CHAPTER 6

The International Economy in 1973

INTERNATIONAL TRADE AND INVESTMENT grew at a near record rate during 1973, despite the strains placed on the international economy by massive capital flows, large fluctuations in exchange rates, and strong price pressures due to crop failures, capacity limitations, and cutbacks in oil production by the major producers. The existing international monetary and trading system proved resilient enough to enable governments to cope with the difficulties they experienced in managing their economies, without having to take measures that would have seriously disrupted international trade and investment flows. While individual governments adopted different policy instruments, including external measures, in seeking to stabilize their economies, potential policy conflicts were minimized by mutual accommodation. The common effort to arrive at pragmatic solutions to joint problems undoubtedly strengthened the international economic system.

As indicated elsewhere in this report, the major problem faced by the United States as well as the other major industrial nations during 1973 was inflation. In most economies, demand at the beginning of the year was fast approaching or was already in excess of the capacity to produce more goods. Demand pressures were intensified when large speculative capital flows led to excessive increases in the money supply in a number of countries. Superimposed on this generally inflationary environment were particularly large imbalances between demand and supply in particular sectors. Capacity limitations were especially severe in the processing of raw materials, like petroleum and steel. Moreover crop failures in many parts of the world put pressures on agricultural supplies in the United States and elsewhere, and in the latter part of the year the major oil producers in the Middle East cut back the oil they were supplying to the rest of the world.

General inflation combined with particularly large increases in the prices of basic foods and processed materials to create tremendous political pressures in most countries for government actions to reduce price increases. Among the policy measures governments took in response to such pressures were price controls and export controls. The latter measure had the unfortunate side effect of shifting the inflationary pressures to other countries. Nevertheless in most cases governments recognized the limits of beggar-my-neighbor

policies, and the tensions among countries resulting from the pursuit of such policies were successfully eased by means of diplomatic efforts.

In working out cooperative approaches to the various global problems governments benefited from discussions regarding a longer-term reform of international economic arrangements. In turn, the experiences of the past year provided a new perspective on plans for reform. Progress was made in each of the three major areas of reform: the international monetary system, the international trading system, and arrangements relating to international investment.

The international monetary system. Discussions on the future of the international monetary system were held in the framework of the Committee of Twenty, which was set up by the countries belonging to the International Monetary Fund (IMF). An indication of the current state of these discussions was provided by the chairman of that committee in a report to the annual meeting of the IMF in Nairobi in September.

The international trading system. Also in September, 105 countries reached agreement in Tokyo on some general objectives and a framework for a major new round of trade negotiations. They pledged to aim simultaneously for an expansion of international trade opportunities and improvements in the rules and procedures for coordinating trade policies. Prior to this meeting the Administration sent to the Congress draft legislation to authorize U.S. participation in a new round of trade negotiations and to improve the legislative provisions dealing with Presidential management of U.S. trade policy.

International investment. Discussions were held on investment questions in the framework of the Organization for Economic Cooperation and Development (OECD). The preliminary conclusions reached on the basis of these discussions point to the desirability of some new procedures and guidelines which would assure an efficient international allocation of new capital.

WHAT HAPPENED IN 1973?

In the area of international economic relations, the year 1973 may be characterized as one of continuing adjustment to past disequilibria as well as to new developments that entered the picture during the year. Early in the year the governments of most major countries abandoned attempts to fix exchange rates at negotiated levels. While central banks continued to intervene to some extent, foreign exchange markets played the major role in determining the exchange rates that would clear the market. This process was marked at times by unusually large fluctuations of market exchange rates. Nevertheless, the market performed its intermediating function well, and neither trade nor long-term capital flows were seriously disrupted at any time during the year.

The developments in the balance of payments accounts of individual countries reflected, in part, the developments in the foreign exchange markets. The appreciation and depreciation of individual currencies, achieved

either through formal measures by the authorities or as a result of free movement of exchange rates, continued to influence the flows of international commerce and thus the deficits and surpluses of individual countries. Special developments, such as the shortages of food in certain parts of the world and, later in the year, the emerging world energy crisis, also affected the direction and magnitude of trade and capital flows among countries.

What Happened to Exchange Rates?

Developments during 1973 in the foreign exchange market can be conveniently broken into four periods, coinciding with the 4 quarters of the year. These developments are described in detail below. Briefly, in the first quarter, massive capital flows from the United States to Europe and Japan had two effects: First, foreign central banks added around $10 billion in claims against the United States to their reserves as a result of their efforts to support the value of the dollar in terms of their own currencies. Second, when large-scale market intervention failed to restore stability to foreign exchange markets, fixed exchange rates were abandoned; consequently the dollar fell during the quarter by an average of 10 percent against the EC currencies floating jointly, and 7 percent against the currencies of 14 major industrial countries when each is weighted by that country's bilateral trade with the United States (Table 50). For the computation of the trade-weighted depreciation of the dollar see the supplement to this chapter.

In the second quarter the dollar depreciated against most continental European currencies, but remained in close relationship to the Japanese yen, the Canadian dollar, and a number of other currencies accounting for two-thirds of U.S. trade. The dollar dropped 11 percent against most EC currencies floating jointly, and around 5 percent against the group of 14 currencies. Net claims of foreign central banks on the United States during this period actually decreased by about $0.7 billion.

In the third quarter the decline of the dollar was arrested, and its value remained roughly the same against the group of 14 currencies. In fact there was limited intervention by a number of central banks, including the United States, to prevent the dollar from rising.

TABLE 50.—*Changes in the foreign exchange value of the dollar, U.S. liabilities to officia foreigners and U.S. liabilities to private foreigners, 1973*

Item	Percent change from preceding quarter			
	First quarter	Second quarter	Third quarter	Fourth quarter
Foreign exchange value of the dollar [1]	−6.9	−5.0	1.1	5.5
U.S. liabilities, official foreigners [2]	15.9	−.9	−1.3	(3)
U.S. liabilities, private foreigners [4]	−9.3	10.6	4.5	(3)

[1] Trade-weighted depreciation of the dollar against 14 major currencies; computed by Morgan Guaranty Trust Company.
[2] Liabilities to foreign central banks and governments.
[3] Not available.
[4] External liabilities to other banks and to other foreigners.

Sources: Morgan Guaranty Trust Company and International Monetary Fund.

In the fourth quarter the dollar rose sharply. It rose 12 percent against the German mark and around 5 percent against the group of 14 currencies. Central banks intervened substantially to slow the dollar's rise, and claims by foreign central banks on the United States declined.

The first quarter of 1973: Fixed exchange rates are abandoned. Foreign exchange markets were stable in the beginning of 1973. In most foreign exchange markets the dollar was above the level where central banks were committed to buy dollars to keep its value within the agreed margins. The stability was so fragile, however, that any disturbance had a highly unsettling effect on the market. The first such disturbance was an acceleration of the capital flight from Italy into Switzerland. Confronted with massive outflows, the Italian authorities allowed the lira to float, first for financial transactions and later for all transactions. In Switzerland, the influx of funds from abroad intensified an already high rate of inflation. To gain greater control over its monetary policy, Switzerland decided on January 22 to allow the franc to float. By terminating their purchases of foreign currencies in support of a fixed value of the franc vis-a-vis other currencies, the Swiss monetary authorities were able to avoid further involuntary increases in the Swiss money supply.

The floating of the franc by Switzerland, a country viewed by many as the epitome of financial orthodoxy, strengthened expectations that other exchange rate adjustments were inevitable, particularly for currencies of countries with large payments imbalances such as Japan and Germany. These expectations led to increasingly large speculative purchases of marks and yen for dollars. Such sales reached a peak in the first week of February, forcing the closing of foreign exchange markets on February 10. Extensive consultations among the monetary officials of major countries followed and culminated in a number of coordinated exchange rate adjustments. On February 12 the Administration announced that it would ask Congress to approve a 10 percent devaluation of the dollar in terms of Special Drawing Rights (SDR's). At the same time, the Japanese authorities announced that the Japanese yen would be allowed to float upward. The resulting exchange rate structure was endorsed by the 14 major industrial nations.

The multilateral adjustment of exchange rate patterns in February, including the devaluation of the dollar, did not, however, restore market confidence in the entire pattern of rates—in particular, the rate for the German mark. Large-scale flows of speculative funds out of dollars into marks and some other currencies continued until exchange markets were officially closed on March 2.

