August 1978-January 1979 Semiannual Report
(This report was released to the Congress and to the press on March 8, 1979)

Treasury and Federal Reserve Foreign Exchange Operations

On November 1, 1978, President Carter, the United States Treasury, and the Federal Reserve announced a series of actions to correct what had become an excessive decline of the United States dollar in the exchange market. Between early August and end-October, the dollar had fallen sharply against most major foreign currencies, including net depreciations of 18 percent against the German mark, 17 percent against the Swiss franc, and 7 percent against the Japanese yen. The renewed selling pressure on the dollar, as with earlier periods of decline in 1977-78, had largely been in reaction to the persistence of the large United States trade and current account deficits, compared with surpluses in several other industrial countries, and to a quickening of inflation in the United States, as against steady or slowing rates of inflation elsewhere. By late October the selling pressure had gathered such force that dollar exchange rate movements had gone beyond what could be justified by underlying economic conditions and were threatening to undermine United States efforts to curb inflation.

In fact, the United States trade deficit had begun to narrow, as manufacuring exports in particular were expanding sharply, a trend that was expected to continue. Economic growth in the United States was expected to moderate in 1979, while more rapid expansion was already under way in several other major countries. The sharp rise in United States interest rates over the course of 1978, while interest rates elsewhere were steady or rising more slowly, had opened up substantial interest differentials in favor of placements in the United States. But the market atmosphere had become so extremely bearish that few expected the dollar's slide to stop or be reversed on its own.

The November 1 program, developed in close cooperation with governments and central banks of three major foreign countries, was linked closely to the broader anti-inflation policies of the United States Government. It featured a further tightening of monetary policy, including a 1 percentage point increase in the Federal Reserve discount rate to a historic high of 9½ percent. Also, it provided for additional foreign currency resources totaling up to $30 billion equivalent to finance United States participation in coordinated intervention in the exchange markets. For the Federal Reserve, this involved a $7.6 billion increase in the swap network through increases in the swap arrangements with the German Bundesbank, the Bank of Japan,

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This is the first semiannual report on Treasury and Federal Reserve foreign exchange operations to appear since the adoption on September 1 of a new convention for quoting foreign exchange rates in the New York market. To bring market practice here into line with that in most other trading centers around the world, the market switched to express exchange rates in terms of the number of foreign currency units per dollar for currencies other than the pound sterling, which continues to be quoted in terms of the dollar value per unit of currency In keeping with this shift in convention, all currency rates in this report except sterling are expressed in terms of the number of foreign currency units per dollar.

and the Swiss National Bank to a total of $15 billion. For its part, the Treasury announced that it would draw $3 billion in marks and yen from the United States reserve position with the International Monetary Fund (IMF) and sell $2 billion equivalent of special drawing rights (SDRs) to mobilize additional balances of German marks and Japanese yen, as well as Swiss francs. The Treasury also announced that it would issue foreign-currency-denominated securities up to $10 billion equivalent. In addition, the Treasury announced it would substantially increase the amounts of gold to be offered at its monthly auctions.

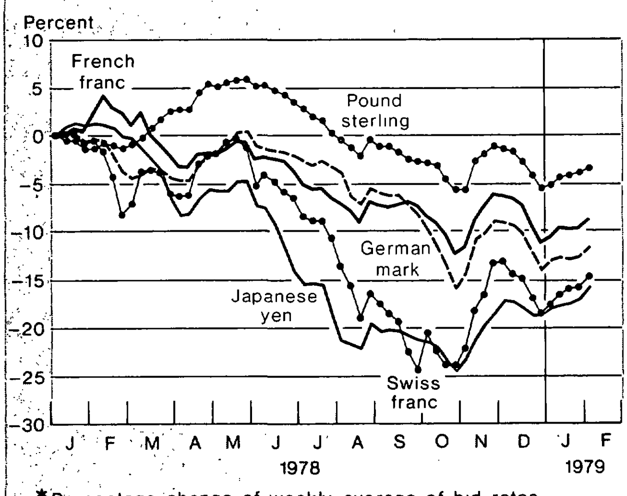
The United States authorities followed up the announcements by intervening massively in the New York market through the Foreign Exchange Trading Desk of the Federal Reserve Bank of New York in German marks, Swiss francs, and Japanese yen. These operations were fully coordinated with intervention by other central banks in their own markets and in some cases in New York. The dollar rebounded sharply, and reactions were similarly favorable in United States financial markets. Thereafter, the exchange market gradually came into better balance with good two-way trading at levels well above the late-October lows, and the authorities were able to scale back their intervention. By late November-early December, the dollar had advanced by nearly 12 percent against the German mark, 15 percent against the Swiss franc, and 13 percent against the Japanese yen.

Despite the improved outlook, however, the dollar's recovery rested on fragile footing for the time being. Many market participants remained pessimistic about the prospects for bringing inflation under control in the United States and continued to question whether the authorities would succeed in their efforts to halt the erosion of the dollar's value in the exchange markets. The dollar therefore remained vulnerable to potentially adverse political and economic shocks around the world. In early December the political upheavals in Iran, coupled with a stoppage of that country's production and export of oil, prompted a burst of dollar selling. The mid-December announcement by the Organization of Petroleum Exporting Countries (OPEC) of a greater than expected rise in oil prices by some 14.5 percent over the course of 1979 triggered additional selling of dollars. The United States authorities, along with the other central banks, again intervened in substantial amounts to blunt these selling pressures on the dollar without holding rates at any particular level. But bearish sentiment deepened, and dollar rates slipped back some 2 to 5½ percent from their early-December highs.

By the end of December, the United States authorities had sold a total of $6,659.4 million of foreign cur-

Chart 1

The Dollar Against Selected Foreign Currencies

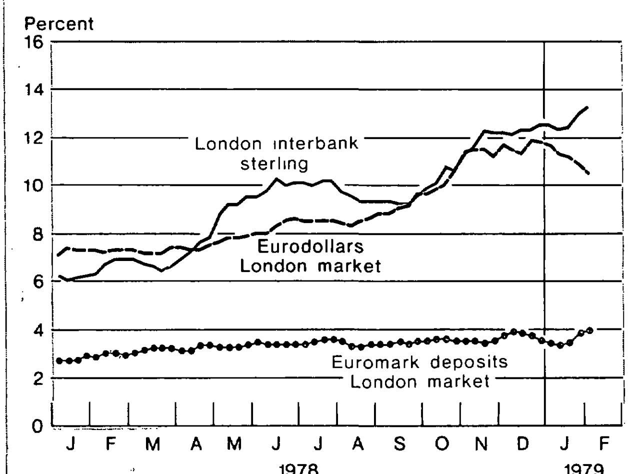


*Percentage change of weekly average of bid rates for dollars from the average rate for the week of January 3-6, 1978. Figures calculated from New York noon quotations.

Chart 2

Selected Interest Rates

Three-month maturities*



*Weekly averages of daily rates.

Table 1

Federal Reserve Reciprocal Currency Arrangements

In millions of dollars

Institution	Amount of facility January 1, 1978	Increases effective during 1978	Amount of facility January 31, 1979
Austrian National Bank	250		250
National Bank of Belgium	1,000		1,000
Bank of Canada	2,000		2,000
National Bank of Denmark	250		250
Bank of England	3,000		3,000
Bank of France	2,000		2,000
German Federal Bank	2,000	4,000*	6,000
Bank of Italy	3,000		3,000
Bank of Japan	2,000	3,000†	5,000
Bank of Mexico	360		360
Netherlands Bank	500		500
Bank of Norway	250		250
Bank of Sweden	300		300
Swiss National Bank	1,400	2,600†	4,000
Bank for International Settlements:			
Swiss francs-dollars	600		600
Other authorized European currencies-dollars	1,250		1,250
Total	20,160	9,600	29,760

* Increased by $2,000 million each on March 13 and November 1, 1978.

† Increased on November 1, 1978.

Table 2

Federal Reserve System Drawings and Repayments under Reciprocal Currency Arrangements

In millions of dollars equivalent; drawings (+) or repayments (−)

Transactions with	System swap commitments January 1, 1978	1978 I	1978 II	1978 III	1978 IV	1979 January	System swap commitments January 31, 1979
German Federal Bank	800.1	+1,008.5	+ 35.2 −800.1	+360.8 −714.9	+4,154.3 − 409.7	+188.7 −428.4	4,168.2*
Bank of Japan	-0-	-0-	-0-	-0-	+ 156.5 − 50.0	−106.5	-0-
Swiss National Bank	-0-	+ 69.0	+ 4.8 − 69.0	+165.7	+ 847.5 − 231.7	+ 33.8 −373.4	446.7
Total	800.1	+1,077.6	+ 40.1 −869.1	+526.5 −714.9	+5,158.2 − 691.4	+222.5 −908.3	4,614.9*

Because of rounding, figures may not add to totals. Data are on a value-date basis with the exception of the last two columns, which include transactions executed in late January for value after the reporting period.

* Outstanding commitments as of January 31, 1979 also include revaluation adjustments resulting from swap renewals, which amounted to $26.3 million for drawings on the German Federal Bank renewed during January.

rencies since November 1. Net of repayments, Federal Reserve commitments under the swap lines with the German Bundesbank, the Swiss National Bank, and the Bank of Japan rose to a peak of $5,456.9 million in early January. United States Treasury drawings under its swap arrangement with the Bundesbank stood at $889.4 million equivalent, and the Treasury had used $1,820.4 million of the $4.4 billion equivalent of currencies obtained through IMF and SDR transactions in November and through the issuance of $1,595.2 million equivalent of mark-denominated securities in the German capital market in December.

