U.S. Exchange Rate Policy: Bretton Woods to Present

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Over the past thirty years or so, the United States has operated under two distinct exchange rate regimes. The first, which lasted effectively from December 1958 to March 1973, was the Bretton Woods system of fixed exchange rates. In the second, which began in March 1973 and has continued to the present, exchange rates have been subject to managed floating. This article traces the evolution of U.S. exchange rate policy through these two regimes, focusing for each on the broad objectives of U.S. policy, operational objectives and approaches, and the major episodes in policy during the period.

THE BRETTON WOODS SYSTEM: DECEMBER 1958 TO MARCH 1973

The system of fixed exchange rates was provided for in the *Articles of Agreement,* the charter for the International Monetary Fund that was negotiated at Bretton Woods, New Hampshire, in 1944. Although the *Articles* went into force in December 1945, the system of fixed exchange rates envisaged at Bretton Woods became fully operational only at the end of 1958, when most major foreign currencies became convertible for the private sector into dollars for current account transactions.[1] Under the Bretton Woods system, par values were established for the currencies of IMF member countries in terms of gold or the "U.S. dollar of specified gold content."[2] Foreign monetary authorities were obliged to intervene in foreign exchange markets to maintain the value of their currencies within 1 percent of their dollar parities. Monetary authorities in major foreign countries undertook this intervention in dollars; the U.S. Treasury stood ready to sell gold to them or buy it from them at the official price of $35 per ounce. In light of this commitment by the United States and the dominance of the U.S. economy, the dollar was the principal reserve currency and, aside from gold, the principal reserve asset of the Bretton Woods system. Sterling remained a reserve currency, but it was only a minor one for countries outside of the British Commonwealth.

Because the responsibility for intervention in exchange markets lay with foreign authorities, direct U.S. intervention during the Bretton Woods era was extremely limited. Before August 15, 1971, U.S. operations were restricted largely to two types: selling gold to foreign authorities for the dollars acquired by those authorities in exchange market intervention; and, later, buying dollars from foreign authorities in return for that country's currency, which the United States had acquired by drawings on the Federal Reserve swap network and the issuance of bonds denominated in foreign currencies. Only after the dollar had been declared inconvertible into gold, had

1. In 1958, among European countries, only Germany also permitted convertibility for the proceeds of capital account transactions. The Japanese yen was not convertible for current account transactions until 1964.

2. Initially, the par value of the dollar was defined by the President at $35 per ounce of gold under the authority granted to him by the Gold Reserve Act of 1934. The Congress modified the par value of the dollar to $38 per ounce of gold in the Par Value Modification Act, passed in February 1972. This act was subsequently amended in September 1973, to redefine the par value as $42.22 per ounce of gold. When the Second Amendment to the *Articles of Agreement* was approved on October 19, 1976, the Congress repealed the Par Value Modification Act but retained the value of $42.22 per ounce of gold for the purpose of valuing the U.S. gold stock.

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been devalued in the Smithsonian Agreement, and still was under downward pressure in exchange markets, did U.S. authorities undertake much direct intervention in the exchange market.

Broad Objectives of U.S. Exchange Rate Policy

In establishing the Bretton Woods system, the IMF's *Articles of Agreement* heavily stressed exchange rate stability. The intent was to discourage the competitive devaluations that were viewed as contributing to economic and financial chaos in the 1920s and 1930s. The *Articles* formally permitted adjustment of a currency's par value only if the country's balance of payments was in "fundamental disequilibrium." This was an imprecise concept, but it came to mean that exchange rates would be adjusted only as a last resort and only in conjunction with other policies to redress the disequilibrium.

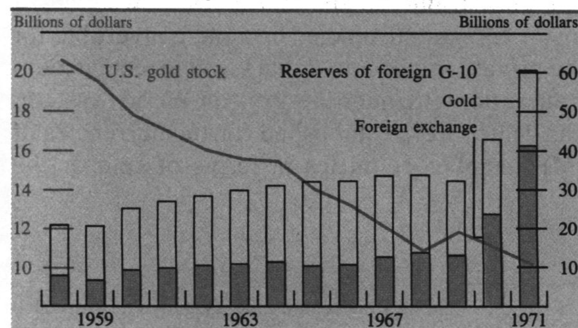
Given the widespread concern about competitive devaluations and the goal of maintaining a system of fixed exchange rates, the overriding objective of U.S. exchange rate policy was the maintenance of a fixed par value of the dollar. Keeping the dollar a leading standard and store of value provided a stable center for the world's monetary structure. Revaluations of foreign currencies against gold and the dollar, though few, were more readily accepted by the United States than devaluations, which were considered appropriate only if unavoidable. Devaluation of the dollar, under the Bretton Woods system, could be achieved only by an increase in the dollar price of gold without a commensurate increase in the price of gold in terms of other currencies. Hence, it could not be accomplished without the cooperation of foreign authorities. Moreover, most U.S. policymakers ruled out devaluation of the dollar: They saw it as likely to disturb the world economy by increasing the propensity to shift reserves out of dollars and into gold and thereby undermining confidence in the fixed exchange rate system.

Operational Objectives and Approaches

The credibility of the U.S. commitment to convert dollars into gold came into question in the early 1960s, when the United States began to cumulate deficits in its balance of payments. (See the glossary for a definition of this term and others used in this article.) From 1960 to 1967, as U.S. residents continued to invest in the reconstruction of Western Europe and Japan, large capital outflows generally outweighed surpluses in the U.S. trade and current accounts. Foreign monetary authorities began to accumulate dollars as they intervened to maintain the value of their currencies in the face of growing U.S. payments deficits. In turn, they purchased gold more and more from the U.S. Treasury with these dollars. The Treasury sold, net, more than $10 billion worth of gold between December 1958 and August 1971, cutting its gold stock in half (see chart 1). Sales to France and in the London gold market to stabilize the market price around the official price accounted for much of this total. Even if gold were not immediately demanded, there remained the threat that it could be demanded by foreign monetary authorities. To preserve the credibility of the offer to convert dollars into gold and, with it, the stability of the Bretton Woods system, the protection of the U.S. gold stock became the key operational objective of U.S. exchange rate policy. The government adopted five approaches to meeting this objective.

Operations in Foreign Currencies. As the first line of defense, U.S. authorities resumed operations in foreign currencies in the early 1960s, after a hiatus of nearly thirty years. The Treasury, using the Federal Reserve Bank of New York as its fiscal agent, began operations in 1961.

1. U.S. gold stock and gold and foreign exchange reserves of foreign G-10 countries, 1958–71



Gold is valued at $35 per ounce. The data are for the end of the periods, except for 1971, for which the data are for the end of August.

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Glossary

Balance of Payments. The balance of payments is defined in various ways. Under the Bretton Woods system, analysis of longer-run fundamentals tended to focus on the basic balance, consisting of the current account plus net long-term capital flows. From the perspective of potential claims on the gold stock, however, policymakers generally used the official settlements balance—the basic balance plus net private short-term capital. Unless otherwise specified, the concept used in this paper for the Bretton Woods period is the official settlements balance. Under the regime of floating exchange rates, measures of the overall balance of payments were abandoned and attention focused on current account positions.

Carter Bonds. Carter bonds were two- to four-year notes denominated in marks and Swiss francs and issued publicly by the U.S. Treasury in the German and Swiss capital markets between late 1978 and January 1980. They were issued to supplement foreign currency resources for U.S. intervention.

Group of Five or G-5 Countries. The countries are France, Germany, Japan, the United Kingdom, and the United States.

Group of Seven or G-7 Countries. The countries include the G-5 countries plus Canada and Italy.