The exchange markets remained officially closed until March 19, although private trading of currencies continued. On March 19, five of the European Community (EC) countries—Belgium, Denmark, France, Germany, and the Netherlands—allowed their currencies to float jointly vis-a-vis the dollar and other currencies. As before, these countries decided to keep the exchange

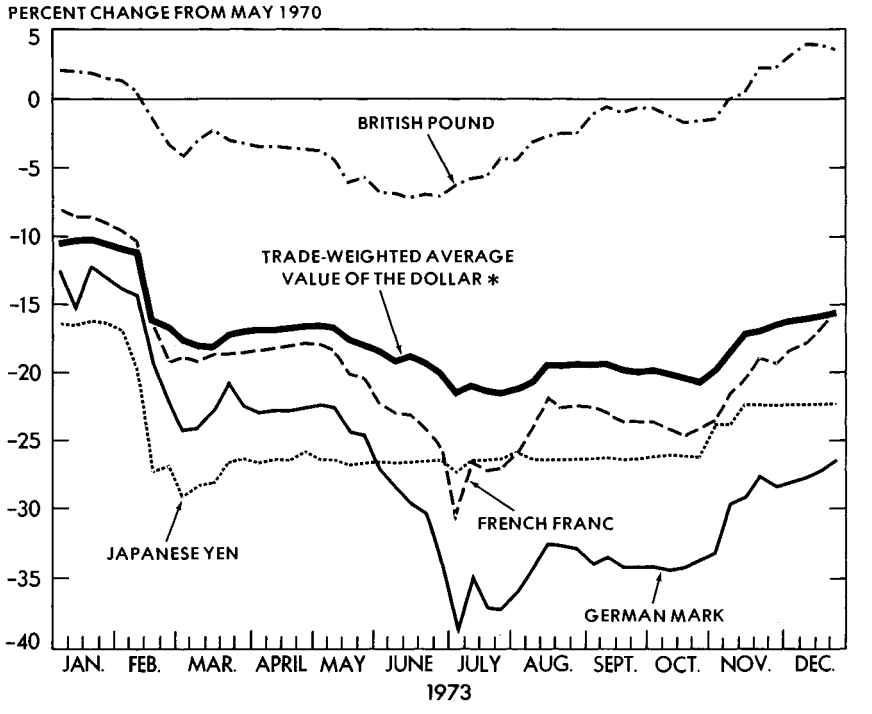
rates between any two of their currencies within 2¼ percent of an agreed relationship. In addition, Norway and Sweden subsequently decided to peg their currencies to the jointly floating EC currencies.

The second quarter of 1973: The dollar drops further. Between the end of March and the end of June the markets were characterized by a substantial depreciation of the dollar against most European currencies. At the same time, the dollar remained relatively unchanged against the currencies of Japan, Canada, and a number of other countries. The dollar declined about 11 percent in terms of most EC currencies floating jointly and 5 percent in terms of the trade-weighted average of 14 currencies. The dollar declined by as much as 15 percent vis-a-vis the German mark, which was revalued by 5½ percent relative to the other EC currencies floating jointly. (Chart 10.)

There were three sources of downward pressure on the dollar in European exchange markets during this period. First, the United States continued to have a deficit vis-a-vis Europe on basic balance transactions—

Chart 10

Change in the Value of the U.S. Dollar Relative to Selected Foreign Currencies



* RELATIVE TO 14 MAJOR CURRENCIES; COMPUTED BY MORGAN GUARANTY TRUST COMPANY.
NOTE: FOR INDIVIDUAL CURRENCIES, FRIDAY CLOSING PRICES WERE USED.
SOURCE: MORGAN GUARANTY TRUST COMPANY.

which include trade, grants and other unilateral transfers, and long-term investment. This meant that the public was supplying more dollars through these transactions in exchange for European currencies than were being purchased with European currencies through these transactions. Second, many non-European countries besides the United States had deficits vis-a-vis Europe in basic transactions. Since most of these countries use the dollar as a reserve currency, they tended to finance their deficits vis-a-vis Europe with dollars. Dollars from non-American sources were thus competing with dollars from the United States in European exchange markets. Third, the dollar is widely held abroad not only by central banks but also by many private individuals, banks, and corporations. With the continuing decline of the dollar during the previous 2 years, many of these private foreign holders wanted to exchange their dollars for foreign currencies.

As long as markets clear, however, there can be no "additional" dollars remaining unsold. Exchange rates will change until enough sellers have been discouraged from selling or enough buyers have been encouraged to buy. Equilibrium in the market was established during this period by private foreigners on balance increasing their dollar holdings. Figures for dollars held by private foreigners in Europe are not available, but the changes in these holdings are reflected in the $2 billion increase of U.S. liquid liabilities to all private foreigners from the end of March to the end of June. Foreign central banks decreased their holdings of dollars over this period by $650 million.

The rapid drop of the dollar significantly below what many considered its longer-term value created widespread uncertainty regarding future exchange market trends; for a short period during the end of June and the beginning of July the spread between buying and selling rates widened, and it became increasingly difficult for traders to obtain forward coverage. Nevertheless foreign exchange markets remained open throughout this period, and normal international trade and investment transactions continued without major disruption. Fears by many that floating exchange rates would disrupt international trade proved to be without foundation.

The third quarter of 1973: The dollar begins to rise. The decline of the dollar relative to European currencies was reversed in the third quarter as an increasing body of opinion in the market held that the dollar had become undervalued, a view that was strengthened by the emergence of a sizable surplus in U.S. trade of goods and services. In this favorable atmosphere, some further impetus to the turn in market opinion came from the announcement on July 18 of U.S. intervention in the foreign exchange market in order to maintain orderly market conditions.

This move discouraged speculation against the dollar by raising the possibility that the U.S. authorities would buy as many dollars (or sell as many foreign currencies) as would be necessary to prevent a further decline. To make large-scale intervention by U.S. authorities in the foreign exchange market a credible possibility, it was announced at the same time that bi-

lateral swap facilities had been increased by $6¼ billion; the amount of foreign currencies that the Federal Reserve could borrow from other central banks thus rose to nearly $18 billion. In fact, intervention by the Federal Reserve amounted to only about $250 million during the last 3 weeks of July. During this period the dollar rose by around 4 percent against the jointly floating European currencies.

The fourth quarter of 1973: The dollar rises further. During the fourth quarter the appreciation of the dollar continued, in part because it was thought that the United States was in a relatively better position than Western European countries and Japan to deal with the cutback of oil production in the Middle East and the simultaneous increase in world oil prices. At the same time, the surpluses in U.S. trade were becoming larger, and figures published for the long-term investment account began to show a surplus. Between September 28 and December 27 the dollar rose by about 11 percent against the jointly floating European currencies. By the end of the year the dollar was thus approximately back to its February post-devaluation level. The dollar was rising so fast, in fact, that some foreign central banks found it increasingly desirable to reduce their controls on capital inflows and to sell off some of the dollars which they had accumulated in the past. Foreign exchange reserves of the Bank of Japan and the Bundesbank declined by $1 billion each during the October to November period as a result of their dollar sales.

Increasingly in the fourth quarter the exchange markets became dominated by the energy crisis and the abrupt and massive additions to import costs of oil. Early in January 1974 both the yen and the European currencies floating jointly depreciated sharply, and in some cases reached levels lower than those prevailing immediately after the multilateral adjustment of February 1973. On January 21, the French franc was allowed to float freely, and immediately declined by 5 percent.

Over the year as a whole the functioning of the exchange market improved as traders gained experience with floating exchange rates. This can be seen, for instance, in the narrowing spread between the buying and selling rates of the major currencies traded and in the diminished day-to-day fluctuations of these currencies. In general, one has to conclude that despite the dramatic decline and the equally dramatic rise of the dollar against the major European currencies, foreign exchange markets functioned remarkably well, and only on a few days was it difficult to carry out foreign exchange transactions.

What Happened to All Those Dollars?

Over the years a large volume of dollars has been accumulated by foreigners, both governments and private individuals. To a large extent these dollars are held because the dollar is the most widely used currency for international transactions, and a stock of dollars was therefore useful for all the reasons that induce people to hold money. Dollars are thus held voluntarily by private banks, corporations, and individuals. They are also held volun-

tarily by foreign central banks, even though central banks to some extent hold these dollars not because they want to increase their dollar reserves, but because they want to avoid a rise in the value of their currencies relative to the dollar.

Dollars held by foreigners are generally held in the form of dollar balances at commercial banks. However, not all of the dollars held by foreigners are dollars which are liquid liabilities of the United States, that is, dollar balances held in U.S. commercial banks. Some dollars are liabilities of European private banks which have accepted dollar deposits. These are generally known as Eurodollars. European banks can create new dollars by lending dollars to someone who will redeposit them in a Eurodollar bank. As long as the proceeds of new loans are left as deposits in the banking system, the banking system as a whole can continue to create new money in the form of bank deposits.

A number of central banks have participated in the creation of new dollars in the Eurodollar market by depositing their reserves with European commercial banks making Eurodollar loans. By so doing, these central banks not only facilitated the expansion of Eurodollars, but in many cases they ended up by creating new official reserves. Most major central banks, however, have now agreed to refrain from depositing new reserves in the Eurodollar market.

When they are sold in the foreign exchange market, dollars owned by foreigners become indistinguishable from dollars owned by Americans. That is, when they are sold they exert a downward pressure, and when they are purchased they exert an upward pressure on the market value of the dollar. Private American holders of dollars and private foreign holders of dollars, whether these are held in U.S. or in foreign banks, have similar economic motives in selling or buying dollars in the foreign exchange market. For instance, if the dollar is expected to fall relative to foreign currencies, holders of dollars will have an incentive to sell dollars and to buy foreign currencies. If the dollar is expected to rise relative to foreign currencies, holders of foreign currencies have an incentive to buy dollars and to sell their foreign currencies. While the average foreign holder of dollars is likely to be more sensitive to such changes in the foreign exchange value of the dollar than domestic holders of dollars, the experience of the last few years has shown that Americans will exchange large amounts of dollars for foreign currencies when they find it profitable to do so.

There is some reason to believe that during the first half of 1973 expectations of a future fall in the value of the dollar may have induced some dollar holders, both in the United States and abroad, to sell their dollars, thereby depressing the market value. Thus there were occasions when the value of the dollar was declining in the market, even though the United States was experiencing a rapid improvement in its underlying balance of payments. In the second half, expectations of a future rise of the dollar may have reinforced an upward trend by inducing both Americans and foreigners to shift from foreign currencies into dollars.