Though many market participants expected further downward pressure on the dollar in January, renewed selling failed to materialize and the dollar gradually regained resiliency in the exchanges. In fact, the dollar had been heavily oversold in late 1978. Moreover, on those occasions when the dollar did come on offer, the authorities quickly met the pressures, helping restore a greater sense of two-way risk in the market. As the market thus came into better balance, traders began to respond more positively to the thrust of United States policy. The Carter Administration opened the new Congressional session by calling for austerity in fiscal policy to deal with inflation and the dollar problem. Federal Reserve spokesmen continued to emphasize the need for monetary restraint. The Federal Reserve provided tangible evidence of this determination by keeping domestic interest rates firm even as the growth of monetary aggregates slowed. With the dollar taking on a firmer tone in the exchanges, the German Bundesbank was able to begin to absorb some of the excess mark liquidity created in 1978 and Switzerland and Japan lifted temporary barriers to capital inflows.

In late January the demand for dollars picked up further, as market participants began to view the Iranian situation and possible oil shortages as a potentially serious problem for Western Europe and Japan as well as for the United States. The dollar's surge caught some market participants by surprise, prompting a sudden scramble for dollars toward the month end. The central banks stepped in to avoid an outbreak of disorderly conditions in the upward direction. On these occasions, the United States authorities purchased a total of $188.8 million equivalent of German marks, Swiss francs, and Japanese yen. At end-January, dollar rates stood some 9 to 14 percent above the end-October 1978 lows.

As the dollar improved in early 1979, the United States authorities were able to step up efforts to clear away swap indebtedness, repaying a net $1,118.3 million equivalent of commitments. These repayments were effected by purchases of currencies mainly from correspondents but also in the market. By the end of January, the Federal Reserve had reduced total swap drawings outstanding to $4,615 million equivalent and the United States Treasury had reduced its swap drawings in German marks to $613.0 million equivalent. Also, in January, the Treasury issued in the Swiss market $1,203 million equivalent of medium-term notes denominated in Swiss francs. Foreign currency securities issued during the period were thereby increased to a total of $2,798.2 million valued on the dates of issue. As of January 31, 1979, the value of these liabilities amounted to $2,821.8 million.

In all, during the six-month period from August 1978 to January 1979, the intervention sales of foreign currencies by the United States authorities totaled $9,359.1 million. In German marks, sales over the six-month period amounted to $8,122.9 million, of which $4,939.2 million was for the Federal Reserve and $3,183.7 million was for the Treasury. In Swiss francs, the Federal Reserve sold a total of $1,029 million over the six-month period. Sales of Japanese yen totaled $207.3 million, of which $160.8 million was for the System and $46.5 million was for the Treasury.

In other operations, the Federal Reserve and the United States Treasury continued to repay pre-August 1971 Swiss franc-denominated liabilities still outstanding with the Swiss National Bank. The Federal Reserve bought sufficient francs directly from the Swiss National Bank to liquidate $139.6 million equivalent of special swap debt with the Swiss central bank. The Treasury used Swiss francs purchased directly from the Swiss central bank to repay $319.2 million equivalent of franc-denominated securities. As of January 31, $139.3 million equivalent of System special swap debt and $531.2 million equivalent of the Treasury's obligations still remained outstanding.

German mark

Since the mid-1970's, the German mark had been caught up in recurrent heavy inflows of speculative and investment funds, leading to a sharp appreciation of the rate against the dollar as well as against most other major currencies. The mark's underlying strength reflected Germany's large current account surplus. German industry had successfully weathered the previous substantial appreciations of the mark and had maintained, if not improved, its competitiveness in many markets. Moreover, the German government, mindful of the broad public concern over inflation, had been cautious about providing stimulus to the economy. As growth in Germany lagged behind the expansion under way elsewhere, particularly in the United States, the current account surplus mounted.

In fact, the mark's appreciation had temporarily added to the size of the current account surplus through terms of trade effects. It also allowed Germany to make further progress in curbing inflation, to the extent that prices rose by only 2½ percent in 1978. Even so, the cumulative rise in the mark exceeded relative inflation differentials with many trading partners, including the United States, and was clearly having a depressing effect on the German economy. By 1978, the German government had moved gradually to provide more stimulus to the domestic economy through fiscal measures, but the market remained doubtful that the underlying differences in economic performance were likely to change very quickly.

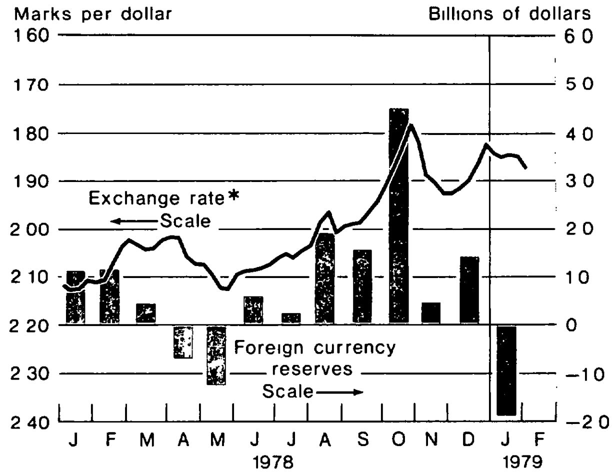
Under these circumstances, trading conditions in the exchange market between the mark and the dollar had occasionally become extremely disorderly. In late 1977-early 1978, German and United States authorities had intervened heavily in the exchanges to settle the market and to reestablish a sense of two-way risk. For the United States, the Federal Reserve and the Treasury had both intervened, mainly using marks drawn under swap arrangements with the Bundesbank. In March, the United States had announced its preparedness to sell SDRs to Germany and to draw marks from the IMF, but such operations were not necessary at the time. The dollar firmed over the next months, and the United States authorities were able to unwind a sizable part of the swap debt. By the end of July, the Federal Reserve's swap debt to the Bundesbank had been reduced to $650.5 million equivalent and the Treasury's to $197.0 million equivalent. Meanwhile, in view of the recurrent strains in the exchange markets, the governments of the European countries decided to work toward linking their currencies together under common intervention arrangements. At a summit meeting in Bremen in July, the European Community (EC) governments made a formal commitment to establish a European Monetary System (EMS) along these lines with the specifics to be negotiated by the year-end.

A sense of deep frustration nevertheless prevailed in the exchange markets about the kind of underlying adjustments that would be necessary to establish stability in the dollar-mark relationship. At the Bremen and Bonn summit meetings in July, the German government had promised to take additional stimulative measures which were subsequently implemented. But, by early August, both the Swiss franc and the Japanese yen had come into strong demand and the unsettlement in those markets triggered renewed demand for marks against dollars. The spot mark, which had been trading at DM 2.0330 at the end of July, was bid up to DM 1.9370 by August 15, a rise of 5 percent. The Bundesbank and the Federal Reserve intervened to temper the rise.

Chart 3

Germany

Movements in exchange rate and official foreign currency reserves



*Exchange rates shown in this and the following charts are weekly averages of noon bid rates for dollars in New York

On August 16, President Carter expressed his deep concern over the decline of the dollar, asking Secretary of the Treasury Blumenthal and Federal Reserve Chairman Miller to seek ways to stem the decline. Over subsequent days and weeks, the United States authorities followed up with a series of measures. The Federal Reserve tightened money market conditions, hiked the discount rate ¾ percentage point in two stages to 8 percent by late September, and eliminated reserve requirements on member banks' Eurodollar borrowings. The Treasury announced it would triple the amount of gold at its monthly auctions. Moreover, the Administration pressed the Congress to seek means of reducing the budget deficit even further and to resolve the remaining issues which held up passage of an energy bill. The market responded favorably to these initiatives, and the mark fell back to trade around DM 1.9850 in early September.

The market's extreme pessimism toward the dollar did not lift completely, however, and trading remained volatile. Consequently, the Bundesbank and the New York Federal Reserve intervened on several occasions in late August. For the month, the Desk's sales of marks for the Federal Reserve and the Treasury amounted to $285.1 million equivalent and $277.9 million equivalent, respectively, financed partly out of balances and partly by additional drawings under the swap lines with the Bundesbank. At the same time, the Desk was able to acquire marks, largely through non-market transactions with correspondents, to repay swap drawings.

During September, a number of potentially favorable developments emerged for the dollar. United States trade figures showed that, following the bulge in the deficit earlier in the year, import demand was beginning to slacken while exports were expanding rapidly. With economic expansion in Germany and other countries now more solidly based, official projections pointed to a further and substantial narrowing of the deficit for 1979. The Senate passed the long-awaited energy bill. And the Camp David accord had generated hopes of an easing of tensions in the Middle East. But these developments were largely ignored by the exchange markets, where traders were expressing concern over the resurgence of inflationary pressures in the United States.

By that time, the negotiations over the EMS were the subject of extensive press and market commentary. Many market participants came to expect that, before the new arrangements could be introduced, scheduled for January 1, a generalized realignment would be necessary to revalue the mark substantially relative to the other currencies. As these expectations spread, heavy demand for marks built up, particularly before weekends. The Bundesbank and the other EC central banks had to intervene in progressively larger amounts to maintain the 2¼ percent margin between participating currencies. From the July Bremen summit to mid-October, some $5 billion equivalent of marks was pumped into the market by participating central banks. Then on October 15 the mark was revalued by 2 percent against the Netherlands guilder and the Belgian franc and by 4 percent against the Norwegian and Danish kroner. This stopped the immediate speculative pressure on the snake but did not generate significant reflows.

Instead the bidding for marks continued. With the focus now shifting back to the dollar, a massive amount of hot money flowed out of dollars and into marks. Corporate treasurers, investment managers, central banks, and other dollar holders around the world sought to diversify their portfolios by buying marks and other currencies. The Federal Reserve's decision on October 13 to raise the discount rate another ½ percentage point to 8½ percent was ignored, as were the generally favorable interest rate differentials for the dollar. As the selling pressure on the dollar moved with the time zones around the clock, intervention by the German and United States authorities increased both in size and scope. On the night of October 24, when President Carter announced his new anti-inflation program calling for voluntary price and wage guidelines, the Federal Reserve, operating through United States banks with branches in Hong Kong and Singapore, intervened in marks in the Far Eastern market to counter speculative pressure on the dollar. The market was well aware of this very forceful approach by the authorities, but demand for marks continued to build, and on October 31 the rate was pushed to an all-time high of DM 1.7050. At this level, the mark had risen almost 20 percent above early-August levels, 23 percent since the beginning of the year and 34 percent since late July 1976.