Group of Ten or G-10 Countries. The countries were those members of the IMF participating in the General Agreements to Borrow—originally, Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, the United Kingdom, and the United States. In 1984, Switzerland joined the G-10, making in fact eleven countries, but by convention the name remains the G-10. The usage of G-10 throughout this article includes Switzerland, even though it was not a member of the IMF, because it was party to the various agreements regarding exchange rates and before joining the G-10 had an agreement parallel to the General Agreements to Borrow to lend its currency to the IMF.

Roosa Bonds. Roosa bonds were medium-term bonds denominated in foreign currencies issued to official institutions of foreign countries intermittently from 1962 to 1971, in an effort to defend the U.S. gold stock. They were issued in German marks, Swiss francs, Italian lira, Belgian francs, and Austrian schillings. Earlier issues, also called Roosa bonds, were denominated in dollars and had special maturity and interest rate provisions.

SDRs. Special drawing rights are international reserve assets created by the International Monetary Fund. The IMF has allocated a total of SDR 21.4 billion in six allocations since the SDR was established in 1969. The amount allocated to a participant is proportionate to its quota in the Fund at the time of the allocation. The value of the SDR initially was defined in terms of gold, at SDR 35 per ounce. After the move to widespread floating of exchange rates in 1973, the value of the SDR was redefined in terms of a basket of currencies. Initially, the currencies were those of the sixteen countries that had a share in world exports of goods and services in excess of 1 percent on average over the period 1968–72—the G-10 countries plus Australia, Denmark, Norway, Spain, Austria, and South Africa. The composition and weights for the basket of sixteen currencies were revised in July 1978 to reflect export shares for 1972–76. In 1981, the Fund decided to restrict the currencies in the basket to those of the five most important countries in world trade—the United States, West Germany, Japan, France, and the United Kingdom.

Swap Network. The swap network is a series of bilateral arrangements between the Federal Reserve and fourteen foreign central banks and the BIS providing standby reciprocal facilities for obtaining foreign currencies. The facilities provide for the swap (simultaneous spot purchase and forward sale) of each other's currency by the Federal Reserve and the respective foreign central bank. Swap drawings typically have a three-month maturity, with an understanding that they may be more or less automatically rolled over for another three months.

Warehousing. In a warehousing operation, the Federal Reserve buys foreign currencies spot from the Exchange Stabilization Fund, and simultaneously sells back the proceeds for delivery at a specified future date. Because both purchase and sale are made at a given exchange rate, neither side incurs additional exchange rate risk; interest earnings on the foreign currencies warehoused accrue to the Federal Reserve.

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It acted under the authority granted it by the Gold Reserve Act of 1934, which established the Exchange Stabilization Fund for the purpose of stabilizing the exchange value of the dollar. Because the ESF's resources were meager, the Treasury was anxious for the Federal Reserve to participate for its own account in foreign currency operations.[3] The Federal Reserve had operated on a very limited ad hoc basis for its own account in the forward exchange market in 1961. In early 1962, the Federal Open Market Committee (FOMC) authorized operations in foreign currencies, first on an experimental, then on an ongoing basis. In 1963, the Federal Reserve authorized the "warehousing" of foreign currencies for the ESF, and in that year, it made a warehousing-type transaction. By temporarily selling some of its foreign currency holdings to the Federal Reserve for dollars through warehousing, the ESF was able to continue to purchase foreign currencies even after it had exhausted its initial dollar resources.

To supplement resources for foreign currency operations, various credit facilities were developed. Beginning in 1962, the Federal Reserve established a network of reciprocal currency agreements (swap facilities) with the major foreign central banks and the Bank for International Settlements. By the end of 1967, this network consisted of lines with fourteen central banks and the BIS. Drawings on swap lines were explicitly of short term, and were intended to finance or accommodate short-term capital flows believed to be seasonal or temporary in nature. They were not intended as a substitute for more fundamental adjustment in the balance of payments. For its part, the Federal Reserve used its swap drawings mostly to purchase dollars unwillingly held by foreign monetary authorities, thereby assuming the exchange rate risk on those holdings. Otherwise, those dollars could have been converted into gold.

To obtain medium-term credit, the Treasury issued "Roosa bonds," named after then Undersecretary of the Treasury Robert V. Roosa. These bonds were designed to be attractive to foreign monetary authorities as an alternative to converting dollars into gold. Part of the foreign currency proceeds from Roosa bonds was used to extinguish swap debt that otherwise would have lingered beyond the one-year limit set by the FOMC on such drawings.

Finally, the Treasury also could obtain foreign currencies by drawing on its credit facilities with the International Monetary Fund. However, before 1961, the IMF's supply of usable nondollar currencies was limited by the small size of the quotas of its other members. In that year, the United States and the other Group of Ten countries negotiated a mechanism to increase the potential availability of their currencies to the IMF under the General Arrangements to Borrow.

Stabilizing the Market Price of Gold. A second approach used to protect the U.S. gold stock was an attempt to stabilize the *private* market price of gold around the official price of $35 an ounce. The United States was concerned that if the market price were allowed to rise appreciably above the official price, foreign monetary authorities would convert their dollar holdings into gold at the official price in order to profit by later reselling the gold at the higher market price. To eliminate this potential source of pressure on U.S. gold reserves, in 1961 the United States and seven other countries formed the Gold Pool, a consortium to sell officially held gold in the London market to keep the private market price below $35.20 an ounce (roughly the cost of delivering in London gold purchased in New York). The nominal share of the United States in Gold Pool sales was 60 percent; in fact, the share was larger because other central banks converted the dollar proceeds of their Gold Pool sales at the Treasury's gold window in order to replenish their gold stocks. Although the Gold Pool later became a gold-buying as well as gold-selling syndicate, most of its transactions were sales;

3. The ESF had an initial capital of $2 billion derived from the proceeds of the 1934 revaluation of the U.S. gold stock from $20.67 to $35.00 per ounce. Subsequently, the Bretton Woods Agreements Act directed the Secretary of the Treasury to pay $1.8 billion from the ESF for the U.S. quota subscription in the IMF, thereby reducing the ESF's appropriated capital to $200 million. The ESF grew over time through subsequent revaluations of gold, interest receipts, and net profits resulting from foreign exchange operations. Beginning in 1978, SDRs allocated by the IMF to the United States or otherwise acquired by the United States became resources of the ESF, and the ESF was authorized to issue SDR certificates to the Federal Reserve to help finance the ESF's foreign currency operations.

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given the large U.S. share in the pool, in the end these sales played a major role in the decline in U.S. gold reserves. Ultimately, in March 1968, the Gold Pool was closed, and a two-tier market for gold was adopted with a fixed price for official transactions and a flexible price in the private market. The United States continued to sell gold to foreign monetary authorities at $35 an ounce, and they, in turn, agreed not to sell gold in the private market.

Freeing Gold for International Settlement. The amount of U.S. gold reserves that were "free," or available for transactions with foreign monetary authorities, was limited by the legal requirement that U.S. monetary authorities hold gold equal to 25 percent of the value of domestic currency as backing for the currency. In a third approach to protecting the U.S. gold stock, this gold cover was repealed, also in March 1968, freeing up additional gold reserves for international settlement.[4]

Redressing the Balance of Payments. The fourth approach used to protect the U.S. gold stock was to redress the balance of payments deficit, both directly through commercial policies and capital controls and indirectly through demand-management policies. Devaluation of the dollar was ruled out by U.S. policy and could not be accomplished unilaterally in any case under the Bretton Woods system.

A sharp deterioration in the U.S. current account, which recorded a deficit in 1959, prompted the United States to tie its foreign aid to its exports and played some role in the adoption of more restrictive monetary and fiscal policies in that year. As the economy entered a recession in 1960, the current account returned to surplus, but the United States continued to run deficits in its balance of payments as a result of capital outflows. During the Kennedy Administration, fiscal policy was directed toward stimulating growth, and monetary policy emphasized redressing the capital outflow. In 1961, debt-management and monetary policies sought to sustain short-term interest rates while allowing long-term rates to decline. This policy, called Operation Twist, was aimed at discouraging capital outflows while encouraging business and residential investment. The investment tax credit, introduced in October 1962, was designed to boost investment without lowering long-term interest rates and possibly exacerbating capital outflows. In 1963, tax rates were reduced, and the Federal Reserve increased its discount rate in July from 3 to 3½ percent "to minimize short-term capital outflows prompted by higher interest rates prevalent in other countries."