It is difficult to get a precise estimate of the total amount of dollars held by foreigners, because figures on dollar deposits in foreign banks are not easily available. Recorded liquid dollar liabilities of the United States—dollars held by foreigners which are liquid liabilities of either a U.S. bank or the U.S. Government—amounted to about $83 billion at the end of 1972; of this, $63 billion was held by official institutions, and about $20 billion was held by private banks and other foreigners. In addition the Bank for International Settlements (BIS) has estimated that at the end of 1972 the total liquid dollar liabilities of private banks in the EC, Sweden, and Switzerland amounted to almost $100 billion. If interbank deposits made by these banks are taken out of this figure, and certain other adjustments are made, the BIS finds that the Eurodollar volume was about $70 billion. The total volume of dollars held by foreigners as balances in both American and European banks was thus in the neighborhood of $150 billion. Of this amount perhaps a little more than half was held by official institutions, and the remainder by foreign private banks, corporations, and individuals. In comparison, the domestic supply of dollars in the United States, in the form of currency and demand deposits, was about $250 billion at the end of 1972.

During 1973 the total stock of dollars held abroad increased further. Total liquid dollar liabilities of the United States at the end of September amounted to $92½ billion, of which $72 billion was held by official institutions and $20½ billion by private foreigners. Indications are that the volume of Eurodollars has expanded as well.

What Happened to Trade and Investment?

During the first 3 quarters of 1973 Americans exported $3.0 billion more in goods and services than they imported, a large change from the first 3 quarters of 1972, when imports surpassed exports by $3.7 billion. On a long-term basis, private foreigners invested $1.4 billion more in the United States than Americans invested abroad during the first 3 quarters of the year; during the same period in 1972, U.S. private long-term investment abroad exceeded foreign private long-term investment in the United States by $0.9 billion.

These developments in the balance of payments are consistent with what one might expect from the exchange rate realignments of the past 2 years. The depreciation of the dollar in terms of foreign currencies should lower the price of U.S. goods and services relative to foreign goods and services, thereby stimulating sales abroad and encouraging U.S. residents to purchase goods produced at home rather than abroad. By reducing the relative cost of production in the United States and thus adding to its profitability, the depreciation tended to encourage investment in the United States rather than abroad. Any interpretation of the effect of the depreciation on developments in trade and investment during 1973, however, is complicated by the changing business conditions in the United States and elsewhere, by crop failures abroad, by changes in the demand for and sup-

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ply of oil, and by domestic price control programs, all of which also affected the U.S. balance of payments.

Trade in goods and services. The value of U.S. merchandise exports increased 41 percent from the first 3 quarters of 1972 to the first 3 quarters of 1973, while imports increased 24 percent over the same period. Higher prices resulting from intense inflationary pressures here and abroad during 1973 accounted for much of the increase in the value of U.S. trade. Adjusting for price increases, however, makes the turnabout in U.S. merchandise trade even more apparent. The volume of imports increased only 7 percent during the first 3 quarters of 1973, just over half the growth rate from 1971 to 1972, while the volume of exports increased 24 percent during the first 3 quarters of 1973, more than double the growth rate from 1971 to 1972.

The rapid growth of exports during 1973, following the realignment of exchange rates, is consistent with economic expectations. But factors other than the realignment of exchange rates also affected U.S. exports during 1973.

Shortfalls in foreign crops played a major part in increasing agricultural exports during the first 3 quarters of 1973. Drought in India and Africa, poor weather conditions in the Soviet Union, and the sharp reductions in Peruvian fishmeal production greatly reduced world production of grains and protein feeds in 1972, thus reducing supplies available for 1973. Because the United States was the largest supplier of foodstuffs with relatively open access to foreign buyers, these developments abroad had a particularly strong effect on U.S. agricultural exports. The depreciation of the dollar, however, was also an important factor in expanding agricultural exports by reducing the relative price of American crops. The value of agricultural exports in the first 3 quarters of 1973 equaled $12.7 billion, up 88 percent from the same period in 1972. Although exports of agricultural products accounted for only one-fourth of the value of total exports, 40 percent of the increase in exports during the first 3 quarters of 1973 came from agricultural products. Prices of food exports during the third quarter were nearly 40 percent higher than a year earlier, a change which accounted for a large part of the increase in the value of these exports.

Domestic price control programs also stimulated exports during 1973, at the expense of domestic supplies. As prices of internationally traded goods rose, it became more profitable to sell abroad, where prices remained unconstrained, rather than at home, where prices were controlled.

The increase in U.S. exports, which resulted from food shortages and domestic price control programs, was offset in part by the rapid increase in imports of crude and refined petroleum products. The fact that the demand for oil in recent years has been growing more rapidly than domestic oil production has created a gap which could only be filled by imports. At the same time, the world price of oil increased dramatically during the year. Although the major Arab oil producers embargoed oil shipments to the

United States in October, this did not reduce the value of oil imports during the rest of the year. (For a more complete discussion of these developments see Chapter 4.)

The relatively slow growth of total imports during 1973, despite the rapid increase in imports of crude and refined petroleum products, is the most visible indicator of the impact of exchange rate realignment on U.S. trade. In the later stages of a cyclical expansion, imports should accelerate as domestic producers run low on domestic supplies and rely on foreign suppliers to meet their demands. The fact that the volume of imports did not grow very much faster during 1973 than it did in 1972 suggests that the dollar depreciation had a significant effect on trade.

Developments in U.S. bilateral trade provide some additional clues to the impact of exchange rate realignments. For countries whose currencies have shown a relatively large appreciation in relation to the dollar, one might expect that imports from the United States would grow more rapidly than exports to the United States. This appears to be true, both for Japan and for the EC. Japan, whose currency has risen sharply against the dollar, experienced a 73 percent increase in imports from the United States during the first 3 quarters of 1973, while Japanese exports to the United States increased only 9 percent. The EC, whose currencies also rose sharply in relation to the dollar, increased their imports from the United States by 40 percent, while their exports to the United States increased by 23 percent.

For countries whose currencies changed relatively little in relation to the dollar, the growth rates of exports to and imports from the United States should be more nearly alike. This appears to be true for Canada and the United Kingdom, whose currencies changed relatively little during 1973 in relation to the U.S. dollar. Exports by Canada to the United States and imports from the United States both increased by around 20 percent. Exports by the United Kingdom to the United States and imports from the United States both grew by around 30 percent.

U.S. trade with Communist countries in Europe, including the U.S.S.R., increased dramatically during 1973, not because of exchange rate realignments, but because of a normalization of trade relations combined with poor harvests in the Soviet Union. Exports to the Communist countries in Europe increased to $1.4 billion for the first 3 quarters of 1973, while imports rose to $0.4 billion. Most of the increase in exports was due to larger sales of agricultural products.

Investments. During the first 3 quarters of 1973 private foreigners made more long-term investments in the United States than Americans made abroad. The effective depreciation of the dollar encouraged foreign investment in the United States during the year because it reduced the relative cost of producing internationally traded goods in the United States rather than abroad. The relative cost of producing in the United States declined further as a result of a tendency for wages to rise more rapidly abroad than in the United States; foreign firms thus had a greater incentive to produce

in the United States. In view of the fairly large changes in relative labor costs (Table 51), the increase in foreign direct investment from none during the first 3 quarters of 1972 to $1.5 billion during the first 3 quarters of 1973 may seem fairly small. Judging by the number and size of investment plans that have been announced by foreign companies, however, this flow can be expected to increase significantly in the next year.

TABLE 51.—*Relative labor costs in manufacturing, 1968–73*

[1967=100]

Country and year	Hourly compensation in national currency	Output per man-hour	Unit labor cost in national currency	Value of foreign currency relative to the U.S. dollar	Unit labor cost in U.S. dollars [1]	Index of U.S. unit labor cost as percent of index of foreign unit labor cost
United States:						
1968	107.2	104.8	102.3	----------	102.3	----------
1969	114.0	107.3	106.3	----------	106.3	----------
1970	122.2	108.0	113.2	----------	113.2	----------
1971	130.8	115.7	113.0	----------	113.0	----------
1972	139.0	121.3	114.1	----------	114.1	----------
1973	150.0	127.5	117.6	----------	117.6	----------
Germany:						
1968	105.9	107.6	98.5	99.9	98.3	104.0
1969	115.5	113.8	101.5	101.6	103.1	103.1
1970	133.0	116.7	114.0	109.3	124.6	90.9
1971	152.1	122.4	124.3	114.7	142.5	79.3
1972	169.4	131.0	129.4	125.0	161.7	70.6
1973 [2]	190.5	140.5	135.5	150.5	204.0	57.6
Japan:						
1968	116.2	112.6	103.2	100.4	103.7	98.6
1969	137.3	130.0	105.8	101.1	106.9	99.4
1970	163.4	146.5	111.5	101.1	112.7	100.4
1971	189.0	151.7	124.6	104.2	129.9	87.0
1972	219.5	167.0	131.5	119.5	157.1	72.6
1973 [2]	265.1	198.4	133.7	133.7	178.7	65.8
Canada:						
1968	107.3	107.3	100.0	100.1	100.2	102.1
1969	115.3	113.2	101.9	100.2	102.1	104.1
1970	124.5	115.0	108.2	103.4	111.9	101.2
1971	134.5	121.6	110.6	106.8	118.2	95.6
1972	144.5	126.9	113.8	108.9	124.0	92.0
1973 [2]	157.4	133.5	117.9	107.9	127.2	92.5

[1] Indexes in national currency adjusted for changes in prevailing exchange rates.
[2] Based on seasonally adjusted data for first 9 months.

Note.—Data relate to all employees in manufacturing.

Sources: Department of Labor (Bureau of Labor Statistics) and Council of Economic Advisers.