In all, the Trading Desk sold $1,641.4 million equivalent of German marks during September and October, of which $976.7 million was in the last four trading days in October. Of these totals, $1,033.2 million equivalent was for the Federal Reserve and $608.2 million equivalent was done on behalf of the Treasury. Net of further repayments during those months, swap drawings on the Bundesbank had mounted to $1,256.1 million by the Federal Reserve and $650.4 million by the Treasury. Meanwhile, net purchases of dollars, together with the much larger intervention in EC snake currencies, had swollen Germany's international reserves by $8.4 billion since July to $49.5 billion by the end of October.

On November 1, President Carter announced, as a major step in the United States anti-inflation program, that it was now necessary to correct the excessive decline in the dollar. In this connection, the Federal Reserve's swap line with the Bundesbank was raised to $6 billion, along with increases in the System's swap lines with the Swiss National Bank and the Bank of Japan. The Treasury announced it would draw German marks on its reserve position in the IMF, sell SDRs to Germany for marks, and issue mark-denominated bonds in the German capital market.

The Desk followed up the announcements with a highly visible and forceful intervention operation in the New York market in German marks as well as in Swiss francs and Japanese yen. These operations were fully coordinated with those of other central banks in their own markets. In response, many market professionals moved quickly to dump their long mark positions. As the dollar then rebounded, the spot mark fell sharply to as low as DM 1.9030 on November 6, down 10½ percent from its record high just four trading days earlier. But sporadic bidding for marks by the banks' commercial customers and by central banks shifting funds out of dollars continued for some time. Consequently, as the market sought to establish a new trading range following the November 1 announcements, both the German and United States authorities continued intervening openly and forcefully in their respective markets. These operations gradually brought the market into better balance, and by November 20 the mark declined to as low as DM 1.94. In all, the Desk intervened on twelve trading days during November, selling $2,920.8 million equivalent of marks in the market, of which $1,976.1 million equivalent was done for System account and the remaining $944.7 million equivalent was on behalf of the Exchange Stabilization Fund (ESF). Meanwhile, Germany's foreign currency reserves increased by a further $500 million which, together with the purchase of SDRs from the United States Treasury and the increase in its reserve position with the IMF resulting from the United States drawing, contributed to the $2.8 billion increase in overall reserves for the month.

During December, however, the dollar's recovery lost momentum. With the latest statistics showing the United States economy even more buoyant than expected just a month before—with prices, production, and employment all expanding rapidly—the market worried that the anticipated slowing of inflation and narrowing of our trade deficit was now delayed. Moreover, with economic activity in Germany picking up, reports circulated that the Bundesbank was increasingly concerned over the buildup of mark liquidity in domestic money markets. As a result, dealers watched closely the Bundesbank's weekly reserve figures for any indication that it had acted to offset earlier intervention by selling dollars and grew cautious about the implications of its December 14 announcement of a reduction in commercial bank rediscount quotas and a monetary growth target of 6-9 percent for 1979. In addition, the approach of the starting date for the new EMS was still a source of uncertainty as traders remained doubtful that even the new exchange rate relationships would prevail in the proposed new joint arrangement.

Against this background, the outbreak of a political crisis in Iran and a larger than expected increase in OPEC oil prices helped trigger another burst of demand for the German mark before mid-December. As the mark advanced, many corporations joined in the bidding to cover accounting as well as economic exposures before the rate rose too far. Moreover, some central banks of developing countries proceeded further with their efforts to diversify portfolios by buying marks. This demand for marks came at a time when many of the dealing banks were reluctant to undertake new transactions that would significantly alter their accounts for the year-end. Consequently, the market was even less resilient than normal, and the heavy bidding for marks propelled the rate up to as high as DM 1.8070 on January 2, almost 7½ percent above its November lows.

To moderate this advance, the United States and German authorities again intervened forcefully throughout December. Operating on fourteen trading days the Desk sold $2,796.5 million equivalent of marks including $1,575.8 million equivalent for the System and $1,220.7 million equivalent for the Treasury. These operations brought total United States intervention sales over the last two months of 1978 to $5,717.3 million equivalent of marks. As a result, total drawings outstanding on the Federal Reserve's swap line with the Bundesbank stood at $4,558.0 million equivalent by the year-end. The Treasury's outstanding drawings on its swap line with the German central bank stood at $889.4 million equivalent. But the bulk of its intervention after November 1 had been financed out of ESF balances obtained from the United States drawing on the IMF and out of the proceeds of the Treasury's first issue of mark-denominated securities. This issue, which was floated in the German capital market on December 15, was comprised of $931.1 million equivalent of three-year securities at 5.95 percent per annum and $664.1 million equivalent of four-year notes at 6.2 percent. The $1,595.2 million of proceeds was warehoused by the Treasury with the Federal Reserve.

Meanwhile, the surge in the mark ahead of the year-end had led many market participants to believe that it would advance much further in early January. But, in fact, the commercial demand for marks that had been expected in January had largely been met. The Bundesbank stepped in and intervened in size as soon as trading resumed in the new year. Also rumors circulated that new dollar defense measures would quickly be announced should the mark rise strongly against the dollar. Traders then found they had few outlets for the marks they had accumulated or had just received from the German central bank, and some moved to cover their positions. The mark thus fell back quickly, to around DM 1.85, an unexpected turnaround which had a sobering impact on market psychology. As a result, after some initial nervousness, the market took in stride the January 18 decision of the German authorities to increase minimum reserve requirements and to raise the Lombard rate ½ percentage point to 4 percent. Sentiment toward the dollar was also helped by the stress on the need for fiscal restraint in the President's budget and State of the Union message and by the Federal Reserve's adherence to a restrictive monetary policy. A scramble for oil by many countries seeking to prepare themselves for a protracted disruption of production in Iran prompted additional demand for dollars.

The mark thus came increasingly on offer toward the month end. It fell sharply on the final day of the period under review, prompting the Desk to buy $70 million equivalent of marks in the market to cover outstanding

Table 3

Federal Reserve System Repayments under Special Swap Arrangement with the Swiss National Bank

In millions of dollars equivalent

System swap commitments January 1, 1978	1978 I	1978 II	1978 III	1978 IV	1979 January	System swap commitments January 31, 1979
506 5	−95 6	−95 6	−95 6	−62 3	−18 1	139 3

Data are on a value-date basis

Table 4

Drawings and Repayments by Foreign Central Banks and the Bank for International Settlements under Reciprocal Currency Arrangements

In millions of dollars, drawings (+) or repayments (−)

Bank drawing on Federal Reserve System	Outstanding January 1, 1978	1978 I	1978 II	1978 III	1978 IV	1979 January	Outstanding January 31, 1979
Bank for International Settlements* (against German marks)	-0-	+295 0 −295 0	-0-	+22 0 −22 0	-0-	-0-	-0-

Data are on a value-date basis

* BIS drawings and repayments of dollars against European currencies other than Swiss francs to meet temporary cash requirements

Table 5

United States Treasury Drawings and Repayments under Swap Arrangement with the German Federal Bank

In millions of dollars equivalent, drawings (+) or repayments (−)

Amount of commitments January 1, 1978	1978 I	1978 II	1978 III	1978 IV	1979 January	Amount of commitments January 31, 1979
-0-	+964 8	+ 35 2 −533 6	+360 8 −485 7	+802 5 −254 6	−264 8	613.0*

Because of rounding, figures do not add to totals. Data are on a value-date basis with the exception of the last two columns, which include transactions executed in late January for value after the reporting period

* Outstanding commitments as of January 31, 1979 also include revaluation adjustments resulting from swap renewals, which amounted to $11 6 million for drawings on the German Federal Bank renewed during January

Federal Reserve—Treasury "Warehousing Arrangement"

During the six-month period, the Federal Reserve "warehoused" foreign currencies by taking foreign exchange acquired by the Treasury that was not immediately needed to finance foreign exchange intervention in return for dollars that were needed by the Treasury in its own domestic operations. In carrying out this exchange, the Federal Reserve operated as it did in the past to buy the foreign currency in a spot purchase from the Treasury and simultaneously sell it back to the Treasury at the same exchange rate for a future maturity date—three months or even one year later. A key aspect of this type of transaction is that, since both the Federal Reserve and the Treasury agree to pay and to receive the same amount of foreign currency as specified by the use of the same exchange rate, neither party incurs any foreign exchange rate risk from this transaction.

Between the time of the initial transaction and the maturity date, the Treasury has dollars which are credited initially to its account at the Federal Reserve Bank of New York, while the Federal Reserve has foreign currency assets which it places with its central bank correspondent abroad to earn an investment return. As the dollars flow into the United States banking system, either by transfer to a Treasury tax and loan account at a commercial bank or as the Treasury finances domestic expenditures, member bank reserves increase. However, under the operating procedures the domestic Trading Desk uses to carry out objectives set by the Federal Open Market Committee, it would typically respond by absorbing an equivalent amount of reserves in its day-to-day open market operations to neutralize any unwanted expansionary effect of the use of the Treasury's balance at the Federal Reserve Bank of New York.

A warehousing transaction is reversed when the Federal Reserve repays the foreign currency it has acquired from the Treasury and the Treasury repays dollars. This could occur before the original maturity date, if the Treasury decides that warehoused foreign exchange balances will be used to finance its intervention (in which case the Treasury carries any exchange risk that may be involved) or upon maturity. Whether the Treasury acquires dollars to make the repayment to the Federal Reserve by purchasing them in the foreign exchange market, by borrowing in the domestic market, or from receipts from other sources, member bank reserves will decline. In this case, the domestic Trading Desk would offset any unwanted decline through open market operations. Thus, in practice, there is no net effect on member bank reserves as a result of operations under the warehousing arrangements.

