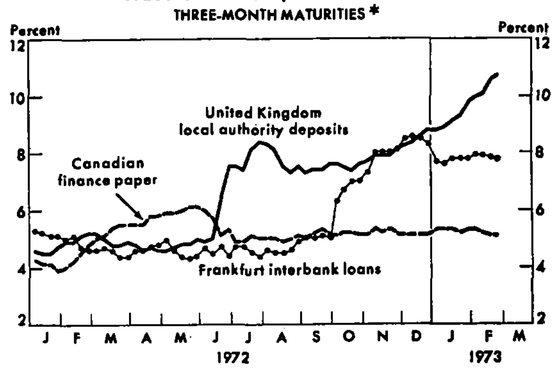


Chart XI

SELECTED INTEREST RATES IN THE UNITED KINGDOM, WEST GERMANY, AND CANADA

THREE-MONTH MATURITIES *



*Weekly averages of daily rates.

† Wednesday data.