Foreign purchases of U.S. securities other than U.S. Treasury securities also increased, from $2.6 billion during the first 3 quarters of 1972 to $3.4 billion during the first 3 quarters of 1973. Such an increase is also consistent with what one would expect from the large depreciation of the dollar, inasmuch as the depreciation should increase the relative profitability of producing in the United States. Market expectations also exerted a strong influence on the flow of security transactions over the year. Foreign purchases of U.S. securities were quite large in the first quarter, reaching a total of $1.7 billion. During the second quarter, purchases fell to $0.5 billion, but increased again to $1.2 billion in the third quarter.

Direct and portfolio investments abroad by Americans amounted to $3½ billion during the first 3 quarters of 1973, as they had during the first 3

quarters of 1972. There are two possible reasons for the absence of a decline: First, economic conditions were buoyant throughout the world. Second, most of the outflow occurred in the first quarter, before the major exchange rate adjustments of 1973, and was probably motivated by the anticipation of subsequent exchange rate adjustments.

The U.S. Balance of Payments in 1973

In a world characterized by the managed floating of exchange rates, measurement of the overall balance of payments has become less important. In a fixed exchange rate world, one of the major functions of overall measures of the balance of payments was to signal to policy makers when a given exchange rate had become untenable. To the extent that exchange rates are allowed to adjust automatically in response to payments imbalances, it is no longer necessary to communicate the desirability of an exchange rate adjustment to the policy maker. Of course, to the extent that exchange rates remain constrained by official intervention in the foreign exchange market, the balance of payments numbers will continue to indicate when such intervention may need to be relaxed.

The managed floating of exchange rates has changed in particular the analytical meaning of the official reserve transactions balance, which measures the net direction and magnitude of official intervention in the foreign exchange market over a period of time. In other words, it approximately shows the extent to which governments have bought or sold currencies to influence the exchange rate. It also includes government-to-government payments outside the foreign exchange market, but removing these transactions from the foreign exchange market has the same effect as direct intervention. As long as governments kept market exchange rates relatively fixed by buying and selling foreign exchange, the net amount of such official purchases or sales provided an estimate of the net deficit or net surplus of a given currency traded in the market. To the extent that governments no longer attempt to keep market exchange rates from falling below or rising above a fixed level, changes in the net demand or supply of a currency are reflected in a movement of the exchange rate rather than in a net loss or gain of reserves. Since exchange rates were at first fixed and then floating to varying degrees in 1973, changes in market pressures were reflected in part by changes in exchange rates and in part by net changes in international reserves, that is, by the official reserve transactions balance.

As measured by the official reserve transactions balance, the United States had a deficit of $10½ billion in the first quarter, a surplus of $½ billion in the second quarter, and a surplus of $2 billion in the third quarter (Table 52). That is, in the first quarter, governments purchased roughly $10½ billion to keep the dollar higher than it would otherwise have been; in the second quarter, governments more or less allowed the dollar to find its own level in the market; and in the third quarter, governments sold roughly $2 billion, to keep the dollar lower than it would otherwise have been.

TABLE 52.—*U.S. balances on international transactions, 1972–73*

[Billions of dollars, seasonally adjusted]

Type of transaction	First 3 quarters		1972 IV	1973		
	1972	1973		I	II	III
Goods[1]	−5.2	−0.5	−1.7	−1.0	−0.2	0.7
Services	1.4	3.5	.9	1.1	.9	1.4
Military transactions	−2.7	−2.1	−.9	−.8	−.7	−.6
Investment income[2]	5.6	6.7	2.2	2.3	2.1	2.3
Other	−1.5	−1.1	−.5	−.4	−.5	−.3
GOODS AND SERVICES	−3.7	3.0	−.9	.2	.7	2.1
Unilateral transfers, net[3]	−2.9	−2.7	−.9	−.7	−1.0	−.9
CURRENT ACCOUNT	−6.6	.3	−1.8	−.6	−.4	1.2
Long-term capital	−1.7	.7	.2	−.4	−.2	1.3
U.S. Government[4]	−.8	−.6	−.6	−.3	.1	−.4
Direct investment	−2.6	−1.7	−.6	−1.8	−.4	.5
Other private	1.7	3.0	1.4	1.7	.1	1.2
CURRENT ACCOUNT AND LONG-TERM CAPITAL	−8.3	1.0	−1.6	−.9	−.6	2.5
Short-term claims	−1.8	−4.7	−1.2	−3.8	−.6	−.3
Short-term liabilities	2.3	.5	2.6	−1.8	1.1	1.2
Errors and unrecorded transactions, net	−1.6	−4.8	−1.5	−3.9	.4	−1.4
Allocations of SDR	.5		.2			
TOTAL[5]	−8.9	−8.1	−1.5	−10.5	.3	2.1

[1] Excludes transfers under military grants.
[2] Includes direct investment fees and royalties.
[3] Excludes military grants of goods and services.
[4] Excludes official reserve transactions and includes transactions in some short-term U.S. Government assets.
[5] Equals official reserve transactions balance.

Note.—Detail may not add to totals because of rounding.

Sources: Department of Commerce, Bureau of Economic Analysis, and Department of the Treasury.

Another commonly used measure of the U.S. balance of payments is the current account and long-term capital balance, or the "basic" balance, as it is sometimes called. This balance is computed by adding up all the recorded transactions in the current and the long-term capital accounts, including unilateral transfers. It attempts to measure the extent to which the "long-term" or "underlying" demand for foreign exchange has exceeded the "long-term" or "underlying" supply of foreign exchange during a given period. If all such transactions were accurately recorded, this balance would also equal the changes in official reserves and the changes in short-term foreign assets of private banks, corporations, and individuals, net of changes in liabilities. Because some transactions may not be measured correctly, however, or may escape measurement altogether, a difference usually exists between recorded basic transactions above the line and recorded changes in reserves and short-term assets below the line. This difference appears as an errors-and-omissions item in the balance of payments statistics.

Deficits and surpluses in the *basic* balance need not necessarily imply any disequilibrium which requires corrective action by the government. To the extent that changes in net private holdings of short-term foreign assets are

voluntary, the existence of a surplus or deficit need not imply that it is either undesirable or unsustainable. When such changes are quite large in any one year, however, there is a strong possibility that the change is a temporary response to unusual circumstances, such as differences in interest rates. In these cases, some governments might be inclined to intervene to moderate the exchange rate fluctuations which could result from large shifts in short-term foreign assets.

The U.S. basic balance was in deficit by $1 billion during the first and $½ billion during the second quarter of 1973, while during the third quarter it was in surplus by about $2½ billion. For the 3 quarters, the U.S. basic balance was in surplus by about $1 billion. In other words, Americans in the first 3 quarters of 1973 earned $1 billion more from current account and long-term capital transactions than they spent on similar transactions.

Table 52 also shows that during the first 3 quarters $5 billion in net foreign currency expenditures were not recorded, while recorded short-term private claims on foreigners increased by $4½ billion. These two items were "financed" by the $1 billion current account surplus; a $½ billion net increase in recorded short-term liabilities to private banks, corporations and individuals; and an $8 billion net increase in U.S. liabilities to foreign official institutions.

The Net Foreign Asset Position

At the end of 1972 the estimated value of American assets abroad was $200 billion, and the value of American liabilities to foreigners was $150 billion. The $50 billion difference between the two is the estimated net American investment position abroad. The net investment position declined by about $20 billion from 1970 to 1972, but data for the first 3 quarters of 1973 suggest that it probably increased last year.

Changes in the U.S. net asset position are brought about in part by surpluses or deficits in the balance on current account, a balance which includes U.S. transactions in goods and services, as well as unilateral transfers (Table 52). The largest changes occurred in the balance on goods and services. When the United States has a deficit in its trade balance as in 1971 and 1972, it imports more than it pays for with exports, thus increasing American liabilities to foreigners. With a trade surplus, as in the first 3 quarters of 1973, the United States acquires imports and an increase in net assets abroad in return for its exports. One would therefore expect an improvement of the U.S. net asset position during 1973.

The U.S. net asset position is also affected by several kinds of transactions and accounting adjustments that do not appear in the balance of payments. When foreign subsidiaries reinvest their earnings, this increases the value of U.S. assets abroad; and when foreign-owned subsidiaries in the United States reinvest their earnings, this increases U.S. liabilities to foreigners. During 1973, U.S. reinvestment of earnings may have exceeded foreign reinvestment by $4 billion or more, thus adding to the U.S. net asset position. Changes in the valuation of outstanding assets and liabilities, which

result from changes in market value or changes in exchange rates, also have a small impact on the U.S. net asset position. Because of the small surplus on current account and the large level of net reinvested earnings, the net asset position of the United States must have improved markedly during 1973.

Balance of payments figures indicate, however, that the increase in liabilities to foreigners exceeded the increase in U.S. assets abroad by about $4½ billion for the first 3 quarters of the year. This inconsistency can be partly explained by the net acquisition of unrecorded short-term foreign assets by Americans.

U.S. assets abroad are on the whole less liquid than U.S. liabilities to foreigners. At the end of 1972 about 90 percent of the $200 billion in assets abroad were considered nonliquid. Direct investments amounted to about $95 billion; holdings of long-term foreign securities were about $25 billion. The remaining nonliquid assets include $15 billion in nonliquid short-term assets held by private Americans, $10 billion in private long-term claims by banks and others and $35 billion in Government-owned assets. Most of the U.S. liquid assets are in the form of official monetary reserves. On the other hand, more than half of the $150 billion in liabilities to foreigners are considered liquid; most of these liabilities are in the form of bank deposits, short-term Treasury securities, and negotiable certificates of deposit.