Federal Reserve and Treasury swap debt and to maintain orderly trading conditions. The mark thus ended the period at DM 1.8720, some 9 percent below its end-October peak but still up 8½ percent over the six-month period under review.

Compared with the preceding two months, central bank support for the dollar was modest during January. The Federal Reserve Trading Desk intervened to sell only $68.9 million equivalent of marks for the System and $132.3 million equivalent for the Treasury over the course of the month. Meanwhile, it took advantage of opportunities to acquire marks, largely through nonmarket transactions with correspondents, which were used to repay swap debt. Thus, by end-January, the System's outstanding swap indebtedness to the Bundesbank was down $389.8 million net over the month to stand at $4,168.2 million and that of the Treasury had been reduced by $276.4 million to $613.0 million. These operations, repayments of swap debt by the Bundesbank's partners in the EC snake, and that central bank's own operations in the market were reflected in the $1.8 billion net decrease in Germany's official reserves over the month to $52.1 billion by January 31, 1979. But for the six-month period as a whole, Germany's reserves rose a net $11 billion.

Japanese yen

By late 1977-early 1978, the Japanese authorities faced three mutually reinforcing problems: economic growth had fallen short of the government's target, the current account surplus remained excessive at an annual rate of nearly $16 billion, and the yen was appreciating rapidly, rising 30 percent in two years to ¥227.00. Since each of these problems had significant international implications, foreign authorities were pressing Japan to hasten the adjustment process. In late 1977, the government had provided more fiscal stimulus to promote domestic growth and boost imports. In addition, Japan encouraged imports by relaxing trade restrictions on certain kinds of goods. But the impact of these measures was blunted by the persistent rise in the Japanese yen which exerted a drag on the domestic economy. Moreover, the current account surplus widened even further as the yen rate appreciated. This unexpected result reflected in good measure the terms of trade effects of the yen's rise. It also reflected the fact that Japan's exports remained highly competitive. With the yen's appreciation serving as a further brake to domestic inflation, Japanese firms in several key industries were able to take advantage of declining costs of imported raw materials and other products, such as oil. Moreover, because of the more rapid inflation under way in many foreign markets, Japanese exporters did not have to absorb the full effect of the yen's rise on their prices. By mid-1978 the underlying adjustment to the previous appreciation of the yen was finally beginning to show through in the trade figures, as export volumes started to decline and import volumes started to rise. But, in view of the experience of the previous two years, the market was still skeptical that Japan's efforts to reduce its surplus significantly—or the United States efforts to reduce our current account deficit—were likely to succeed in the near future.

Against this background the yen had come into demand, buoyed by heavy inflows of funds again in late July-early August. The yen rate was bid up by 20 percent to ¥188.6 at the end of July and advanced a further 3¾ percent to a peak of ¥181.8 in mid-August. By that time, selling pressure on the dollar again spread to the markets for major European currencies. On August 16, President Carter expressed his deep concern over the dollar's decline, initiating a series of actions by the Federal Reserve and the United States Treasury to deal with the problem. These included intensive discussions between the United States and the Japanese authorities on means of hastening the adjustment process. In late August, the Japanese government introduced a supplementary budget which included additional stimulus, mainly through public works projects and credit availability for housing, which was expected to increase GNP by some ¥2.7 trillion. The Japanese authorities also pressed ahead on a program of emergency imports to reduce the immediate current account surplus. The market responded positively to these various official actions, and the yen settled back in late August to ¥188, where it held steady in balanced trading through mid-October.

By that time, Japan's current account surplus was more clearly on a narrowing trend. But the dollar had again come under heavy selling pressure against Western European currencies and that pressure again spilled over into the yen, which rose to a new record high of ¥176.45 by October 31. Under these circumstances, the Japanese authorities became concerned that the new appreciation of the yen might thwart even the modest progress toward internal and external balance that had just begun. The United States authorities were also concerned that the decline of the dollar was becoming excessive and threatened to undermine the efforts to curb inflation in the United States.

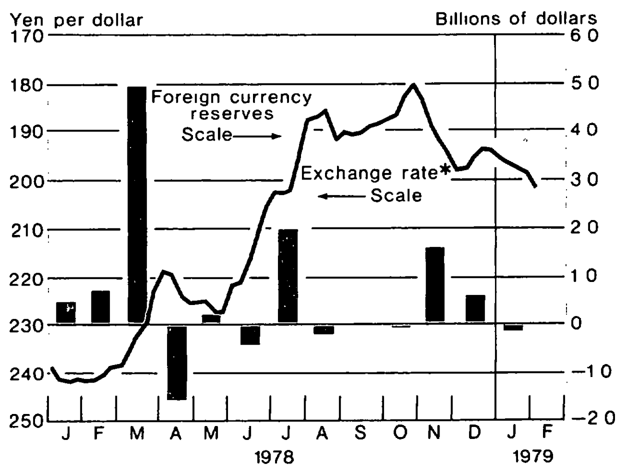
Consequently, in further discussions in late October, United States and Japanese authorities agreed that an important element of any broader package of initiatives to strengthen the United States dollar would be a commitment by the United States to intervene in Japanese yen, backed up by substantial resources, along with intervention in German marks and Swiss francs. For sometime, the Federal Reserve Bank of New York had been intervening in the New York market for account of the Japanese authorities. It was agreed that this would continue and that the United States authorities would join in this intervention using their own resources. As the $30 billion of foreign currency resources was assembled, therefore, the Federal Reserve swap arrangement with the Bank of Japan was raised from $2 billion to $5 billion, and the United States Treasury agreed to draw $1,000 million equivalent of yen from the IMF and to sell $641 7 million equivalent of SDRs to Japan.

The announcement on November 1 of these measures had a profound effect on yen trading in New York, and the yen rate fell back sharply with only modest intervention for the day Heavy demand for yen developed the next day in Tokyo. But the Bank of Japan countered vigorously, and the Federal Reserve Bank of New York maintained a forceful presence in

Chart 4

Japan

Movements in exchange rate and official foreign currency reserves



* See footnote on Chart 3

the New York market on that and subsequent days. In response, the pressure quickly abated and there was little need for further intervention. In all, sales of yen by the United States authorities in early November amounted to $196.7 million. Of the Federal Reserve sales, $151.7 million equivalent of yen was financed by drawings under the System's swap arrangement with the Bank of Japan and $2.8 million equivalent of Japanese yen was drawn from balances. United States Treasury sales of $42.3 million of yen were financed entirely out of proceeds of IMF drawings.

Once the sense of two-way risk was reestablished, market sentiment began to shift against the yen. Traders took account of the narrowing of Japan's current account surplus. Moreover, the wide interest differentials favoring the United States dollar over the yen generated capital outflows, as foreign governments and international institutions stepped up new borrowings in the Tokyo market and nonresidents liquidated earlier investments. Consequently, the yen rate dropped back to as low as ¥202.45 in early December, some 13 percent below the late-October peak. By that time the Federal Reserve began to acquire modest amounts of yen to repay the swap drawings of early November.

The yen then became caught up in the renewed upsurge of the European currencies against the dollar in mid-December. But, while regaining 5 percent to a high of ¥192.45, the yen lagged behind the rise in the other currencies. Consequently, intervention to check the rise was relatively modest, with the United States authorities selling a total of $10.6 million of yen. Of this amount the Federal Reserve sold $6.4 million equivalent financed by a $4.8 million equivalent drawing on the swap line with the Bank of Japan and out of balances. The remaining $4.2 million equivalent was sold by the Treasury out of balances. By midmonth, market sentiment turned hesitant toward the yen once again, as major events of concern to the market at the time—the political and economic disturbances in Iran and the jump in OPEC oil prices—were viewed as potentially serious to Japan as well as to the United States. Consequently, the yen rate began to ease through the month end, even as other currencies continued to advance.

In January, the yen softened further as Japanese trading companies bid strongly for dollars. The Japanese authorities took the opportunity to dismantle some of the barriers to capital inflows, cutting in half the marginal reserve requirement on free yen deposits and relaxing the restrictions on nonresident purchases of Japanese securities. On several days the yen declined sharply enough in the New York market that the Federal Reserve stepped in as a buyer of yen to maintain orderly trading conditions. On this basis it purchased $98.8 million equivalent for the account of the United States authorities over the course of the month. By the month end, the yen rate had fallen back to ¥201.70, for a net decline of 6½ percent for the six-month period under review. By that time, the Federal Reserve had acquired sufficient amounts of yen from transactions with correspondents and from the market to repay in full the swap drawings on the Bank of Japan. The Treasury's purchases of yen were added to ESF balances.

Swiss franc

By midsummer 1978 the Swiss franc was rising sharply, reaching new highs against the dollar and other major European currencies. Switzerland's inflation rate was running at 1.4 percent per annum, the lowest of all industrial countries. Switzerland's current account for the year, forecast to show a SF 9 billion surplus, was expected to be second only to Japan's. Also, many in the market had come to question whether the authorities would continue to resist upward pressure on the franc, since intervention in the exchanges earlier in the year had already contributed to an explosion in the monetary aggregates well above the central bank's 5 percent target. Indeed, since midyear the Swiss National Bank had been able to absorb some of the excess liquidity through domestic monetary operations and by selling dollars to nonresident borrowers under the official capital export conversion requirement. As a result, Switzerland's reserves had declined somewhat in July to $12.8 billion. But in the exchange market the Swiss franc was swept up in a burst of bidding to SF 1.7099 against the dollar and SF 0.8458 against the German mark by August 2. At these levels, the Swiss franc had gained since the beginning of the year 16 percent and 12 percent, respectively.