In addition, a comprehensive program of capital controls was adopted, which targeted the three main types of capital outflow: American portfolio and direct investment abroad, particularly in Western Europe and Japan, and foreign borrowing in the United States. The interest equalization tax, initiated in 1963, was a reaction to the growing issuance of foreign bonds in the United States: Markets for these issues were developing slowly in other countries, and interest rates were lower in the United States than abroad. The tax was designed to curtail sales of new issues of stocks and bonds by foreigners to U.S. residents. The Federal Reserve's Voluntary Foreign Credit Restraint Program, established in 1965, was intended to limit funding in the United States of U.S. banks' foreign operations.[5] U.S. funding of direct foreign investment by U.S. corporations was limited by a Commerce Department program, begun on a voluntary basis in 1965 but made mandatory in 1968.

Creating a New Reserve Asset. While trying to remedy the payments deficit, U.S. policymakers recognized the need for a systematic means to provide for growth in international liquidity without putting pressure on the role of the dollar in the international monetary system. An expand-

4. The Gold Reserve Act of 1934 required 40 percent gold cover on Federal Reserve notes in circulation and 35 percent cover on deposits at Federal Reserve Banks. In 1945, these requirements were reduced to a uniform 25 percent. In March 1965, the 25 percent gold cover on deposits at Federal Reserve Banks was eliminated.

5. As a traditional borrower in U.S. markets, Canada was exempted from both the interest equalization tax and the Voluntary Foreign Credit Restraint Program on the understanding that it would not serve as a conduit for capital flows to the rest of the world.

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ing world economy could be expected to generate a secular increase in the demand for international reserves—dollars and gold. That demand had been met through the early 1960s by a buildup of official claims on the United States as foreign monetary authorities intervened to maintain the value of their currencies against the dollar. Gold and foreign exchange reserves of the foreign G-10 countries tripled over the Bretton Woods period, as chart 1 shows. Most of the growth reflects an increase in foreign exchange (essentially dollars), which, as is evident from the chart, was not matched by a rise in the U.S. gold stock. Hence, confidence in the ability of the United States to meet calls on the gold stock diminished. Thus, reliance solely on increases in U.S. liabilities to foreign official institutions for an increase in world reserves was seen to be inconsistent in the long run with maintaining the convertibility of the dollar into gold.

In light of this fundamental tension, the final approach to protecting the U.S. gold stock and the stability of the Bretton Woods system was to create a reserve asset whose supply could be systematically increased as the world economy expanded. This approach was proposed by the United States and eventually resulted in an agreement to create SDRs (Special Drawing Rights of the International Monetary Fund) through the First Amendment to the IMF *Articles of Agreement*, which was adopted in 1968 and became effective the following year. The first allocation of SDRs was made in January 1970.

Major Episodes and U.S. Responses

Responding to the strains that divergent macroeconomic policies, structural changes in the world economy, and resulting payments imbalances placed on the Bretton Woods system, monetary authorities devalued and revalued currencies or on occasion allowed them to float. The United States generally welcomed revaluations but considered devaluations appropriate only if they were unavoidable. However, when sterling came under pressure intermittently in 1964–67, the United States was concerned that the devaluation of the other major reserve currency would exert substantial market pressure on the dollar.

During the summer of 1964, the U.K. balance of payments deteriorated sharply, largely because of a stimulative fiscal policy. After the Labor Party's victory in October 1964, selling pressure on sterling intensified as the new government's policies showed little prospect for redressing the payments deficit. The U.K. government strongly opposed the devaluation of sterling. The United States endorsed this position and participated in international credit packages to bolster U.K. reserves, including increases in the Federal Reserve's swap line with the Bank of England in 1964 and 1966. When sterling again came under downward pressure in the second half of 1965, the Federal Reserve joined a number of European central banks and the Bank of Japan in purchasing sterling in the market. Exchange rate risk on the sterling acquired was covered by agreements with the Bank of England.

After intermittent recoveries and bouts of selling pressure, sterling again came under persistent downward pressure beginning in the spring of 1967, for several reasons: U.K. monetary policy eased; tensions mounted in the Middle East culminating in war; and the U.K. trade position steadily deteriorated, especially after the closing of the Suez Canal. In an effort to support sterling, U.S. authorities purchased it in the market on a swap basis (that is, they bought sterling spot against redelivery to the market at a future date). After several increases in the Bank of England's official lending rate failed to relieve the pressure on sterling, the U.K. authorities devalued the pound in November 1967. No major country followed the United Kingdom in devaluing; nonetheless, the devaluation of sterling brought into question the basic premise of the Bretton Woods system that par values of reserve currencies should be regarded as fixed.

By late 1967, U.S. inflation had risen, and the balance of payments had worsened as a consequence of the economic expansion associated with the Vietnam War. Rapid advances in Japan's international competitiveness, following its postwar reconstruction, exacerbated the U.S. payments imbalance. In this context, selling pressure shifted from sterling to the dollar. The pressure took the form of record private purchases of gold in London and shifts of private funds from dollars into continental currencies.

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The United States reaffirmed its commitment to maintain the official price of gold at $35 per ounce and, acting jointly with other members of the Gold Pool, continued to stabilize the market price through sales in the London market. The Federal Reserve also enlarged its swap lines, which were used to absorb some of the dollars flowing to foreign central banks; and to a limited extent it sold foreign currencies forward to the market. However, heavy sales of gold by members of the Gold Pool tended to encourage further speculative buying as market participants came to expect that, given the implied loss of gold, these operations would be abandoned. Indeed, the Gold Pool was disbanded in March 1968, and the two-tier pricing system was established.

Continued deterioration in the U.S. trade and current accounts was offset in 1969 by increases in U.S. monetary restraint, which supported the dollar. However, once U.S. monetary conditions eased as domestic economic activity slowed, the deterioration in the external accounts again came to the fore, and by 1971 the dollar came under heavy selling pressure. U.S. authorities responded initially with limited forward sales of foreign currencies and swap drawings to mop up part of the purchases of dollars by foreign central banks. Some foreign countries, notably Germany, abandoned parities and began to allow their currencies to float in May 1971. After selling pressure on the dollar intensified and foreign central banks stepped up their demands for gold conversions, President Nixon, on August 15, 1971, suspended convertibility of dollars into gold or other reserve assets for foreign monetary authorities. He also announced a temporary 10 percent surcharge on imports to ensure "that American products will not be at a disadvantage because of unfair exchange rates" and a 10 percent tax credit to businesses that invested in American-made equipment (the job development credit). Use of the Federal Reserve swap network was suspended after the closing of the gold window. Foreign authorities then had the choice of continuing to pile up dollars in their official reserves that were now inconvertible into gold or allowing their currencies to appreciate. The United States no longer intervened in the market to support the dollar. By the end of August, all major currencies except the French franc were floating. The use of exchange controls in foreign countries proliferated, and intervention by foreign central banks to slow the appreciation of their currencies against the dollar was substantial, even though they were no longer defending fixed dollar parities.