HOW GOVERNMENTS BEHAVED IN THE MONETARY ARENA

During 1973 international monetary arrangements continued to evolve in response to changing needs. A major characteristic of these evolving arrangements is a considerable diversity in practices by different countries. Yet despite this diversity, countries cooperated with each other to a remarkable extent, as they had in 1972, and from their cooperation one could begin to see the development of some conventions to guide countries in their monetary relations. This process has benefited from the discussions taking place in the framework of the Committee of Twenty, a committee associated with the International Monetary Fund.

Exchange Rates and Intervention

Exchange rates became more flexible in 1973, as the governments of most major countries reduced or suspended their commitments to maintain fixed exchange rates, and other governments changed their par values more frequently. While governments have continued to intervene in the foreign exchange market in order to influence the movement of the exchange rate, it can no longer be assumed that they will finance an excess demand or absorb an excess supply of foreign currencies at given exchange rates. The situation can best be described as one of managed floating.

In managing their exchange rates, countries followed widely differing practices, as can be seen in Table 53. Some countries have allowed their currencies to float within a rather wide range, resorting to only limited

TABLE 53.—*Maximum percent change in exchange rates between various foreign currencies and the dollar during 1973*

Type of intervention	Maximum percent change in rate during 1973			
	No change	1–8 percent	9–20 percent	More than 20 percent
Countries maintaining a joint float, with intervention to maintain a stable relationship within the group, but minimal intervention in outside currencies.	----------	----------	Sweden.	Belgium Germany Denmark France Netherlands Norway
Countries floating independently with some intervention in the foreign exchange market.	----------	Italy Canada	United Kingdom Iceland Finland Portugal	Austria Switzerland
Countries undertaking considerable intervention to maintain a stable relationship vis-a-vis the dollar (except where another currency is noted).	Turkey Argentina Bolivia Costa Rica Dominican Republic Ecuador El Salvador Guatemala Haiti Honduras Mexico Nicaragua Paraguay Peru Israel Philippines	Brazil Colombia Venezuela Republic of China Thailand Korea	Ghana India (pound) Pakistan Spain Egypt Ethiopia Iran Iraq Saudi Arabia Sri Lanka South Africa Greece Yugoslavia	Australia Uruguay Afghanistan Japan CFA Countries (French franc) Chile
Country fixing rate with respect to an average of other currencies.	----------	----------	Morocco	New Zealand

Note.—The procedure for computing maximum percentage changes was to find the largest end month deviation during the year from the dollar exchange rate in effect at the end of December 1972.

Sources: International Monetary Fund, and Council of Economic Advisers.

intervention in foreign exchange markets to maintain orderly market conditions. One group of countries, comprising Germany, France, Belgium, the Netherlands, Denmark, Norway, and Sweden, decided to keep their currencies relatively fixed with respect to each other. Whenever spot market exchange rates between any two currencies in the group deviate by more than 2¼ percent from an agreed relationship, the monetary authorities are obliged to intervene in terms of each other's currencies. However, in January 1974, the Government of France announced that it would sever the tie between the franc and the other EC currencies floating jointly. Some countries have decided to keep their currencies fixed to one or the other of the major currencies. A few countries have followed the practice of keeping their currencies fixed relative to an average of other currencies weighted according to their importance in bilateral trade.

Most countries, regardless of the exchange rate regime they have chosen, have continued to intervene in the foreign exchange market to varying degrees. Some countries, the United States among them, have restricted themselves to limited intervention with the object of maintaining orderly market conditions. Other countries, although they were officially floating,

TABLE 54.—*Major changes in capital controls, 1973*

Country	Controls on banks and other financial intermediaries	Controls on portfolio investment	Controls on direct investment
Australia	February—broadened coverage of restrictions on borrowing abroad. October—increase from 25 to 33⅓ percent in noninterest-bearing deposits required on borrowings from abroad with a maturity in excess of 2 years.		March—general ban on foreign investment in Australian real estate.
Belgium	March to early September—negative interest rate of ¼ percent per week on nonresident convertible franc holdings exceeding the daily average in the last quarter of 1972. Late September—negative interest rate reimposed.		
Canada			December—act calling for screening of new foreign direct investments in Canada passed.
France	March to early October—prohibition of interest payments on nonresident franc deposits of less than 180 days; increase (to 100 percent) in mandatory reserve requirements on excess of these deposits above their Jan. 4 level. March—restriction on banks' forward exchange transactions with nonresidents. April to late October—banks allowed to impose a negative interest rate of 0.75 percent per month on the increase in nonresident franc deposits above the January 4 level. September—banks prohibited from lending francs to nonresidents.	March to early October—nonresident purchases of short-term securities prohibited.	
Germany	February 4–prior authorization required (and as a rule not given) for contracting of foreign loans and credits in excess of DM 50,000. February 24—Government empowered to raise the cash deposit requirement against foreign borrowing from 50 to 100 percent (authority not yet invoked). July 1 to October 1—minimum reserve requirements against foreign liabilities effectively increased to 90–100 percent, as opposed to 8–20 percent on domestic liabilities.	February—new restrictions on sale of domestic securities to nonresidents.	February—authorization requirement for nonresident direct investment valued in excess of DM 500,000.
Italy		July—blocked noninterest bearing deposit of 50 percent (25 percent for mutual funds) required on portfolio investments abroad.	July—similar deposit required on direct investments abroad.
Japan	May—increase from 70 to 90 percent in allowable foreign currency financing of external operations, including direct investments overseas, purchases of real estate abroad, and prepayments for imports.	May—relaxation of controls governing acquisition of Japanese securities by foreign investors, and acquisition of foreign securities by Japanese investors.	May—continued relaxation of controls on direct foreign investment in Japan. With some exceptions, virtually all industries will be fully open to foreign ownership by the end of 1975.

TABLE 54.—*Major changes in capital controls, 1973*—Continued

Country	Controls on banks and other financial intermediaries	Controls on portfolio investment	Controls on direct investment
	October 25—relaxed requirement that foreigners floating yen loans must immediately convert 90 percent of the proceeds into foreign currency.	November—banned resident purchases of foreign bonds within 6 months of their maturity; ended requirement that security houses should balance foreign purchases and sales of Japanese stocks.	
	November 21—Government announced that it would make no further additions to its dollar financing of one-half of Japanese banks' import loans.		
	December—marginal reserve requirement on free yen deposits by nonresidents lowered from 50 percent to 10 percent.	December—foreigners allowed to purchase Japanese bonds without restrictions.	
Netherlands	March to May — noninterest bearing reserve requirement levied on increases in banks' net foreign guilder liabilities; special commission levied against increases in balances in convertible guilder accounts.	January—residents allowed to subscribe for new Euroguilder notes issued by residents.	
Switzerland	January 29 to October 29—banks prohibited from having net liabilities in foreign currencies (spot and forward together).		
	October 1—National Bank revoked the 2 percent per quarter negative interest rate on banks' franc deposit liabilities to nonresidents.		
United States	May 16—Federal Reserve Board (FRB) lowered reserve requirements against Eurodollar borrowings in excess of the reserve free base (from 20 to 8 percent), and took steps to eliminate gradually the reserve free bases.	April—Interest Equalization Tax (IET) extended through June 1974.	Continued liberalization: export credits extended by direct investors to their affiliated foreign nationals exempted from controls.
	December 26—Federal Reserve Board announced effective Jan. 1, increased foreign lending and investment ceilings for banks and other financial institutions subject to the Voluntary Foreign Credit Restraint Program: ceilings raised on foreign loans by U.S. banks, by U.S. agencies and branches of foreign banks, and by U.S. nonbank financial institutions.	December 26—Treasury Department announced reduction of the IET from an annual rate of ¾ to ¼ percent per annum effective Jan. 1, 1974.	December 26—Commerce Department announced, effective Jan. 1, increased minimum allowable direct investment abroad by U.S. firms from $10 to $20 million per year. In addition, various other regulations were relaxed.
	January 1974—Controls on foreign lending by financial institutions suspended.	January 1974—IET reduced to zero.	January 1974—Controls on foreign investment by U.S. corporations suspended.

Sources: International Monetary Fund, and Board of Governors of the Federal Reserve System.

have intervened on a broad scale to minimize day-to-day fluctuations in their rates. Still other countries have continued to intervene in order to keep their exchange rates stable with respect to a major currency, a group of currencies, or an average of all currencies.

Despite the great variety of exchange rate practices by different countries, relations among countries have remained fairly harmonious. Although no

attempt was made to agree on a code of conduct to guide governments in formulating their exchange rate and intervention policies, extensive consultations have led to wide acceptance of some basic tenets that should influence the formulation of policies in this area. An idea repeatedly expressed in official statements is that countries should intervene in the foreign exchange market when intervention is necessary to maintain orderly market conditions. On the other hand, interventions aimed at obstructing or accelerating a basic market trend would be generally regarded as harmful. There is probably also wide recognition that a country with meager reserves may need more latitude for allowing its exchange rate to decline than a country with ample reserves; and, conversely, a country with ample reserves may need more latitude for allowing its exchange rate to adjust upward than a country with meager reserves. Similarly, when its rate is rising, a country with meager reserves should have wider latitude to intervene in the foreign exchange market than a country with ample reserves, whereas a country with ample reserves should have a wider latitude to intervene in the foreign exchange market when its rate is falling.

The conceptual basis for these conventions, if one may call them that, is similar to the ideas put forward by the United States and some other countries for reforming the international monetary system. The continuing discussion in the Committee of Twenty can be expected to give these ideas more concrete form.