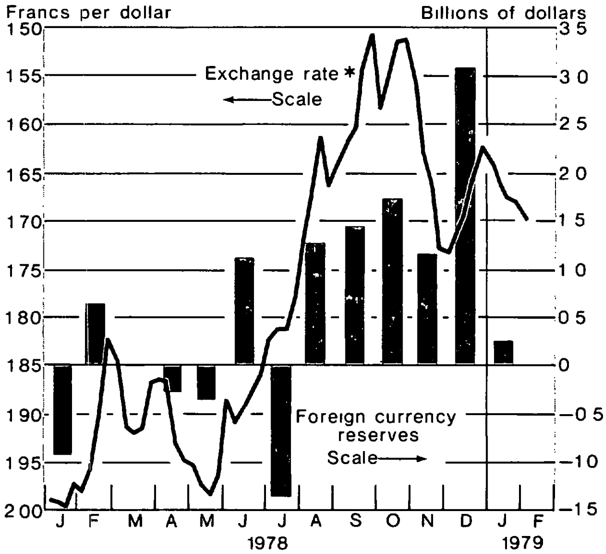
In view of the franc's rapid advance, the National Bank moved early in August to make more liquidity available to the market by open market operations, the placement of government deposits with commercial banks, and one-year swaps against dollars. These operations triggered a sharp decline in domestic and Euro-Swiss franc interest rates and succeeded for a while in blunting the franc's rise. But, in the generally unsettled markets at the time, the franc was soon rising again against the dollar, along with other major currencies. It rose as high as SF 1.5451 by mid-August before falling back by some 8½ percent in reaction to President Carter's expression of deep concern over the dollar's decline and the follow-up measures by the Federal Reserve and the Treasury.

But by September the Swiss franc was again on the rise. As before, the appreciation was for the most part caused by commercial and official shifts of funds out of the dollar. But the franc was also buoyed by flows

Chart 5

Switzerland

Movements in exchange rate and official foreign currency reserves



*See footnote on Chart 3

of funds out of other European currencies, including the mark, in response to market concern that an expanded joint float arrangement to include all EC countries would leave the franc isolated and hence more vulnerable to even stronger upward pressures. In this environment, the rate was propelled by late September to a new record high of SF 1.4510 against the dollar and SF 0.7547 against the mark. To moderate this advance, the Swiss National Bank had gradually increased its dollar purchases in Zurich and New York, while the Federal Reserve joined in these operations on twelve trading days in August and September, selling $147.7 million equivalent of francs These sales were financed by drawings under the swap arrangement with the Swiss National Bank, which raised the total from $22.9 million equivalent to $170.5 million equivalent

Meanwhile, the franc's unrelenting advance in the exchanges raised the risk of severe repercussions on the Swiss economy. Producers of goods for both foreign and domestic markets were concerned about a loss of competitiveness, falling profit margins, and declining sales But the trade balance remained strong, because of the favorable price effects of the franc's appreciation on the terms of the trade. Concerned that an excessive appreciation of the franc might drive the economy into recession, the Swiss authorities took the initiative in the exchange markets in late September-early October. The Swiss National Bank intervened massively to reverse the rise in the rate both against the dollar and the German mark. Although the bulk was done in Zurich, the Federal Reserve followed up in New York, for the account of the Swiss National Bank and for Federal Reserve account. System sales of francs amounted to $100.0 million equivalent

Also, to signal a desire for the franc to decline against the mark, the Swiss central bank bought modest amounts of snake currencies other than the mark to give the mark more room to appreciate within the joint float. Finally, to increase the depth of the Swiss franc market, the authorities raised the limit on nonresident participation in foreign borrowers' Swiss franc bond issues from 35 percent to 50 percent and allowed 50 percent of private nonresident borrowings of francs to be converted in the market.

In response to these actions, the franc initially fell back sharply, dropping to a low of SF 1.63 against the dollar and to SF 0 8350 against the mark. Later on, however, as trading conditions deteriorated and the dollar plummeted across the board, the franc rose again, moving back to its record high on October 31. But, in the wake of the earlier intervention by the Swiss National Bank and the highly publicized concern of the Swiss authorities over the franc's relationship to the mark, the Swiss franc lagged behind the rise in the mark. As a result, although the Federal Reserve supplemented its intervention in marks with sales of Swiss francs, in late October it sold only a modest $46.5 million equivalent of francs financed by drawings on the swap line with the Swiss National Bank. Meanwhile, the heavy intervention by the Swiss National Bank earlier in October accounted largely for the $4.7 billion increase in Switzerland's external reserves during August-October.

The franc's advance was abruptly reversed in response to the November 1 announcement of steps to correct the excessive decline of the dollar. These included an increase in the Federal Reserve's swap line with the Swiss National Bank from $1.4 billion to $4 billion, indications by the Treasury that it would sell SDRs for Swiss francs, and plans for the Treasury to place franc-denominated securities in the Swiss capital market. On November 1, the franc fell sharply, dropping off some 8¾ percent below its highs of the previous day. Thereafter, the franc, along with the mark and the yen, came into heavy demand in a test of the United States resolve to follow through on the November 1 program. But the earlier forceful intervention by the Swiss authorities had already made traders more cautious, and the Swiss National Bank did not have to intervene as heavily as before. For its part, the Federal Reserve sold $351.6 million equivalent of francs in the first half of November, financed entirely by new drawings on the swap line with the Swiss central bank. This intervention helped settle the market, and by November 20 the franc had declined another 9 percent to SF 1.7640. Thereafter, the rate fluctuated fairly narrowly through early December, requiring only occasional light support from the Swiss National Bank and sales of just $29.0 million equivalent of francs by the Federal Reserve on November 21 and 29 which were financed by further swap drawings.

During December the franc came under renewed upward pressure amid uncertainties ahead of the scheduled introduction of the EMS at the month end, growing political instability in Iran, and the announcement by OPEC of a larger than expected oil price increase. As the franc rose, many multinational corporations sought to cover both economic and accounting exposures. For a while the franc outstripped the mark in its advance against the dollar, rising 9 percent by the year-end. In response, the Swiss National Bank intervened heavily and the Federal Reserve sold $354.3 million equivalent of francs through the month end, of which $33.8 million was for value in early January. These operations contributed to another $4.1 billion equivalent rise in Switzerland's external reserves since October 31 to $21.6 billion at the year-end.

But this intense bidding tapered off quickly in early January once it became clear that most companies had satisfied their near-term need for francs before the year-end. Also, timely and forceful intervention by the National Bank left the market to expect that the central banks would step in quickly to counter a renewed rush into francs. Even so, the market was aware that the heavy intervention by the Swiss National Bank had generated a 16.2 percent increase in the Swiss money supply in 1978, far above the targeted rate of increase. To ease concerns that it might suddenly tighten liquidity, the Swiss National Bank announced that, since priority was still being given to the stabilization of exchange rate relationships, it would not set a money supply target for 1979. Moreover, when the United States Treasury announced plans to sell Swiss franc-denominated bonds, the Swiss National Bank followed up with an assurance that the authorities would offset the liquidity drain caused by this issue. At mid-January, the United States Treasury placed a total of $1,203 million equivalent of franc-denominated securities in the Swiss capital market. Of this amount $744.5 million equivalent was borrowed over 2½ years at 2.35 percent per annum. The remaining $458.5 million equivalent four-year placement was at 2.65 percent. The proceeds of these securities were then warehoused by the Treasury with the Federal Reserve.

In this better atmosphere for the dollar, traders began to perceive a downside risk in the Swiss franc. In view of the 10 percentage point differential between United States and Swiss interest rates, it became im-

Table 6

United States Treasury Securities, Foreign Currency Denominated

In millions of dollars equivalent; issues (+) or redemptions (−)

Issues	Amount of commitments January 1, 1978	1978 I	1978 II	1978 III	1978 IV	1979 January	Amount of commitments January 31, 1979
Government series:							
Swiss National Bank	1,168.9	−133.8	−133.8	−133.8	− 167.1	− 69.3	531.2
Public series:							
Switzerland	-0-	-0-	-0-	-0-	-0-	+1,203.0	1,203.0
Germany	-0-	-0-	-0-	-0-	+1,595.2	-0-	1,595.2
Total	1,168.9	−133.8	−133.8	−133.8	− 167.1 +1,595.2	− 69.3 +1,203.0	3,329.3

Because of rounding, figures may not add to totals. Data are on a value-date basis mensely costly to remain short of dollars once the franc began to ease. The franc thus fell back sharply from its year-end highs, and this decline accelerated following the stress on anti-inflation policies in the United States. With the exchange market now in better balance, the Swiss government announced on January 23 the removal of the February 1978 ban on nonresident purchases of foreign securities. Caught by surprise, the market's initial reaction was to bid heavily for francs. But the Swiss National Bank reacted immediately with forceful intervention, and this flurry of demand quickly subsided. Thus, the franc continued to ease enabling the Swiss National Bank to sell some of its earlier dollar purchases. The franc closed at SF 1.700 on January 31, off 14 percent from the late-October peak.

For its part, the Federal Reserve did not intervene in the franc market during January. In fact, at one point in which the franc was easing particularly sharply the System was able to buy $20.0 million equivalent of francs in the market. This purchase, together with much larger amounts purchased directly from the Swiss National Bank, enabled the System to repay $605.1 million of current System swap debt, leaving $446.7 million equivalent outstanding as of January 31. For the period as a whole, the franc was virtually unchanged on balance, while Switzerland's external reserves rose a net of $8.9 billion over the six-month period to $21.7 billion.

During the period, the Federal Reserve and the United States Treasury continued with the program agreed to in October 1976 for an orderly repayment of pre-August 1971 franc-denominated liabilities. The Federal Reserve repaid $139.6 million equivalent of special swap indebtedness, while the Treasury redeemed $319.2 million equivalent of Swiss franc-denominated securities by the end of January. Most of the francs for these repayments were acquired directly from the Swiss National Bank against dollars. However, francs were also bought from the National Bank against the sale of $118.2 million equivalent of German marks which were, in turn, either covered in the market or drawn from existing balances. By end-January, the Federal Reserve's special swap debt to the Swiss National Bank stood at $139.3 million equivalent, while the Treasury's Swiss franc-denominated obligations had been reduced to $531.2 million equivalent.