A system of fixed parities among the currencies of the G-10 countries was re-established through a negotiated realignment of exchange rates in the Smithsonian Agreement of December 1971. The dollar was devalued in terms of gold to $38 per ounce; other currencies generally were revalued against the dollar by varying amounts. These changes in parities resulted in an effective devaluation of the dollar of nearly 10 percent on average against the other G-10 currencies. The amount of the devaluation fell short of the best U.S. government estimates of what would be required to restore the U.S. external position to a sustainable balance. Other G-10 countries, however, would not agree to a larger devaluation of the dollar. Recognizing that somewhat more flexibility in exchange rates was desirable, the G-10 authorities widened the margins for intervention to 2¼ percent to permit small adjustments in exchange rates without changes in par values. The United States made no commitment to defend the Smithsonian parity for the dollar through intervention or to restore the convertibility of the dollar into gold: Intervention was still left to foreign monetary authorities if they wanted to maintain their new parities. The United States did agree to examine the case for a more thorough reform of the international monetary system, which led to the establishment in 1972 of the Committee on Reform of the International Monetary System and Related Issues (the Committee of Twenty, or C-20). It also terminated the import surcharge and the job development credit.

As downward pressure on the dollar continued after the Smithsonian Agreement, and the United States refrained from intervening to defend the dollar, market participants began to doubt that foreign monetary authorities would continue to buy inconvertible dollars. As selling pressure on the dollar mounted, the United States, in July 1972, resumed limited sales of foreign currencies to defend the dollar's Smithsonian parities, and the swap network was reactivated.

New concerns about the durability of the Smithsonian Agreement surfaced in early 1973,

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after the Swiss authorities permitted their currencies to float and Italian authorities adopted dual exchange rates. (The United Kingdom had already allowed sterling to float, in June 1972.) In this context, a tightening of monetary policies abroad, the partial relaxation of the U.S. wage–price controls imposed in August 1971, and the sluggish response of the U.S. trade account to the dollar's depreciation in the Smithsonian realignment helped renew downward pressure on the dollar. In February 1973, the dollar was devalued a second time, by 10 percent in terms of gold to $42.22 per ounce. Nearly all other major currencies accepted the full devaluation of the dollar, and the yen floated to an even higher level. At the same time the dollar was devalued, U.S. authorities stated their intention to phase out all controls on capital outflows over the next two years.[6] They expected that the second devaluation of the dollar would be sufficient to remedy the disequilibrium in the U.S. balance of payments, but the market was not persuaded. The dollar fell to its new floor against the major continental European currencies, a development that triggered massive intervention by some foreign central banks. Ultimately, in March, the system of fixed parities effectively was suspended, and the G-10 authorities de facto adopted generalized floating of their exchange rates.

Managed Floating: March 1973 to Date

Initially, the move to generalized floating was widely viewed as a temporary means of coping with speculative pressures, rather than as a permanent feature of the international monetary system. In the discussions of the Committee of Twenty, the par value system still was regarded as the "normal" regime, and "the task of monetary reform was viewed as one of improving the Bretton Woods system so that it would operate without frequent crises, and in a more symmetrical fashion" than previously, "to facilitate the continued expansion of international trade and productive capital flows."[7]

Although some issues were never completely resolved, the Committee of Twenty described a reformed monetary system in its *Outline for Monetary Reform* issued in June 1974. The system had five broad features:

1. *An exchange rate regime based on stable but adjustable par values*. It would include the right to float in particular situations, subject to Fund authorization.

2. *A greater symmetry in adjustments to the balance of payments*. Under the old system, a country in deficit that was losing reserves was pushed more quickly than a country in surplus to deal with its balance of payments problem, either through demand-management policy, or by adjusting the par value of its currency. The U.S. authorities, in particular, believed that because the exchange rate parities of other currencies were defined in terms of the dollar so that the dollar was the residual currency, other countries were allowed to maintain undervalued currencies and accumulate payments surpluses, while the United States ran deficits. As a means of remedying this asymmetry, countries in surplus would now have a larger responsibility for correcting their payments positions.

3. *Multilateral surveillance*. In the context of a par value system in which convertibility could be suspended, the United States favored an international reserve indicator as an objective gauge of whether a country's policies were consistent with overall equilibrium in the balance of payments and with adequate growth in global liquidity (at existing par values). The use of this indicator was thought to put more pressure on countries in surplus to adjust.

4. *Convertibility*. European authorities focused on the lack of mandatory convertibility of dollars under the Bretton Woods system and believed that if the United States were required to finance its payments deficits with reserve assets (gold, SDRs, and Fund drawings), it would have a greater incentive to adopt policies to eliminate its deficits. The United States wanted to limit the

6. U.S. capital controls were dismantled in early 1974.

7. Robert Solomon, *The International Monetary System 1945–1981*, rev. ed. (Harper & Row, 1982).

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convertiblity of dollars beyond a certain point for surplus countries as a means of encouraging a more symmetric adjustment of payments imbalances.

5. *Better international management of global liquidity*. The SDR would become the principal reserve asset, and the role of gold and reserve currencies would be reduced.

Meanwhile, the increase in worldwide inflation in 1972–74, associated in part with the runup in oil prices in 1973, led to a divergence in rates of inflation across countries and increased strains on countries' external positions; these problems were aggravated by the worldwide recession in 1974–75. Under these circumstances, a system of par values seemed even less viable than before. Moreover, the world economy had been functioning reasonably well under a mixed floating system for a few years. The United States shifted from favoring a system of stable, but adjustable par values, with floating in particular situations, to explicitly advocating a system of floating exchange rates as a long-run option.

The Committee of Twenty recognized that the international monetary system was in flux and that it might be particularly difficult in the circumstances of the time to return to a par value system. However, it recommended the immediate adoption in the interim of "appropriate guidelines for the management of floating exchange rates." These were agreed to in 1974, though many of the rest of the committee's recommendations were not adopted because there was never a return to a par value system.

Floating was finally legitimatized at the Rambouillet Economic Summit among the major industrial countries in November 1975. The agreement reached there, which had been worked out in advance between the representatives of the United States and France, had two basic elements. The first was to "deepen, systematize, and broaden" daily consultation among the monetary authorities, including central banks, of the larger countries with regard to exchange market intervention. Second, Article IV of the IMF's *Articles of Agreement,* governing exchange arrangements, was to be revised to permit a member to choose its own exchange arrangements—including floating. Under the revised article, completed in 1976, a return to a generalized par value system, if deemed appropriate, requires an 85 percent majority vote of the IMF membership, effectively giving the United States a veto over such a move.

Article IV also provides for surveillance over the Fund's members to ensure effective operation of the international monetary system and compliance with members' general obligations, which include (1) "endeavoring to direct economic and financial policies toward . . . fostering orderly economic growth with reasonable price stability;" (2) "fostering orderly economic and financial conditions and a monetary system that does not tend to produce erratic disruptions;" and (3) "avoiding manipulating exchange rates or the international monetary system in order to prevent effective balance of payments adjustment or to gain an unfair competitive advantage over other members." This new Article IV was incorporated, along with a number of other significant changes, in the Second Amendment of the IMF's *Articles of Agreement*, which became effective April 1, 1978.

Broad Objectives of U.S. Exchange Rate Policy

In conjunction with the decision in March 1973 to suspend the commitment to intervene in support of fixed parities against the dollar, the G-10 countries issued a communiqué stating that "official intervention may be useful at appropriate times, to facilitate the maintenance of *orderly* market conditions"(emphasis added). An eventual return to a par value system was assumed, and intervention was viewed as a way to maintain order in the interim. Subsequently, as a system of floating exchange rates came to be regarded as the norm, the statement about intervention in the Rambouillet Declaration was changed to "countering *disorderly* market conditions" (emphasis added). The Rambouillet formulation was repeated in the IMF's *Principles for the Guidance of Members' Exchange Rate Policies*.[8] This concept has since guided U.S.