Capital Controls

Another development during 1973 has been the adoption of new measures for controlling capital movements, as can be seen in Table 54. (Controls already in force at the beginning of the year are not shown in the table.) Capital controls were tightened further in the first part of 1973 by many major industrial countries, when exchange market developments put upward pressure on many of the European currencies and several countries sought to moderate this pressure by imposing restrictions on banks and other financial intermediaries. Some of the more common restrictions were discriminatory reserve requirements, and penalty rates or prohibition of interest payments on nonresident deposits. Capital controls did not, however, succeed in preventing large speculative short-term capital inflows, either prior to the revaluation of the dollar in February or from late May to early July.

Some countries, on the other hand, took steps to discourage capital outflows or encourage capital inflows. Italy required noninterest-bearing deposits against investments abroad in order to stem a continuing capital outflow. Japan relaxed controls on inward direct and portfolio investment to reduce the overall balance of payments deficit which developed in 1973.

Since the 1960's the United States has maintained three kinds of restraints on capital outflows: an interest equalization tax on purchases of foreign securities, restrictions on foreign direct investments by U.S. corporations, and limitations on foreign lending by U.S. financial institutions. These restraints were relaxed in December 1973, and removed entirely in January 1974.

Changes in International Liquidity in 1973

Total international reserves increased by $28 billion during the first 9 months of 1973, compared to $28 billion in 1972 and $38 billion in 1971. From the end of 1970 to the end of September 1973, total reserves doubled, increasing from $93 billion to $187 billion. As in previous years, most of the increase was in foreign exchange and resulted from intervention by foreign central banks in the foreign exchange market to slow down the appreciation of their currencies vis-a-vis the dollar. After the major European countries and Japan decided to allow their currencies to float in relation to the dollar, the further accumulation of foreign exchange was reduced. As can be seen from Table 55, foreign exchange reserves increased by $22 billion during the first 9 months of 1973. Of this amount $14 billion occurred in the first quarter, before the major European currencies were floated. The $22 billion increase in foreign exchange reserves consisted of an $8 billion increase in U.S. liabilities to foreign central banks. The remainder constituted increases in dollar balances of central banks held in commercial banks outside the United States, and reserves held in currencies other than the dollar. Toward the end of the year a reversal of this trend set in, as an increasing number of foreign central banks sold dollars to slow the decline of their currencies relative to the dollar.

Despite the large increase in foreign exchange holdings in 1973, the composition of reserves did not change significantly during the year. The proportion held in gold fell from 24 to 23 percent, while that held in foreign exchange increased from 65 to 67 percent of total reserves. Most of the increase in primary reserves (gold, SDR's, and reserve positions in the Fund) resulted from the devaluation of the dollar in terms of gold and SDR's, which automatically increased by 11 percent the dollar value of the existing stock of gold, SDR's, and reserve positions in the Fund.

TABLE 55.—*Composition of international reserve assets, 1970–73*

Type of reserve asset	Value of reserve assets [1] (millions of U.S. dollars)				Percent of total reserves			
	1970	1971	1972	September 1973	1970	1971	1972	September 1973
Total reserve assets	92.6	130.6	158.8	186.9	100	100	100	100
Gold stock	37.2	39.1	38.8	43.2	40	30	24	23
SDR	3.1	6.4	9.4	10.6	3	5	6	6
Reserve position in IMF	7.7	6.9	6.9	7.5	8	5	4	4
Foreign exchange	44.6	78.1	103.7	125.6	48	60	65	67
U.S. liabilities	23.8	50.7	61.5	69.8	26	39	39	37

[1] End of period.

Note.—Detail may not add to totals because of rounding.

Source: International Monetary Fund (IMF).

The official price of gold was raised from $35 per ounce to $38 per ounce by the Smithsonian Agreement in December 1971. It rose from $38 to $42.22 an ounce in conjunction with the announcement early in 1973 that the dollar would be devalued in terms of SDR's. The price of gold in the private bullion market in London increased from $65 at the end of 1972 to $112 at the end of 1973, having reached a peak of $127 on June 5 and July 6. Since the market price of gold has been almost three times as high as the price at which governments have fixed the price of gold for official transactions, countries that hold gold have been reluctant to use it in international settlements. As a first step to unfreezing gold, a number of countries which had previously agreed not to buy or sell official gold in the free market decided to end that agreement in November. While IMF rules still prohibit official gold purchases from the private market when the free market price is above the official price, official sales to the private market are permitted when the free market price is above the official price. Snnce the market price is now nearly three times the official price, central banks would now be in a position to sell gold from the market without violating IMF rules. No country has yet announced, however, whether or when it intends to sell gold to the market.

PLANNING THE FUTURE INTERNATIONAL MONETARY SYSTEM

Discussions begun in 1972 by the Committee of Twenty on reform of the international monetary system continued during 1973. The state of these discussions at the time of the annual meeting of the International Monetary Fund in Nairobi during September was summarized in a document entitled *First Outline of Reform.* It is a report in which the chairman of the committee cites the issues on which some measure of agreement has been reached, points of disagreement, and suggestions by members of the committee about ways of dealing with outstanding issues.

The current international monetary arrangements have been evolving as countries have made pragmatic adjustments to changing realities in the international economy. In making these adjustments, governments have been influenced by the discussions in the Committee of Twenty, just as those discussions have been influenced by the experiences gained with the interim arrangements. In the discussion below, the long-term alternatives are examined within a framework that encompasses both the Bretton Woods system and the current interim arrangements.

The Exchange Rate Regime

The central function of an international monetary system is to facilitate the exchange of one currency for another in such a way that trade and investments can take place across national frontiers almost as easily as within a given country. There are various ways of organizing the exchange of one currency for another. They differ chiefly in their methods of assuring that

over time a country's payments in foreign currencies equals its receipts in foreign currencies.

At one extreme, balance between the demand for and supply of a currency is achieved at all times through a free market in which currencies are traded at whatever exchange rate will clear the market. Many monetary authorities are opposed to this degree of flexibility, however, since they fear that large exchange rate fluctuations would create difficulties for international commerce. In order to overcome some of these difficulties, most governments have made it a practice to enter the market as buyers and sellers whenever changes in the private demand or supply of their currencies would otherwise lead to large fluctuations in exchange rates.

The exchange rate at which one government would like to fix the value of its currency relative to other currencies may not coincide with the exchange rate at which other governments would like to fix *their* currencies.. To avoid such potential conflicts, it is desirable to agree on some rules, which may specify when governments may or should intervene in the market, or when governments may or should allow exchange rates to change.

The rules could be very tightly written, allowing little national discretion; or they could be written with considerable room for nations to make their own judgments. The Bretton Woods system imposed a relatively strict discipline by requiring governments to intervene in the foreign exchange market whenever rates deviated by more than ¾ percent from internationally agreed rates. Exchange rates could be changed only when it could be demonstrated that the existing rates created a disequilibrium which was regarded as fundamental.

Under the current arrangements agreed to in March, governments have accepted a general obligation to intervene in the foreign exchange market to assure orderly market conditions.* In the future international monetary system, the Committee of Twenty has agreed, that exchange rate rules should be less rigid than they were under the Bretton Woods system, but that they should impose more precise obligations than exist under the present arrangements.

When Should Countries Use Demand Management Policies?

Changing the exchange rates is not the only way of removing an imbalance in international payments flows. In fact, it is theoretically possible to have a system of completely fixed exchange rates in which long-term balance between the demand for and supply of foreign currencies is achieved through changes in the level of domestic demand. Under the classical gold standard

*The communique issued on March 16, 1973, by the Group of Ten meeting in Paris stated that the participating countries "agreed in principle that official intervention in exchange markets may be useful at appropriate times to facilitate the maintenance of orderly conditions, keeping in mind also the desirability of encouraging reflows of speculative movements of funds."

system, these demand changes were assumed to take place automatically. Since exchange rates were established by the fixed price of gold in each country, payments equilibrium was assumed to be preserved by the impact of net transfers of gold on the domestic money supply and hence on the total demand for goods and services. However, since most governments today consider it their responsibility to manage domestic demand in accordance with their goals of employment and price stability, complete reliance on adjustments of domestic demand to keep the balance of payments "balanced" is therefore not considered reasonable. At the same time, any government following a rational policy will manage its domestic demand with regard to the side effects on international currency markets, since exchange rate movements have a feedback on domestic economic variables.

The methods by which a country equalizes its foreign currency payments and its foreign currency receipts affects not only its own economy but foreign economies as well, and hence there needs to be agreement on mutually acceptable conduct. The Bretton Woods Agreement, for instance, established a strong presumption that countries would use domestic demand management policies for balance of payments adjustment whenever that would not be inconsistent with domestic price stabilization and employment objectives.

Under present arrangements countries are free to decide on their own the extent to which demand management policies should contribute to a correction of payments imbalance. Nevertheless, in the course of international discussions related to current balance of payments developments, the impact of alternative adjustment measures on other countries is explored, and where conflicts are identified, mutually satisfactory solutions can usually be worked out.

In the future international monetary system, it is generally assumed, countries will continue to have considerable flexibility in choosing among alternative adjustment measures, and they will also continue to take into account the effect of their policies on other countries. It is expected that the adjustment policies of countries will be reviewed by a new committee that will be established in the International Monetary Fund to be composed of policy-making officials from national capitals.

When Should Countries Use Controls?