EC snake

In the mid-1970's, divergencies in the performances of the major European economies had forced a number of important currencies to drop out of the EC snake, leaving the remaining currencies highly exposed to the volatility of the exchange markets. As a result, over the past three years the currencies remaining inside the joint float had advanced more rapidly against the dollar than those which had left the band, even though the differences in economic performance among all EC countries had begun to narrow. Against this background, the EC heads of state and government reached agreement at Bremen last July to create a zone of monetary stability via a new joint floating arrangement to include all EC members.

News of the agreement prompted some bidding for the currencies outside the snake as the market took the view that these currencies would henceforth trade more in line with those now in the EC band. But within that arrangement enough divergence between price and trade performances remained to raise expectations in the market that a realignment might take place among those currencies prior to the introduction of the EMS. Once the mark began outpacing the advances of other major currencies against the dollar in late July-early August, participants doubted that other participating currencies could keep pace with the German mark. As a result, the Dutch guilder, Belgian franc, Norwegian krone, and Danish krone all fell to the bottom of the joint float.

Against this background, all four currencies were subjected to outflows into the mark. In some cases, the pressures were aggravated by local considerations. The Norwegian krone was beset by commercial and professional selling pressure as the market reacted to Norway's loss of competitiveness *vis-à-vis* its major trading partner, Sweden, whose currency had been withdrawn from the EC band a year before. Evidence of deterioration in Belgium's trade position during the summer generated continued sizable selling of Belgian francs. A large-scale buildup in commercial leads and lags also weighed on the Netherlands guilder.

As the movement of funds into the mark gathered momentum, the five EC central banks stepped up their intervention to keep the joint float within its 2¼ percent limits, buying large amounts of guilders, Belgian francs, and Danish and Norwegian kroner against sales of German marks provided by the Bundesbank. By mid-October the total amount of marks created by the Bundesbank to meet these pressures had mounted up to $5.1 billion equivalent since end-June and was contributing to a strong expansion in Germany's monetary aggregates. By contrast, this intervention drained large amounts of liquidity out of the other four snake currencies. Interest rates rose steeply in each of their money markets, while the respective monetary authorities reinforced the squeezes still further by raising official lending rates.

Finally, in mid-October, the EC monetary authorities agreed to a realignment which upvalued the mark by 2 percent against the Dutch guilder and Belgian franc and by 4 percent against the Danish krone and the Norwegian krone. Following this announcement, the heavy selling within the snake came to an end and all the joint float currencies advanced on their own to record highs against the dollar at the month end. But reversals of the commercial leads and lags or speculative positions in favor of the mark were modest. Consequently, part of the indebtedness built up while defending the snake was settled at the month end by transfers of dollar assets to Germany.

The November 1 announcement of the United States measures to support the dollar triggered a sharp fall in the mark, well in excess of the declines in the other snake currencies. The mark thus dropped to the bottom of the joint float, and strains on the band eased generally. Under these conditions, market participants began to reverse the highly expensive long mark positions they had been maintaining against the weaker snake currencies.

This unwinding proceeded slowly, however. Many uncertainties remained over the outlook for the snake in view of the scheduled introduction of the new European Monetary System on January 1. Some participants still wondered if another realignment might not occur prior to the starting date now only a few weeks away. Many traders thus continued to roll over short positions against the mark. To clear the air, the monetary authorities of the EC snake countries let it be known that the bilateral central rates presently in force between the snake currencies would be maintained in the new system. This announcement contributed further to a reduction of tensions within the snake. But Norway decided it could not risk having its currency pulled up further against the Swedish krona. Therefore, following Sweden's decision not to enter the new system, Norway announced on December 12 it could not join the arrangement and that the krone would be withdrawn from the snake effective immediately.

The decision at the year-end to delay the implementation of the new monetary arrangement had no discernible impact on trading relationships within the snake. Instead, as the mark eased back against the dollar, the process of unwinding positions taken up prior to the mid-October realignment accelerated Benefiting from high domestic interest rates, the Dutch guilder and the Danish krone became buoyed by these reflows and traded firmly in the snake. The commercial Belgian franc was also bolstered by reflows but, amid concerns over the persistent sluggishness of the Belgian economy and the size of the government deficit, the return of funds took place more slowly and the franc stayed near the bottom of the joint float.

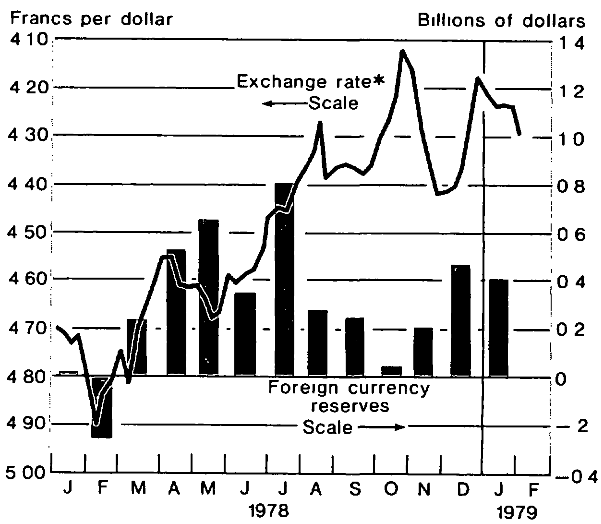
French franc

During the spring of 1978, the French government had reaffirmed its commitment to give priority to the fight against inflation and the maintenance of a sound balance of payments, while boosting employment largely through selective measures. By midyear, the economy was beginning to respond to the modest stimulus that had been provided earlier, spurred by an upturn in domestic consumption. Also, the current account had settled into strong surplus. The French franc had strengthened in the exchanges. It rose against the dollar to trade around FF 4.36 by early August. It also gained against the German mark, and the Bank of France had taken in reserves. Progress on the inflation front, however, had not yet met expectations. Looking ahead, the market was uncertain about the prospect for an early further decline in inflationary pressures since, as part of its longer term strategy to reduce the growth of public financing needs and to channel more personal savings into business investment, the government had embarked on a program to increase charges for public services and gradually to relax long-standing controls on industrial prices. Also, by midsummer, the market had become sensitive to the implications of any deterioration in economic performance relative to that of Germany in view of the possibility that France might join in an expanded EC currency arrangement

Chart 6

France

Movements in exchange rate and official foreign currency reserves



*See footnote on Chart 3

which was scheduled for implementation on January 1, 1979.

Against this background, news during August of a quick upsurge in consumer prices, an acceleration of wage increases, and a temporary slippage in France's trade account back into deficit had a dampening effect on market psychology for the French franc. Market participants began to question whether the franc could hold its own against the German mark, and commercial leads and lags started to move against the franc. Also, since short-term interest rates had been gently declining as the franc had strengthened during previous months, some investors took advantage of a narrowing of favorable interest differentials to shift funds into other currencies. As a result, the franc lost some of its earlier buoyancy. Although at times it was bid up as the dollar came on offer in August and September, it posted little advance on balance over the two months trading around FF 4.37. Meanwhile it eased back about 4 percent against the mark by end-September. Under these circumstances, the inflows to France's reserves tapered off and the Bank of France provided some support for the rate through sales mostly of German marks but also of dollars.

In the increasingly unsettled markets that developed during October, the French franc joined to a greater degree in the rise in foreign currencies against the dollar. By this time, also, the authorities had reinforced the relatively restrictive monetary stance by reducing to 11 percent the target for monetary growth in 1979 and by tightening somewhat the ceilings on bank credit expansion. They also doubled the reserve requirements against sight deposits to 4 percent to absorb liquidity generated by the balance-of-payments surplus and the financing of the government deficit. Thereafter, an abrupt tightening in the Eurofranc market prompted importers that previously had been borrowing to bid instead for francs in the spot market in order to meet their month-end payment needs. These factors combined to push up the French franc, which rose to a record high of FF 3.97 against the dollar on October 31, some 9¾ percent above early-August levels. But the franc continued to lag behind the German mark. As a result, the Bank of France at times still provided occasional support for the franc by selling marks while otherwise taking in dollars to limit the franc's rise.

Following the announcement of the November 1 package in support of the dollar, the French franc plummeted along with other currencies, dropping back below early-August levels to FF 4.3490 by midmonth. Initially, it fell back less rapidly than the mark which had been the center of speculation against the dollar. But by late November, as the market focused on the upcoming negotiation over the EMS at an EC Council meeting December 5-6, the franc became subject again to bouts of selling pressure on expectations that it would decline against the mark before entering the new joint floating arrangement. As a result, the franc eased back against the mark to a low on December 4, while moving back up to FF 4.45 against the dollar.

Before long, however, the earlier concerns about the prospects for the French franc began to lift. Doubts about France's trade performance faded inasmuch as a surplus of around FF 2.5 billion was emerging for 1978. The market's previous fears that price decontrol would trigger an accelerated spiral of price increases no longer seemed justified in view of the more moderate rise in consumer prices reported for November. The December announcement of an agreement that all currencies coming into the EMS would enter at prevailing cross rates dispelled some of the uneasiness about implementation of the new arrangement. Also, inclusion of the Italian lira and the Irish pound in the new arrangement alleviated concerns in the market that the franc would be the only additional member. Against this background, funds began flowing from the mark back into the franc and the previously adverse commercial leads and lags started to be reversed. Moreover, since the dollar had started declining again, market participants scrambled to cover exposures and year-end needs in francs as well as in other currencies. The franc thus recovered to as high as FF 4.1200 at the Paris opening on January 2.