8. International Monetary Fund, *Selected Decisions and Selected Documents*, Fourteenth Issue (IMF, April 30, 1989). These principles, first adopted in April 1977, specify that "(1) A member shall avoid manipulating exchange rates or the international monetary system in order to prevent effective balance of payments adjustment or to gain an unfair

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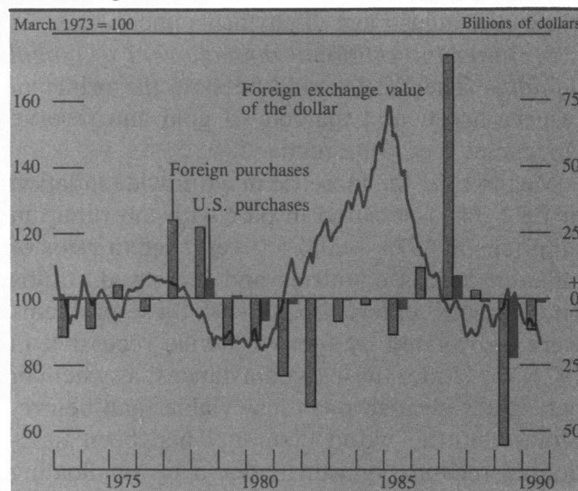
exchange rate policy and appears in both the U.S. notification to the IMF of its exchange arrangements and the FOMC's Foreign Currency Directive.[9]

A precise official definition of "disorderly market conditions" has never been attempted. In a narrow sense, the phrase has been understood to mean market disruptions of very short duration. In a broader sense, the phrase has referred to episodes in which policymakers deem market exchange rates to be clearly out of line with economic fundamentals. In his testimony before the Joint Economic Committee in January 1989, Alan Greenspan, the Chairman of the Federal Reserve Board, interpreted the phrase "countering disorderly market conditions" as fostering exchange rate stability, consistent with understandings among the Group of Seven (G-7) countries.

2. Net official purchases of dollars and the foreign exchange value of the dollar, 1973–90



Net official foreign purchases of dollars are those by thirteen major foreign countries. The foreign exchange value of the dollar is its weighted average against the currencies of the foreign G-10 countries; the weights used are total trade for 1972–76. This series is plotted monthly. The 1990 data for both series are for the first seven months.

Operational Objectives and Approaches

Since 1973, the frequency and size of U.S. foreign exchange operations have varied, as chart 2 illustrates. Intervention was substantial in 1977–79, when the dollar was deemed unacceptably low. U.S. operations were minimal during the first Reagan Administration, in line with its policy of limiting government interference in markets generally; they were directed mainly at countering short-run market disruptions. Intervention was substantial again in the autumn of 1985, when the dollar was regarded as unacceptably high. By far the most extensive U.S. intervention operations, however, have taken place since the Louvre Accord of February 1987; since then U.S. operations have been guided largely by informal understandings with the other G-7 countries about the limits of tolerance for exchange rate fluctuations. Throughout the floating-rate period, other countries' intervention policies have been mixed, with some countries adopting a consistently more active policy than the United States.

Although episodes of U.S. intervention have been relatively infrequent since 1973, the amounts involved sometimes have been sizable. Accordingly, the United States at times has taken steps to increase foreign currency resources for intervention, particularly when the dollar was under sustained downward pressure. The overall size of the Federal Reserve's swap lines with other central banks was enlarged. A new swap line between the ESF and the Bundesbank was established in early 1978, and the ESF became an active partner in the financing of intervention at that time. During 1978, the Treasury sold SDRs for foreign currency, drew on its reserve position at the IMF, and began to issue securities denominated in foreign currencies in the private market ("Carter bonds"). In late 1980, U.S. authorities for the first time began to build up substantial foreign currency reserves through purchases in the market and from other central banks, after having first covered outstanding foreign currency liabilities.

competitive advantage over other members. (2) A member should intervene in the exchange market if necessary to counter disorderly conditions which may be characterized inter alia by disruptive short-term movements in the exchange value of its currency. (3) Members should take into account in their intervention policies the interests of other members, including those of the countries in whose currencies they intervene."

9. The U.S. notification to the IMF was amended following the Plaza Agreement of September 1985 to provide for intervention "to counter disorderly market conditions, or when otherwise deemed appropriate."

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During times when the dollar's exchange value raised particular concern—in 1977–79, 1984–85, and 1987—it became a significant factor in Federal Reserve decisions regarding monetary policy. Furthermore, consultation and cooperation on macroeconomic policies by the major industrial countries have increased over the floating-rate era amid a growing perception that the existing international monetary arrangements have not exerted as much equilibrating influence on payments imbalances, or provided as much independence for monetary policies, as had been hoped. Wide swings in exchange rates have occurred, contributing to large trade imbalances and resource reallocations, and pointing up the need for more compatible policies among the major countries.

Major Episodes and U.S. Responses

The first time U.S. authorities intervened following the adoption of generalized floating was in July 1973. Concern over rising U.S. inflation, forecasts of vastly higher energy imports, and the potential ramifications of the Watergate affair weighed on the dollar; at the same time, a tightening of German monetary policy supported the mark and associated European currencies. As the dollar fell, trading became increasingly disorderly, with many banks refusing to quote rates. In these circumstances, U.S. authorities intervened to counter disorderly conditions in the markets.

The scale of operations was expanded a bit in the winter of 1974–75. Inflation in the United States was still worrisome, whereas price pressures in many other industrialized countries were abating. Though worldwide, the recession was most severe in the United States. The Federal Reserve had begun to ease money market conditions in the autumn of 1974, and the federal funds rate plummeted from 13 percent in July 1974 to 5⅜ percent in March 1975. With interest differentials between dollar and foreign currency assets eroding, the dollar depreciated. U.S. authorities intervened at first to cushion the dollar's decline. In mid-January 1975, they became more concerned with the dollar's progressive slippage, and stepped up intervention in support of the dollar in concert with the central banks of Germany and Switzerland. Between October 1974 and March 1975, U.S. authorities made gross purchases of $1.4 billion, and the central banks of Germany and Switzerland made somewhat larger dollar purchases. The dollar did not recover until March, when U.S. interest rates stabilized while foreign interest rates declined.

The first sustained period of U.S. intervention under the floating-rate regime occurred in 1977–79. By 1977, rapid growth in U.S. domestic demand had contributed to a deterioration of the U.S. current account balance, which swung from a surplus of more than $4 billion in 1976 to a deficit of more than $14 billion in 1977; it had also contributed to a pick-up in inflation to nearly 7 percent (December to December), up from 5 percent in the previous twelve months. Short-term interest rates in the United States rose during 1977, and the Federal Reserve raised its discount rate twice by year-end. But, with M1 expanding at a rate well beyond the upper limit of the target range set by the FOMC, the perception in exchange markets was that the Federal Reserve was too slow in responding to inflationary pressures. These conditions contrasted with those in Germany and Japan, where a more rapid policy response to inflationary pressures resulted in slower economic growth, contributing to surpluses in current accounts.

As the depreciation of the dollar intensified around the turn of the year, the Federal Reserve responded by raising its discount rate in January 1978 to 6½ percent, citing developments in foreign exchange markets. However, the pace of U.S. inflation quickened to 9 percent in 1978, in part reflecting the past depreciation of the dollar; meanwhile, inflation in the other G-10 countries, on average, declined—from 5½ percent in 1975 to slightly more than 4 percent in 1978. Efforts to reduce the U.S. trade deficit by curbing oil imports also were unsuccessful. The Federal Reserve engineered further firming in money market conditions through the spring and summer, but the growth of M1 still exceeded its targeted range and the dollar continued to fall. Noting both disorderly conditions in exchange markets and the serious U.S. inflation problem, the Federal Reserve in August 1978 raised its discount rate ½ percentage point further to 7¾ percent. This move and subsequent increases in

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the autumn provided only temporary support for the dollar. Between May and October 1978, President Carter announced a series of measures to fight inflation, including delays and reductions in the amount of scheduled tax cuts, budgetary restraints, and voluntary wage–price guidelines. Following the announcement of the last two measures in October, the dollar tumbled still further, hitting on October 30 a record low on the trade-weighted index compiled by the Federal Reserve Board staff. Two days later, a dollar-defense package was announced. It included a further hike in the discount rate by an unprecedented full percentage point, to a then historic high of 9½ percent. In unveiling the package, President Carter stated that "the continuing decline in the exchange value of the dollar is clearly not warranted by the fundamental economic situation" and "as a major step in the anti-inflation program, it is now necessary to correct the excessive decline in the dollar."