It would also be theoretically possible to have a system in which balance of payments equilibrium is maintained by government controls over international transactions. The Communist countries, in fact, have adopted such a system. In most non-Communist countries an adjustment system based exclusively on the use of controls would be unacceptable because it would entail unwarranted government interference with private decisions and because it would lead to inefficient production and consumption patterns. In some circumstances, however, governments have found it desirable to use controls to adjust the balance of payments.

The Bretton Woods Agreement permitted the use of controls to regulate international capital movements, but generally ruled out any restrictions on payments for transactions in the current account. The General Agreement on Tariffs and Trade (GATT), which spells out what restrictions countries may place on trade directly, as distinct from restrictions on payments for trade, provides that governments may temporarily impose quotas but may not impose or increase tariffs, in order to deal with a serious balance of payments deficit. In practice, tariff surcharges have been imposed but have remained in effect only for short periods, because other countries have exerted strong pressures to remove them promptly. Nothing has happened to change these rules during the time the present arrangements have been in effect. The *First Outline of Reform* indicates international agreement on a continued "strong presumption against the use of controls on current account transactions or payments for balance of payments purposes." It also rules out the use of controls over capital transactions "for the purpose of maintaining inappropriate exchange rates or, more generally, of avoiding appropriate adjustment action." There has also been wide agreement that, in choosing among different forms of adjustment actions, countries should take into account repercussions on other countries as well as domestic considerations.

When Should Countries Correct Payments Imbalances?

Another area of international concern is the timing of policy measures by countries to remove payments imbalances. This is of international concern because one country's surplus is another country's deficit, and vice versa. When one country fails to deal with a growing payments imbalance, it becomes more difficult for another country to deal with its payments imbalance. Under the Bretton Woods system the main provisions dealing with the timing of adjustment actions were focused on deficit countries. A country wanting to borrow from the International Monetary Fund had to satisfy the Fund that it was taking appropriate actions to reduce its deficit. The more such a country wanted to borrow, the tighter the discipline that the Fund imposed. The IMF Articles of Agreement also provided for pressures to be exerted on countries with persistently large surpluses, though this provision was never applied in practice. Under the current arrangements these provisions remain in effect, although they have become largely inoperative. According to the Chairman of the Committee of Twenty there is agreement that countries should "take such prompt and adequate adjustment action, domestic or external, as may be needed to avoid protracted payments imbalances." There is also agreement that a judgment of what constitutes "adequate adjustment action" should be based on both objective indicators, such as a country's level of international reserves, and an evaluation by an international body such as the IMF. The manner in which these elements might be best combined remains unsettled.

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What Pressures Should Be Exerted on Countries?

Once an obligation is established for countries to act in a timely fashion to remove payments imbalances, the question arises what, if any, pressures ought to be exerted on countries that fail to carry out their obligations. The Bretton Woods Agreement provided mainly for pressures on deficit countries, insofar as the credit facilities of the Fund were made contingent on a finding by the Executive Directors of the IMF that a country was taking adequate steps to remove the deficit in its balance of payments. Under current arrangements the strongest pressures are those exerted by the foreign exchange market. Attempts by a government to prevent an adjustment of the exchange rate in the face of a persistent surplus or deficit tend to trigger large speculative movements, and these in turn exert strong automatic pressure that countries have found difficult to ignore. The Chairman of the Committee of Twenty has indicated that a reformed system will provide for graduated pressures to be applied by the international community on both surplus and deficit countries in cases of large and persistent imbalance. It has not been agreed in the Committee of Twenty, however, what those pressures ought to be and how they ought to be activated.

The Convertibility Issue

Another issue under discussion is the convertibility of national currencies into primary reserve assets such as SDR's and gold. This particular use of the term has to be distinguished from the exchange of one currency into another in the foreign exchange market. The issue of convertibility into primary reserve assets arises primarily in the context of an agreement to limit fluctuations of exchange rates by government intervention in the foreign exchange market. If a surplus country is obligated to buy the currency of a deficit country to forestall a decline of that currency in the foreign exchange market, the question arises to what extent the deficit country ought to buy back its currency with primary reserve assets. One argument in favor of such a requirement is that it limits the extent to which a surplus country is obligated to finance another country's deficit. Another argument is that it puts some pressure on the deficit country to accept "financial discipline" insofar as its deficit is due to excessively loose domestic policies.

Under the Bretton Woods system all countries except the United States intervened in the foreign exchange market to carry out an obligation to keep their exchange rates within internationally agreed margins. Since the currency used for such intervention was generally the U.S. dollar, the dollar itself was kept fixed in foreign exchange markets by the intervention of other central banks. The United States, in turn, accepted an obligation to convert dollars into gold or other reserve assets upon demand. The United States finally suspended this convertibility of the dollar into primary reserves on August 15, 1971, though the dollar remained convertible into other currencies in the foreign exchange market. Inconvertibility came after an extended period during which the American gold stock was very small

in relation to the country's liquid dollar obligations and the major central banks had abstained from converting large amounts of dollars into gold, despite the fact that they were continuing to accumulate a large number of dollars. The Committee of Twenty has agreed that in the context of long-term monetary reform it would be desirable to establish the convertibility of (the dollar as well as other) currencies into primary reserve assets insofar as it is decided to stabilize currencies within agreed margins. But whether such an obligation to convert should be mandatory or at the option of the country acquiring the currency is still at issue.

The Level, Distribution, and Composition of Reserves

To support the value of their currencies in the foreign exchange market, most countries maintain an inventory of foreign currencies. In addition, countries accumulate international assets, such as SDR's or gold, which can be used to buy foreign currencies from the governments issuing them. Finally, countries maintain lines of credit with each other and with the International Monetary Fund so that they can borrow additional amounts of foreign currency when the need arises. Some might argue that the reserves a country keeps are its own affair. It is widely believed, however, that the reserves which countries keep are of interest to the whole world community because they affect the behavior of governments and in doing so also affect everyone else. There are three separate, though interrelated, aspects of the so-called liquidity issue: the level of world reserves; their distribution among countries; and their composition in terms of the types of assets held and the kind of borrowing facilities that are readily available.

The *level* of world reserves is important because if the level is not "right," countries on balance may be induced to adopt policy measures that have a disruptive effect on other countries. For instance, some fear that if reserves are inadequate, countries may not prevent changes in exchange rates considered excessive by the international community; or they may not gear domestic demand management policies to appropriate employment objectives, or they may impose controls on imports or capital outflows. On the other hand, it is feared that if reserves are excessive countries in payments deficit may keep their exchange rates at a fixed level long after an adjustment would have been desirable; or they may escape financial discipline and thus create an inflationary problem for themselves as well as for others; or they may impose controls on exports or capital inflows.

The *distribution* of reserves among countries becomes an issue once the decision is made to manage the global level of reserves. Judgment about the adequacy of world reserves from the point of view of any one country must be based on the relative distribution of those reserves among countries. Thus, while some countries might consider world reserves to be "excessive," they might not be willing to give up any of their own reserves. From the point of view of countries with inadequate reserves, global reserves can be excessive only to the extent that other countries are willing to give up "excess" reserves.

The *composition* of reserves among different assets becomes an issue because each asset (or borrowing facility) has its particular characteristics which determine its desirability and its most appropriate role relative to other types of assets. Moreover, one can affect the total volume of reserves only by affecting the volume of individual components.

The Bretton Woods Agreement sanctioned the use of both gold and foreign currencies as international reserves, but it did not make any provisions for international control of the level of those reserves. In practice the growth of the monetary gold stock was the result of the difference between newly mined gold and the private demand for gold. The growth of currency reserves (mostly dollars) was the result of the difference between the net amount of foreign currency acquired through intervention in the foreign exchange market and the conversion of such currency balances into gold or other assets. The Bretton Woods Agreement did provide one managed source of borrowed reserves in the form of controlled access to a stock of foreign currencies managed by the International Monetary Fund.

In the late 1960's two developments occurred which established some limited international influence over reserve creation. First, as a result of an arrangement made among a number of central banks, it was agreed to stabilize the stock of monetary gold. Second, the member countries of the International Monetary Fund decided to create a new reserve asset, called the SDR, which can be created and distributed on the basis of international consent. At the same time there was an increasing desire to limit the accumulation of currencies, but there was no effective means of doing so. The Committee of Twenty has agreed that in a reformed international monetary system, "countries will cooperate in the management of their currency reserves." No agreement has been reached, however, on how this is to be accomplished.

The Issue of the Numeraire

The numeraire of the international monetary system is the common unit of account in terms of which the relative values of all currencies are measured. While it is of course possible to express the value of a currency in terms of any other currency, it is usually convenient to adopt a single reference point. In addition to being a convenient measuring stick, the numeraire is usually also the unit value in terms of which the obligations of countries to the international monetary system and the claims of countries on the system are expressed.

Under the Bretton Woods system, gold served as the formal numeraire, though the dollar became the de facto numeraire. The use of the dollar as the most commonly used unit of account was made legitimate by the official tie to gold. It was convenient because the dollar increasingly became the most important official as well as private international reserve asset.

When the convertibility of the dollar into gold was suspended in August 1971, the tie between the dollar and gold was broken. It was thus no longer possible to assume that international obligations of countries to the

International Monetary Fund, which in legal terms continued to be denominated in gold, would bear a fixed relationship to the dollar. It was also no longer possible to establish a firm relationship between the value of the SDR, the internationally created reserve asset, and individual currencies. It has thus been difficult for countries to discharge their obligations to the International Monetary Fund, and countries have been reluctant to use SDR's in settlement of their obligations to each other.