That day the decision not to proceed with the EMS until EC members had concluded new agricultural financing arrangements was announced. Also, forceful intervention in other markets helped to blunt any further rise in European currencies against the dollar. Thereafter, the franc began to ease back, and this tendency continued as the dollar strengthened generally during the month. Thus, the franc, closing at FF 4.2905 on January 31, was up only 1¾ percent on balance for the six-month period. Against the mark, however, the franc remained relatively firm during January with the result that it recovered to just about the levels of six months before. In view of the franc's buoyancy generally in December and against the mark during January, the Bank of France continued to buy both dollars and German marks in the market. These operations contributed to a further rise in France's foreign exchange reserves, which increased $1.6 billion over the six months to $8.7 billion as of January 31.

Italian lira

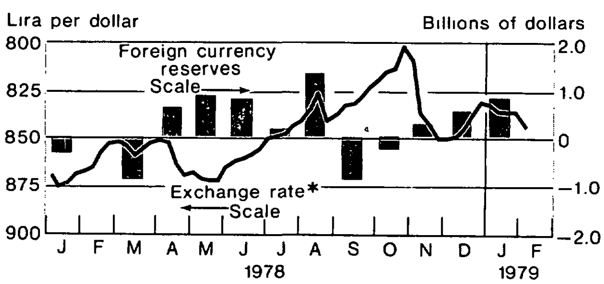
Under Italy's comprehensive stabilization program, further progress was made during the first half of 1978 in strengthening the balance of payments and reining in the rate of domestic inflation. By midyear, the inflation rate had been brought down to 12 percent, and the current account had registered a comfortable surplus of $2.1 billion over the first six months. Coming into the summer, imports remained sluggish while exports continued to be buoyed by the existence of excess industrial capacity and by the competitive effects of the lira's decline of earlier years. With the seasonal bulge in tourist receipts adding strength to Italy's current account, the stage was set for a further widening of Italy's surplus position. Also, interest rates in Italy had been kept high, easing back less than the slowdown in the inflation rate might have suggested, in order to facilitate the financing of the large public sector deficit. Consequently, Italian residents continued to borrow abroad, and these capital inflows, on top of Italy's current account surplus, bolstered the lira in the exchanges. As a result, the lira had come into heavy demand for several months and the authorities were able to buy substantial amounts of dollars to rebuild Italy's reserve position, while moderating the rise in the spot rate. By the end of July the lira, trading above LIT 841, was at its highest level against the dollar since October 1976. Moreover, Italy's foreign exchange reserves had increased to $9.3 billion, even after the authorities had made sizable repayments of official debt to the IMF, the EC, and the Bundesbank.

During August and much of September, the lira continued to benefit from Italy's strong balance-of-payments position. The announcement on August 1 of a seven-month extension in the ceiling on the growth of bank lending reassured the market that current policies were to be maintained. Against this background and with the Bank of Italy continuing to take large amounts of dollars into reserves, the authorities

Chart 7

Italy

Movements in exchange rate and official foreign currency reserves



*See footnote on Chart 3.

took the opportunity to follow through on initiatives earlier in the year to ease exchange controls regarding commercial payment terms. Meanwhile, the minority government announced its three-year economic stabilization program which, after extensive negotiation over the summer months, had received the tacit approval of the Communist Party. This program, which was to reduce significantly the proportion of gross domestic product taken up by the public sector deficit, included a shift of government spending from current expenditures to the promotion of investment, a freeze on real labor costs together with a gradual phasing-out of automatic wage rises under the *scala-mobile* program, and improved incentives for labor mobility and a rebuilding of the financial condition of Italian enterprises.

At the same time, the authorities acted to absorb some of the liquidity being created by Italy's balance-of-payments surplus. This objective was accomplished in part by extending the maturities of new government debt after the Bank of Italy confirmed an easing of money market rates by lowering by 1 percentage point to 10½ percent its base rate for rediscounting and advances. In addition, the government continued to use some of its additions to official reserves to repay outstanding debt to the IMF and the EC, both at and prior to maturity. Moreover, to keep Italy's inflation rate more in line with its trading partners over the longer run, the Italian authorities indicated they might be receptive to some form of association for the lira with the EMS, then under consideration within the EC.

In October, however, the increasing unsettlement that was developing in the exchange markets began to affect the Italian lira as well. Although it, too, was pulled up against the dollar by the rise in the strong Continental currencies, the market began to question whether the lira would not be allowed to weaken *vis-à-vis* other EC currencies before being linked to the EMS. As a result, commercial leads and lags shifted modestly against the lira. In addition, Italian enterprises reacted to seemingly favorable exchange rates, together with the increases in Eurodollar interest rates, by paying or prepaying their Eurocurrency debts and switching back into lira financing. Consequently, the lira lagged behind the mark during October while the Bank of Italy sold dollars to provide some support for the rate. Even so, by October 31 the lira had advanced 7 percent above early-August levels to LIT 787 against the dollar.

Then, following the November 1 announcement of United States measures to strengthen the dollar, the lira declined along with other European currencies to trade around LIT 851.50. Meanwhile, new figures showed that Italy's current account, remaining strong even after the passing of favorable seasonal factors, was amassing a surplus of some $6 billion for the year. Also, the economy had begun to expand more rapidly and, with financing needs growing and interest rates still high, the inflows of capital resumed. With regard to the EMS, the government had negotiated flexible terms for entry, whereby the lira would be allowed to fluctuate as much as 6 percent around its central rate against each of the other currencies. Moreover, the market was reassured once prospects for a currency realignment prior to the introduction of EMS faded and numerous officials confirmed that the exchange rate relationships of that arrangement would be based on prevailing market rates. Thus, the lira came into heavy demand as the turn of the year approached, and the news on January 2 of a delay in the implementation of EMS had little apparent impact on the rate.

By January, the continuing strength of Italy's external position was again showing through in the exchange market. Although the lira tended to decline as the dollar recovered across the board, it eased back less rapidly than the German mark and other strong European currencies. In mid-January the authorities provided some relief to small firms with limited access to the Eurodollar market, by raising slightly the ceiling on domestic credit expansion applicable through March. Nevertheless, funds continued to flow into the lira, thereby keeping the rate buoyant even in the face of increasingly vocal opposition from the trade unions to the government's anti-inflation program and the withdrawal of Communist Party support to the Andreotti government at the month end. In fact, the lira closed the six-month period trading steadily at LIT 843.50 to show little net change on balance. Meanwhile, additional purchases of dollars by the Bank of Italy, again during January, helped provide a further $2 billion increase in foreign exchange reserves over the period to $11.3 billion by January 31.

Sterling

In the United Kingdom, impressive progress had been made in 1977 in bringing down domestic inflation, swinging the balance of payments into surplus, and bolstering the international reserve position. Also, by late 1977, the British authorities had succeeded in gaining leeway, under the agreements with the IMF, for providing some modest stimulus to the economy. But by late spring 1978 the markets were becoming concerned that the sudden upsurge in demand in the United Kingdom was beginning to generate additional inflationary pressures and would weaken the payments position. In June the authorities moved again to reinforce their broad anti-inflation effort through monetary restraints, including a hike in interest rates, and through a selective tightening of fiscal policy. Later, the Government announced a 5 percent guideline for wage increases over the coming year beginning in August, down from the previous guideline of 10 percent. These measures helped to reassure the market. Thus the pound had advanced to $1.95 against the dollar by early August and had firmed against other currencies as well. On the effective trade-weighted basis used by the United Kingdom authorities, the pound had reached 63 percent of its 1971 Smithsonian parity.

By early August, however, the market was again becoming concerned over the outlook for inflation in the United Kingdom. The Trades Union Congress voted to reject a continuation of an incomes policy, and highly visible wage negotiations kept the exchange market wary of a possible confrontation between the government and the unions over the 5 percent pay policy. The pound fell back somewhat and traded unevenly in the exchanges between early August and mid-October. But each time selling pressure mounted the Bank of England responded quickly to show its resolve in defending sterling, both through intervention in the exchange market and through maintaining a taut money market.

In October, as market participants increasingly turned their attention to the accelerating slide of the dollar, sterling started to advance on hot-money inflows. Spot sterling soon moved above $2.00, and a burst of buying in late October pushed the rate to as high as $2.1050 by the month end. During this upswing the Bank of England occasionally bought dollars to keep the trade-weighted effective rate from rising much above 63 percent.

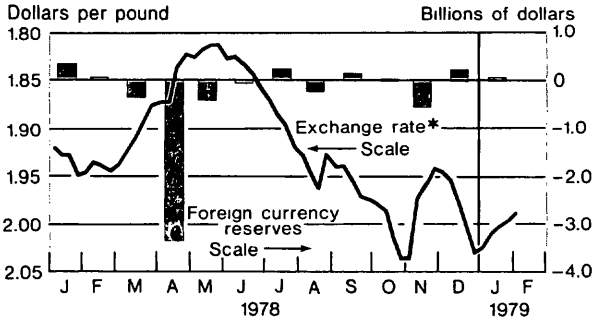
In the wake of the United States measures of November 1, sterling dropped back 6 percent to fluctuate around $1.98 against the dollar, without any appreciable change on an effective basis. Meanwhile, union opposition to the continuance of an incomes policy was hardening. Interest rates abroad were rising sharply, particularly in the United States. And, as sterling came on offer, in response to these uncertainties the Bank of England again provided support in the exchange market to steady the effective rate. Short-term sterling interest rates were allowed to rise and, on November 9, the authorities hiked the minimum lending rate 2½ percentage points to 12½ percent, its highest level in two years.