During 1977–79, U.S. authorities also took steps to bolster their resources for intervention. In December 1977, the President announced an explicit undertaking to intervene in concert with other countries to support the dollar. In January 1978, the Treasury stated that the ESF would henceforth be used as an active partner in the financing of intervention, and that a new swap line with the Bundesbank had been established. Furthermore, in March, the Federal Reserve's swap line with the Bundesbank was doubled, and the Treasury sold SDRs to the German central bank for marks. The Treasury also indicated that it was prepared to draw on its reserve position at the IMF to acquire foreign currencies. To further support the dollar, the Treasury announced in May that it would resume auctioning gold to the public.[10] Finally, as part of the November 1, 1978, dollar-defense program, a $30 billion package of foreign currency resources to finance U.S. intervention in cooperation with foreign authorities was put together. It consisted of an increase in Federal Reserve swap lines with the central banks of Germany, Japan, and Switzerland; sales of SDRs; a drawing on the U.S. reserve position at the IMF by the Treasury; and issuance of Carter bonds.[11]

With these resources, U.S. authorities intervened aggressively, sometimes in concert with other central banks. Net official purchases by U.S. authorities in the market from October 1977 through the end of 1978 amounted to about $10 billion, while foreign authorities bought about $37 billion. In 1978, the major central banks more than financed the current account deficit, with net official purchases more than double the $15 billion deficit.

In the first half of 1979, the dollar recovered somewhat, but by mid-June it came under renewed selling pressure. The second oil-price shock in 1979 added substantial upward pressure to price levels worldwide and restricted output. In the United States, these problems were acute: Inflation already was more rapid than in most foreign economies, and the data pointed to a slowdown in economic activity. In contrast, foreign economic growth had not yet begun to decline, with German and Japanese authorities having committed themselves to stimulative fiscal packages at the Bonn Economic Summit in the summer of 1978. Policymakers in most foreign countries responded to the hike in oil prices by tightening monetary conditions, but the Federal Reserve, responding to signs of weakness in the U.S. economy, took less vigorous steps, raising its discount rate 1½ percentage points in three moves in the third quarter of 1979. Nevertheless, the growth of U.S. monetary aggregates remained well above projected rates during the summer of 1979. Furthermore, U.S. energy policy was widely regarded in exchange markets as being in disarray. The subsequent shake-up of the Carter cabinet raised concerns in exchange markets about political leadership as well. Under these circumstances, U.S. authorities intervened substantially during the summer of 1979 to resist the dollar's decline.

The continued weakness in the dollar and other signs of rapidly deteriorating inflation ex-

10. The U.S. Treasury had auctioned a small amount of gold—1.3 million ounces—during 1975–77 to underline the U.S. policy position that gold was no longer a monetary asset and should be treated like any other commodity.

11. In 1978, the FOMC extended the warehousing facility to include the U.S. Treasury's General Fund, which used the warehousing facility for the proceeds of the Carter bonds.

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pectations, including sharply rising prices of gold and other commodities, were important considerations in the adoption of new monetary operating procedures by the Federal Reserve on October 6, 1979. The shift in operating procedures entailed a greater emphasis on the control of banks' nonborrowed reserves and, therefore, less control of the federal funds rate. These procedures were intended to assure better control over the growth of the monetary aggregates and, in general, to damp inflationary pressures. The Federal Reserve also increased its discount rate a full percentage point to 12 percent and imposed a supplemental reserve requirement on banks' managed liabilities.

Following the change in operating procedures, U.S. interest rates rose sharply, but political developments in late 1979 weighed on the dollar. These included the taking of U.S. hostages by Iranian militants, the threat by Iranian authorities to withdraw funds from U.S. banks, the freezing of Iranian assets in U.S. banks, and the Soviet invasion of Afghanistan.

During the first quarter of 1980, the dollar strengthened. The demand for money and credit was increasing rapidly: Inflationary expectations were mounting, as increases in consumer prices topped 14 percent in the year ending in March 1980; and financial markets were anxious about the Carter Administration's economic policies, including the imposition of credit controls in March. The Federal Reserve continued to restrain the growth of nonborrowed reserves, and interest rates in the United States soared, with the federal funds rate increasing nearly 4 percentage points, in barely four months, from 13¾ percent in December 1979 to 17⅝ percent in April. U.S. authorities took advantage of the dollar's rebound to acquire foreign currencies to repay debt incurred as a result of dollar-support operations in 1978–79.

Subsequently, as economic activity in the United States contracted sharply in the second quarter of 1980, short-term interest rates in the United States plummeted. Between April and July, the federal funds rate fell more than 8 percentage points, prompting a sharp decline in the dollar. During this period U.S. authorities intervened heavily to slow the dollar's fall.

By September 1980, the dollar began to strengthen as the U.S. economy performed favorably compared with other economies. Inflation in the United States had begun to wane, while in several other countries, especially the traditionally low-inflation countries of Europe, it remained high relative to postwar experience. The U.S. economy also showed more resilience, bouncing back from the sharp downturn in the second quarter of 1980; output in most European economies stagnated and unemployment increased. As the U.S. economy rebounded and the Federal Reserve continued to emphasize nonborrowed reserves, interest rate differentials moved sharply in favor of dollar assets. Two additional factors lent further support to the dollar later that fall: The election of Ronald Reagan suggested to the market a political commitment to bringing down inflation; and the global pattern of external balances shifted in favor of the United States. The U.S. current account swung into surplus in the second half of 1980, reflecting a strong improvement in non-oil trade as a result of the past depreciation of the dollar.

In the fall of 1980, U.S. monetary authorities still had outstanding foreign currency obligations in the form of swap debt and maturing Carter bonds to cover. As the dollar began to strengthen, they purchased the foreign currencies needed to cover those obligations when they judged that doing so would not depress the dollar.

Even after the outstanding obligations were covered, U.S. authorities continued to purchase foreign currencies to build up U.S. foreign currency reserves. Before this time, the Federal Reserve and the Treasury had had essentially no long-term net asset position in foreign currencies (see chart 3). U.S. authorities decided to acquire foreign currency balances to avoid having to finance intervention by incurring swap debts with sometimes reluctant foreign monetary authorities. In addition, they judged that the dollar's strength could well be temporary. The dollar had been supported primarily by unusually favorable interest differentials and, in an environment of volatile interest rates, these might narrow, putting downward pressure on the dollar.

The Federal Reserve and the Treasury intervened in this manner from October 1980 through

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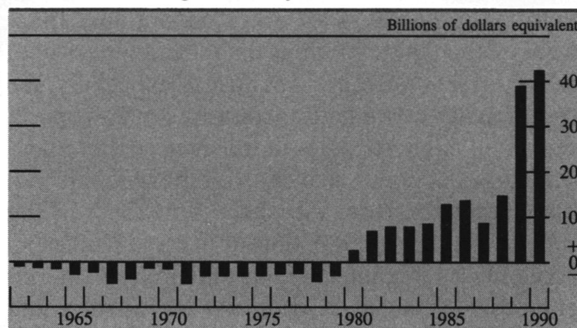
3. U.S. net foreign currency balances, 1962–90



Foreign currency balances are valued at historical cost. The data are for the end of the periods, except the datum for 1990, which is for the end of July.

mid-February 1981, purchasing nearly $7 billion equivalent of German marks and small amounts of Swiss francs and French francs. As of February 1981, their combined net position in foreign currencies (marks, yen, and Swiss francs) was $6 billion equivalent. This position compares with net foreign currency liabilities that peaked at $3.5 billion equivalent (valued at February 1981 exchange rates) in September 1979.

In early 1981, the new Reagan Administration decided to move away from what it judged to have been the heavy intervention inherited from the previous administration. This decision reflected the view that exchange rates were the product of economic policies and that a "convergence" of economic policies was the way to stabilize exchange rates, a view consistent with the Administration's general desire to minimize government interference in markets. Testifying before the Joint Economic Committee of the U.S. Congress on May 4, 1981, then Undersecretary of the Treasury Beryl Sprinkel described the new Administration's exchange market policy as "a return to fundamentals" by "concentrating on strengthening and stabilizing the domestic economic factors which have undermined the dollar during the last decade or so." In conjunction with the emphasis on economic fundamentals, Undersecretary Sprinkel stated that the Administration intended to "return to the more limited pre-1978 concept of intervention by intervening only when necessary to counter conditions of disorder in the market." He anticipated little need for U.S. intervention in light of the President's proposed program of incentive-enhancing tax cuts and deregulation and in light of the Federal Reserve's policy of gradually reducing money growth to noninflationary levels.

From 1981 through early 1985, the dollar continued to strengthen, for several reasons. U.S. monetary conditions were restrictive in the context of a robust recovery, and prospects for continued large U.S. fiscal deficits exerted upward pressure on real interest rates. Meanwhile, monetary authorities abroad initially were reluctant to raise interest rates because their recoveries appeared more fragile. Investment, including foreign investment, boomed in the United States, attracted by the increasingly favorable business climate. In addition, dollar-denominated assets were sought as a "safe haven" following the onset of the international debt crisis and amid apprehensions about the political situations in some European countries.

U.S. intervention operations from April 1981 through 1984 were very limited, occurring on only twenty days, in line with the Administration's view that the strong dollar was an indication of the robust U.S. economy and not a cause for concern. Moreover, most of these operations were undertaken at the urging of foreign monetary authorities. On net, U.S. authorities sold $750 million against marks and yen during this period.

Some European monetary authorities who favored more active management of exchange rates objected to the U.S. policy of "nonintervention." In this context, the G-7 Economic Summit at Versailles in June 1982, agreed to establish a working group (the Jurgensen Group) to study the effectiveness of intervention in foreign exchange markets.[12]

By mid-1984, however, the dollar had risen nearly 60 percent on average against the other G-10 currencies from its level in the fourth quar-

12. Paragraph 38 of the Jurgensen report concludes that "intervention had been an effective tool in the pursuit of certain exchange rate objectives—notably those oriented towards influencing the behavior of the exchange rate in the short run. There was also broad agreement that sterilized intervention [intervention that leaves the monetary base unchanged] did not generally have a lasting effect, but that intervention in conjunction with domestic policy changes did have a more durable impact. At the same time it was recognized that attempts to pursue exchange rate objectives which were inconsistent with the fundamentals through intervention alone tended to be counterproductive."

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ter of 1980, and its strength concerned some U.S. policymakers. Concern was expressed in FOMC meetings, among other forums, about the implications of the strong dollar for the U.S. manufacturing sector and about the consequences for inflation should the dollar drop precipitously. These considerations were among the arguments leading to an adoption of an easier monetary stance in mid-1984.

As the dollar continued to rise, the second Reagan Administration began to reverse its policy of nonintervention in currency markets. Group of Five (G-5) officials, meeting on January 22, 1985, issued a statement reaffirming their commitment to promote the convergence of economic policies, to remove structural rigidities, and (as agreed at the Williamsburg Economic Summit of April 1983) to undertake coordinated intervention in exchange markets as necessary. Subsequently, in coordinated operations with other central banks, U.S. authorities sold about $650 million between January and March 1985.

Although the dollar had started to decline by late February, that decline had not yet had time to produce an improvement in the U.S. trade deficit. So, protectionist sentiment in the United States mounted as the trade deficit swelled to an annual rate of $120 billion in the summer of 1985. In part to deflect protectionist legislation, U.S. officials arranged a meeting of G-5 officials at the Plaza Hotel in New York on September 22 with the purpose of ratifying an initiative to bring about an orderly decline in the dollar. In their statement, G-5 officials drew attention to the significant progress that had been made in promoting favorable economic performance along a path of steady noninflationary growth. Yet, they observed, "recent shifts in fundamental economic conditions among their countries, together with policy commitments for the future, have not been fully reflected in exchange markets." Large imbalances in external positions were noted, along with the potentially "mutually destructive" protectionism they might engender. The statement concluded:

> The Ministers and Governors agreed that exchange rates should play a role in adjusting external imbalances. In order to do this, exchange rates should better reflect fundamental economic conditions than has been the case. They believe that agreed policy actions must be implemented and reinforced to improve the fundamentals further, and that in view of the present and prospective changes in fundamentals, some further orderly appreciation of the main non-dollar currencies against the dollar is desirable. They stand ready to cooperate more closely to encourage this when to do so would be helpful.

This statement that exchange rates were out of line with economic fundamentals represented a sharp reversal of the U.S. Administration's previous stance.

Although intervention in exchange markets was not explicitly mentioned, the last sentence of the G-5 statement quoted above encompassed it. During the seven weeks following the Plaza Accord, G-5 authorities sold nearly $9 billion, of which the United States sold $3.3 billion.

With respect to policy intentions, the communiqué said little that was new. No commitments were made regarding U.S. monetary policy. However, Japanese government officials stated their intention to implement "flexible management of monetary policy with due attention to the yen [exchange] rate." Since the imbalance in external positions reflected, to some extent, the misalignment of fiscal policies, specific programs consistent with current policy intentions to reduce fiscal stimulus in the United States and increase it abroad were included in the statements. The United States promised to "implement fully the deficit reduction package for fiscal year 1986" specified in the Gramm–Rudman–Hollings act and indicated its intention to implement revenue-neutral tax reform. Japan agreed to increase investment by local governments, conditional on the circumstances of each region. The West German government stated its intention to continue its tax reform, with tax cuts due to take effect in 1986 and 1988. The United Kingdom and France each promised to curb public expenditure and to reduce tax burdens.

In reaction to the G-5 statement and subsequent intervention, the dollar fell sharply. Monetary tightening in Japan in late October provided further downward impetus for the dollar. By year-end the dollar had fallen 17 percent against the yen and 14 percent against the mark from its

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levels just before the Plaza meeting, leaving it 24 and 29 percent respectively below its peaks in February.

Throughout this period, the Federal Reserve emphasized that, given the dependence of the United States on large capital inflows for the time being, underlying confidence in the dollar needed to be maintained. Although it believed that a precipitous fall in the dollar was only a remote possibility, it was concerned that, should it occur, it could force sharply higher interest rates and inflationary pressures, thereby threatening the financial system and the economy. In light of these considerations, the decisions to lower the Federal Reserve's discount rate in March and April 1986 were carefully coordinated with similar moves by other central banks. The March move coincided with reductions in official rates in Japan, Germany, France, and the Netherlands. Subsequently, the United Kingdom and several other countries in the European Monetary System cut their official rates. In April, the United States and Japan lowered their discount rates in tandem.

Formal procedures to improve G-7 policy coordination and strengthen multilateral surveillance were agreed to at the Tokyo Economic Summit in May 1986. In particular, a framework for the systematic consideration of national policies and performance was adopted, involving the use of economic indicators. According to the summit declaration, the purposes of improved coordination "should explicitly include . . . fostering greater stability of exchange rates." Although the United States supported improved coordination of macroeconomic policies to foster increased stability in exchange rates, U.S. authorities did not intervene in exchange markets in 1986 because the dollar's continued decline was regarded as orderly and not cause for concern. Japanese authorities, however, became quite concerned about the yen's appreciation, particularly in the runup to the national elections in Japan, and the Bank of Japan intervened quite heavily in support of the dollar in the spring and summer of 1986.