Thereafter, sterling was bouyed by inflows of interest-sensitive funds. Also, with the spot rate holding firm in December, many multinational corporations bought pounds to cover accounting and economic exposures and to satisfy year-end payment needs. The political uncertainties in Iran and the mid-December increase

Chart 8

United Kingdom

Movements in exchange rate and official foreign currency reserves

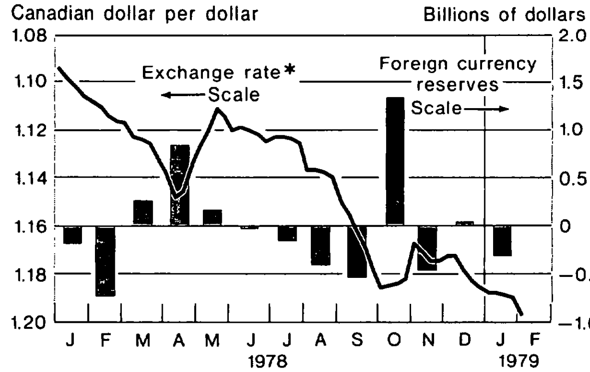


*See footnote on Chart 3.

Chart 9

Canada

Movements in exchange rate and official foreign currency reserves



*See footnote on Chart 3.

in OPEC oil prices had little impact on sterling since the United Kingdom, as an oil producer itself, was seen as less vulnerable to a cutoff of oil supplies from Iran and as perhaps even benefiting from the larger than expected rise in oil prices. As a result, when the dollar came on renewed offer during December, sterling was bid up to a high of $2.0480 by early January. Meanwhile, the government had announced it would not join the EMS but would undertake, as it had in the past, to keep sterling relatively stable *vis-à-vis* its principal trading partners.

In view of the United Kingdom's comfortable reserve position and the high level of interest rates, sterling held firm in the exchanges in early 1979, despite a spate of highly disruptive strikes. Sterling eased off against the dollar as dollar rates generally improved, but it held steady in effective terms. By the close of the period the spot rate was at $1.9872, up 3 percent on balance for the six-month period. Meanwhile, although the authorities had intervened on both sides of the market, these operations had largely netted out. Consequently, official reserves which were $17.6 billion at end-January were unchanged on balance over the six-month period.

Canadian dollar

By late summer, the Canadian dollar had been declining almost without interruption for nearly two years. Even so, the current account remained in substantial deficit and long-term foreign borrowings by private interests and provincial authorities were not sufficient to close the overall payments gap. Moreover, the rate of domestic inflation remained high, aggravated partly by the depreciating currency, and unemployment continued to hold at uncomfortably high levels.

Earlier in 1978, the authorities had moved cautiously to stimulate employment through selective fiscal policy measures while maintaining a firm monetary policy in light of concerns over inflation and the exchange rate. The authorities had also arranged for some $7.7 billion of official long-term international borrowings both to close the payments gap and to bolster reserves which had been depleted through intervention to cushion the decline of the exchange rate. Nevertheless, the deep-rooted pessimism toward the Canadian dollar persisted in the exchange market, as the prospect of a national election to be held sometime within the year left the market uncertain about the outlook for the Canadian economy. Amidst these uncertainties, sudden shifts of sentiment left the market subject to increased volatility. In addition, selling pressures were aggravated at times when the United States dollar was declining, because market participants would sell Canadian dollars against United States dollars either to finance acquisitions of currencies rising in the exchanges or to offset for internal accounting short-dollar positions against these currencies.

In August-September, after trading around the Can.$1.14 level, the Canadian dollar again came under heavy selling pressure in the exchanges following some disappointing trade and price figures. Also, the further rise in interest rates in the United States had prompted some outflows of interest-sensitive funds from Canada. In response, the Bank of Canada raised its discount rate to 9½ percent and announced a reduction of its monetary growth targets for the coming year. The authorities also arranged for a further $750 million bond issue in the United States market. The selling pressure continued, however, with the Canadian dollar slipping a further 3 percent against the United States dollar. Meanwhile, a sustained intervention effort contributed to a decline in Canada's external reserves by a net $924 million in August-September to $3.7 billion.

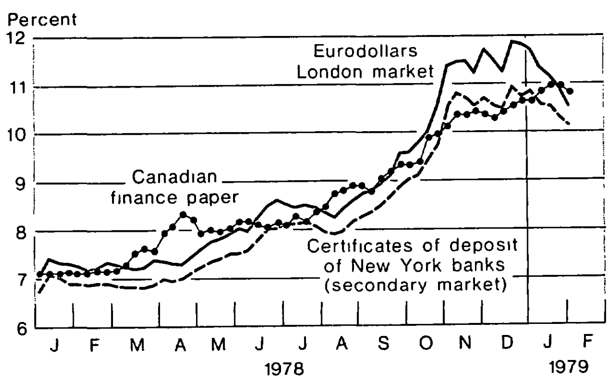
In early October the spot rate dipped to as low as Can.$1.1958 before bottoming out. In addition, the Canadian authorities hiked the discount rate further to 10¼ percent and operated in the bond market to lift long-term Canadian interest rates. Interest-sensitive funds thus began to move back into Canada. In addition, the trade figures for September were back in significant surplus and the rise in consumer prices slowed, giving a boost to market sentiment toward the Canadian dollar. Thus, the Canadian dollar moved back up from its early-October lows against the United States dollar, and the Bank of Canada intervened to moderate the rise. These official dollar purchases, combined with the receipt of proceeds from the New York bond issue and the takedown of additional credits on the facility with the chartered banks, were reflected in a $1.4 billion rise in external reserves to $5.1 billion at the month end.

On November 1, when the United States announced its major support package and the United States dollar rose sharply against the currencies of Western Europe and Japan, the Canadian dollar eased only slightly *vis-à-vis* the United States dollar. But then, as interest rates in the United States rose by more than rates in Canada, interest incentives favoring Canada were nearly eliminated, even after the Bank of Canada raised its discount rate to 10¾ percent on November 6. Moreover, the latest figures on Canada's price and trade performance released during the month were less encouraging. Bearish sentiment resurfaced for the Canadian dollar and, as selling pressure built up once again, the rate drifted downward in November and December.

Chart 10

Interest Rates in the United States, Canada, and the Eurodollar Market

Three-month maturities*



*Weekly averages of daily rates

In early January, the Canadian authorities announced plans for a new official borrowing abroad, a $500 million equivalent issue denominated in yen, and the Bank of Canada raised its discount rate by ½ percentage point to 11¼ percent. These initiatives helped stabilize the exchange rate, but the latest round of trade figures announced in late January proved to be disappointing to the market. The rate thus dipped to Can.$1.1989 at the month end, down 5½ percent for the six-month period, before firming somewhat in February. Meanwhile, Canada's reserves declined not only by $700 million from end-October levels but also by $200 million on balance over the six-month period to $4.4 billion as of January 31.

Profits and losses

The stepped-up intervention by the United States authorities beginning on November 1 involved a variety of financing techniques. In addition to use of the swap arrangements, the Treasury drew marks and yen on its reserve position with the IMF and sold SDRs to both Germany and Japan against their respective currencies. Also, the Treasury issued mark- and Swiss franc-denominated notes in the German and Swiss capital markets, thereby raising foreign currency assets against medium-term liabilities in those currencies. The acquisitions or borrowings of currencies and the sale and repayment of currencies took place at varying exchange rates. Thus the profit and loss implications became much more complex.

At the same time, at the end of 1978 the Federal Reserve, in presenting its annual statement of condition, shifted to accounting practices under which all foreign currency assets and liabilities are periodically revalued in dollars at current spot market rates. The ESF had adopted this accounting practice in 1977. For both institutions this meant that, in addition to profits and losses actually realized on foreign exchange transactions, unrealized profits and losses are also reported. New arrangements were also reached with foreign central banks to revalue, beginning in January, maturing swap drawings that were being renewed at current market rates. This practice generated realized profits

Table 7

Net Profits (+) and Losses (−) on United States Treasury and Federal Reserve Current Foreign Exchange Operations

In millions of dollars

Period	Federal Reserve	United States Treasury: Exchange Stabilization Fund	United States Treasury: General Account
1961-77	+51.2	− 5.1	
First quarter 1978	− 0.2	− 0.2	
Second quarter 1978	−17.2	− 2.9	
Third quarter 1978	−11.0	− 0.1	
Fourth quarter 1978	− 5.0	−68.0	+4.8
January 1979	+ 6.7	+ 1.2	+8.9
Unrealized profits and losses on outstanding assets and liabilities as of January 31, 1979	+ 2.5	+41.3	−7.8

Data are on a value-date basis.

Table 8

Net Profits (+) and Losses (−) on United States Treasury and Federal Reserve Liquidations of Foreign Currency Debts Outstanding as of August 15, 1971

In millions of dollars

Period	Federal Reserve	Exchange Stabilization Fund
1971-77	−583.9	−516.2
First quarter 1978	− 58.7	− 81.1
Second quarter 1978	− 60.6	− 84.8
Third quarter 1978	− 84.2	−117.8
Fourth quarter 1978	− 60.4	−156.7
January 1979	− 16.3	− 62.6
Unrealized losses on outstanding liabilities as of January 31, 1979	−121.4	−462.9

Data are on a value-date basis.

or losses depending on whether the dollar rose or fell over the period of the swap drawing.

Table 7 presents the profit and loss data for the Federal Reserve and the United States Treasury, separating out the results between the Treasury General Account and the ESF. Losses on pre-August 1971 Swiss franc debt, undertaken to protect the United States gold stock, are presented separately in Table 8.

Table 7 covers all Treasury and Federal Reserve purchases and sales in the foreign exchange market. Federal Reserve operations mainly reflect current swap operations, while ESF data also reflect foreign currency acquisitions from IMF drawings and SDR sales.

The Treasury General Account operations reflect the issuance of foreign currency-denominated securities and sales of some of those proceeds in the market. Foreign exchange operations are closely coordinated between the Treasury and the Federal Reserve. The incidence of realized profit and loss, however, falls on the different participants in the operations depending on the nature of the transaction and the exchange rate at the particular time. The ESF, the Treasury General Account, and the Federal Reserve had both profits and losses on individual transactions but, as the table indicates, losses exceeded profits on balance in 1978.