The dollar declined to seven-year lows in early 1987, amid signs that the U.S. economy might be weakening while the U.S. trade deficit continued to grow. Furthermore, various press statements attributed to U.S. Administration officials were interpreted in exchange markets as indicating a lack of concern about the ramifications of a further decline in the dollar. In these circumstances, U.S. monetary authorities at the end of January intervened on one occasion in support of the dollar. This was the first operation in support of the dollar since mid-1980, except for small operations when President Reagan was shot in March 1981 and during the Continental Bank crisis in May 1984. It was conducted in coordination with the Bank of Japan.

On February 22, 1987, officials of the major industrial countries met at the Louvre in Paris. They concluded that "substantial exchange rate changes since the Plaza Agreement will increasingly contribute to reducing external imbalances and have now brought their currencies within ranges broadly consistent with underlying economic fundamentals." In addition, they expressed concern that "further substantial exchange rate shifts could damage growth and adjustment prospects in their countries." Therefore, they agreed to "cooperate closely to foster stability of exchange rates around current levels." In this regard, the G-7 authorities reached certain general understandings about the tolerable range of fluctuations in exchange rates for the dollar and about cooperation in exchange market operations.

No new commitments regarding monetary policy were made at the Louvre, although the Bank of Japan announced a reduction of a half percentage point in its discount rate effective the next day. Only two aspects of the agreements on fiscal policy represented new initiatives. Japan promised that "a comprehensive economic program will be prepared after the approval of the 1987 budget by the Diet, so as to stimulate domestic demand, with the prevailing economic situation duly taken into account." Germany agreed to "propose to increase the size of the tax reductions already enacted for 1988." On the U.S. side, the commitment to "policies with a view to reducing the fiscal 1988 deficit to 2.3 percent of GNP from its estimated level of 3.9 percent in fiscal year 1987" was consistent with the Gramm–Rudman–Hollings target, which in the event was not reached.

Despite heavy intervention purchases of dollars following the Louvre Accord, the dollar

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continued to decline, particularly against the yen. Market participants perceived delays in the implementation of expansionary fiscal measures in Japan expected after the Louvre Accord, and talk of trade sanctions on some Japanese products heightened concern about a deterioration in U.S.–Japanese trade relations. By the time of the G-7 meeting in early April, the dollar had fallen more than 5 percent against the yen from its level at the time of the Louvre Accord. At the April meeting, the G-7 officials "reaffirmed the view that around current levels their currencies are within ranges broadly consistent with economic fundamentals and the basic policy intentions outlined at the Louvre meeting." They urged further measures, however, to "resist rising protectionist pressures, sustain global economic expansion, and reduce trade imbalances." In this regard, they welcomed newly announced proposals by Japan for a large supplementary budget to stimulate the economy.

The dollar began to firm in May when monetary conditions tightened in the United States and eased abroad. In addition, the passage of the supplementary budget in Japan and more favorable U.S. trade data offered some optimism regarding adjustment of trade imbalances. But the dollar turned down again with the release of disappointing U.S. trade data in mid-August. Citing "the potential for greater inflation, associated in part with weakness in the dollar," the Federal Reserve raised its discount rate ½ percentage point to 6 percent in early September. However, record U.S. trade deficits and market perceptions that the G-7 authorities were pursuing their own domestic objectives soon sparked a further selloff of the dollar, and equity prices plunged worldwide. The dollar's decline gathered momentum once the Federal Reserve moved more aggressively than its foreign counterparts to supply liquidity in the aftermath of the stock market crash. The Federal Reserve's actions in this regard led market participants to believe that it would emphasize domestic objectives, if necessary at the cost of a further decline in the dollar. By year-end, the dollar's value had fallen 21 percent against the yen and 14 percent against the mark from its levels at the time of the Louvre Accord.

In these circumstances, G-7 officials reconvened by telephone in late December and reached a new set of understandings about fluctuations in exchange rates and cooperation in exchange market operations. They stated that "either excessive fluctuation of exchange rates, a further decline of the dollar, or a rise in the dollar to an extent that becomes destabilizing to the adjustment process, could be counterproductive by damaging growth prospects in the world economy." They also reaffirmed their commitment to "cooperate closely on exchange markets." In addition, the agreements on fiscal policy measures contained in the Louvre Accord were extended to include policies for 1988.

Following the Louvre Accord, the G-7 authorities intervened heavily in support of the dollar throughout the episodes of dollar weakness in 1987, and sold dollars on several occasions when the dollar strengthened significantly. Net official dollar purchases by the G-7 and other major central banks effectively financed more than two-thirds of the $144 billion U.S. current account deficit in 1987. The U.S. share of these purchases was $8.5 billion, and the share of the other G-7 countries was $82 billion.

The G-7 authorities continued to make large purchases of dollars into January 1988, and the dollar stabilized. Subsequently, the dollar strengthened as monetary conditions in the United States were tightened earlier than those abroad and U.S. external accounts improved. As some foreign authorities began to tighten monetary conditions and external adjustment stalled during the second half of 1988, the dollar eased back somewhat. For the year as a whole, the dollar appreciated moderately; U.S. authorities both bought and sold dollars, so that intervention was small on balance. When the dollar again strengthened in the first part of 1989, reaching a 2½-year high against the mark and threatening to undermine progress on external adjustment, the U.S. authorities became more active in selling dollars.

In September 1989, G-7 officials issued a communiqué stating that they "considered the rise in recent months of the dollar inconsistent with longer run fundamentals" and "agreed that a rise in the dollar above current levels or an excessive decline could adversely affect prospects for the world economy. In this context, they agreed to cooperate closely in exchange markets." The

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release of this statement was followed by three weeks of coordinated intervention with the initial objective of lowering the dollar and the later objective of keeping the dollar lower. For 1989 as a whole, U.S. authorities sold $22 billion net, by far the largest U.S. annual operation ever; other G-7 countries made net sales of $43 billion.[13] To facilitate these operations, the Treasury made extensive use of the warehousing facility with the Federal Reserve—its first use since the proceeds of the Carter bonds were unwound in 1982. Chiefly as a result of intervention, the combined Federal Reserve and Treasury net position in foreign currencies increased to $38 billion equivalent at the end of 1989 valued at historical cost, as shown in chart 3.

During late 1989 and early 1990, the dollar's movements against the major currencies diverged. The opening of the Berlin Wall and subsequent steps toward unification of the two Germanys bolstered the mark, while political uncertainty and concern in exchange markets that monetary policy in Japan was too lax depressed the yen. Consistent with G-7 understandings, U.S. authorities intervened in support of the yen in early 1990, buying more than $2 billion equivalent of yen. The Bank of Japan also bought yen against dollars. As the yen continued to weaken nonetheless, G-7 officials—meeting in early April—issued a communiqué stating that they had discussed "developments in global financial markets, especially the decline of the yen against other currencies and its undesirable consequences for the global adjustment process and . . . reaffirmed their commitment to economic policy coordination, including cooperation in the exchange markets." In fact, there was little U.S. intervention in support of the yen after the communiqué was released. Concerns about Japanese monetary policy dissipated, and the yen recovered somewhat. Between May and July of 1990, in order to adjust balances of foreign currencies and to facilitate the retirement of a portion of the amounts of foreign currencies held by the Federal Reserve under its warehousing arrangements with the ESF, the Treasury liquidated $2 billion equivalent of DM balances in ways that would not significantly influence prevailing exchange rates.

13. The scale of U.S. intervention was much larger in 1989 than in 1977–79. However, somewhat larger operations probably are required to influence exchange rates now, because the size of the net open position of the private sector undoubtedly has increased during this period. Though there are no reliable measures of the latter, according to a survey by the Federal Reserve Bank of New York, the size of the U.S. market increased from an estimated average daily turnover of $18 billion in 1980 to $129 billion in 1989.

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