There is wide agreement that the SDR should become the formal numeraire of the future international monetary system. In order to make the SDR the numeraire not only formally but also in practice, it will be necessary, however, to establish an agreed procedure for calculating the value of the SDR in terms of individual currencies. Since the SDR is not traded in the market against currencies, there is no one relationship which suggests itself more strongly than another. The most widely suggested idea is that the SDR should be valued in terms of an average of the major currencies.

HOW GOVERNMENTS BEHAVED IN THE TRADE ARENA

During the first half of 1973 the economies of most industrialized countries grew rapidly, and prices rose sharply. Real GNP in the United States grew at an annual rate of about 5.5 percent during the first half of the year, an annual rate well above the long-term average; but growth rates in many foreign economies were also high in relation to long-term growth. The worldwide boom was accompanied by inflation rates exceeding 6 percent in Canada, France, Italy, Japan and the United States. This rapid growth of demand, together with poor harvests and cutbacks in world oil production, created particularly strong upward pressures on the prices of food and some key raw materials. A number of national governments attempted to contain inflation by controlling prices, but by doing so they created widespread shortages and other economic distortions.

Shortages and soaring prices induced governments to add a new dimension to their trade policies. In addition to their traditional concerns about access for their products to foreign markets, they showed increasing concern about access to foreign sources of supply for key materials. Similarly, while governments continued across-the-board efforts to promote exports, they also showed an increasing tendency to limit the export of commodities in short supply.

What Countries Did to Encourage Imports

On July 18 the Australian Government announced that it was unilaterally reducing all its tariffs by 25 percent. In an accompanying statement, the Government explained that "this reduction . . . is designed to restrain price increases by increased competition and by stimulating in the short run a sufficiently large inflow of additional imports to help meet pressing demand." It was estimated that "the tariff changes will have a direct impact on import

prices of approximately the same order of magnitude as a revaluation [of the Australian dollar] of slightly less than 6 percent." While this was certainly the most dramatic example of the new economic incentives prevailing in 1973, similar evidence was provided by the actions of many other countries.

In the United States large increases in the prices of foodstuffs became a particularly important public issue, and efforts to contain these prices became a prominent objective of domestic economic policy, as explained elsewhere in this report. This overall policy led to a review of the quotas on imported food products, which have long been part of U.S. agricultural programs designed to protect farm income at home. Since the problem in 1973 was soaring farm prices rather than falling farm income, the Administration decided to enlarge or suspend many of these quotas while supplies remained scarce. Quotas on meat imports were suspended for 1973; quotas on cheese, butter, and nonfat dry milk were all increased temporarily.

Many other countries took similar actions. Japan, for instance, reduced tariffs on about 5 percent of her import categories and expanded or eliminated some of the remaining quotas on imports of manufactured and agricultural products. Canada lowered tariffs on certain consumer goods and agricultural products. The European Community reduced, and in some cases suspended, tariffs on various industrial products, primarily chemicals. In addition, the variable levies which the EC imposes on food imports as part of its Common Agricultural Policy automatically fell to zero, as world prices exceeded the support price level in the Community.

What Countries Did to Reduce Exports

With the booming worldwide demand for foodstuffs and raw materials, prices of such commodities rose to record heights. This increase in domestic prices as a result of foreign demand pressure caused considerable resentment in many producing countries and led to public demands that domestic supplies be protected. The situation was further aggravated when some governments imposed price controls in an effort to contain the inflationary pressures. Since export prices remained uncontrolled, domestic producers had an increased incentive to export their goods, with the result that the domestic shortages created by the initial imposition of the price controls were aggravated by increased exports. To alleviate the domestic shortages, a number of governments imposed controls on exports.

The pressures of foreign demand for agricultural goods in 1973 had a particularly strong impact in the United States. In most of the other major countries exporting agricultural products, the government acts as the middleman between the domestic producer and the foreign buyer, and it can thus regulate the level of sales. In contrast, the United States has traditionally permitted foreign buyers to purchase freely in the U.S. market. Partly for this reason, and partly because the United States had the largest stocks, foreign buyers converged on the U.S. market, increasing U.S. agricultural exports by

88 percent. Since U.S. food prices had been significantly lower in the past than food prices in more protected markets, the resulting rise of food prices in the United States was larger than in most other countries. When ceilings were imposed on the prices of foodstuffs to contain the inflationary pressures, the export pressures increased even more.

The problems created by rapid increases in foreign demand became particularly pronounced with soybeans and related products. When it appeared that export contracts would exceed available supplies until new crops were harvested, temporary controls were imposed on exports of these commodities in early July. The export licensing provisions allowed each exporter to ship a fixed percentage of the exports he had contracted before June 14. Later the controls were extended to cover other high-protein feeds. All these controls were terminated by October 1. Despite the controls, exports of these products were substantially larger in 1973 than in 1972. The soybean crop harvested in late 1972 had been a record crop, and almost the entire increase in production was added to exports in 1973. The United States increased soybean exports by 18 percent and increased exports of soybean meal by 25 percent over the previous harvesting season.

Export pressures combined with controls on domestic prices also led to domestic supply shortages for a number of nonagricultural commodities, including steel scrap and logs. To alleviate shortages, the Government imposed temporary controls on the export of steel scrap in July. These controls were supplemented by a Japanese decision to reduce imports of ferrous scrap by 1 million tons during the remainder of 1973. Japan also agreed voluntarily to cut back her imports of U.S. logs.

A large number of countries besides the United States imposed export controls to protect domestic supplies of food and to ease inflationary pressures. Brazil, the world's other major exporter of soybeans, limited the export of soybeans and soybean products shortly after the United States imposed controls. Canada instituted an export licensing program for protein feed supplements, edible oils, animal fats, and livestock protein feed; export controls were also imposed on live cattle and hogs and on fresh, chilled, and frozen beef and pork. Australia tightened export controls on a similar list of feed products. Both the Canadian and Australian controls were lifted later in the year. The Common Market countries suspended export subsidies for several dairy products in July and in August banned the export of wheat and wheat products. The export bans were later replaced by export levies on wheat, as well as corn and barley.

Export controls of a more serious kind were imposed by some of the oil-producing countries in the Middle East, after renewed fighting broke out between Israel and some Arab states. In order to pressure third countries to support their cause, most Arab states cut back oil production and exports and imposed an embargo on shipments to the United States, the Netherlands, and several other countries. These controls on oil, as discussed earlier, severely threaten the economic prospects of all industrial nations. If sus-

tained, they would probably be felt most intensely in Japan and Western Europe because of their relatively high dependence on imported energy sources.

Lessons for the Future

The world was caught unprepared when the shortages during 1973 caused a shift from a buyer's to a seller's market for certain products. Because a buyer's market had existed in varying degrees for several decades, most international trading rules focused on trade policy devices, such as tariffs and quotas, that protected producers in their domestic markets. The existing patterns of thought as well as existing trade rules were not well geared to dealing with trade policy measures aimed at restricting exports and preserving domestic sources of supply.

As the year wore on, countries began to seek practical accommodations on the new issues that arose; and in the future it will become desirable to focus greater attention on the possibility of new kinds of commitments by exporting countries on foreign access to their supplies when world demand is strong. Such issues will be explored in the forthcoming world conference on food, in the coming meeting of oil-consuming and oil-producing nations, and possibly at similar conferences in the future. At the same time the formulation of a more general code of good conduct for exporting countries, and the adoption of more systematic procedures for the resolution of disputes over the access to supplies, should be addressed in the context of the forthcoming multilateral trade negotiations.

PLANNING THE FUTURE INTERNATIONAL TRADING SYSTEM

The United States reaffirmed its commitment to a continued expansion of world trade by joining 104 other countries in opening a new round of comprehensive trade negotiations in Tokyo during September. In a statement issued at the end of the meeting the participating countries expressed their willingness to pursue negotiations aimed at "the progressive dismantling of obstacles to trade and the improvement of the international framework for the conduct of world trade."

A new initiative in the trade area is timely for a number of reasons. First, the reductions in trade barriers negotiated during the Kennedy Round have been fully implemented, and this makes desirable the negotiation of new commitments. Second, with the lowering of tariffs as a result of past negotiations, nontariff barriers have become relatively more important as a source of distortion in international trade and have taken on greater importance in international economic relations. Third, expansion of the European Community to include the United Kingdom, Denmark, and Ireland, as well as the substantial elimination of trade barriers between the expanded European Community and most of the other European countries have created the possibility of a significant decrease of trade opportunities between Europe and the rest of the world, including the United States.

A reduction of trade barriers on a global basis would reduce the resulting diversion of trade, just as the Kennedy Round cushioned the diversion of trade after the EC was formed. Fourth, the ongoing reform of the international monetary system will require mutually supportive improvements of the monetary and trading systems, in particular to ensure that efforts in one field are not frustrated in the other. Finally, recent years have seen an increase of political friction related to trade issues, both within the United States and between the United States and its major trading partners. While some friction is inevitable, given the large degree of economic interdependence among countries, the heightening of these tensions reflects in part a failure of the international institutions designed to resolve economic disputes before they spill over into the political arena.

An improvement in the functioning of the international trading system may be the most important outcome of the new round of trade negotiations, inasmuch as such improvement may be essential for alleviating the tensions which might otherwise lead to new obstacles to trade. A better international framework for resolving trade problems is required in five areas: nontariff barriers related to domestic economic and social policies; agricultural trade barriers related to domestic agricultural programs; safeguard measures to facilitate an orderly adjustment to new market conditions by producers in *importing* countries; subsidies and other government assistance to industries; and finally new understandings on the access of consuming countries to sources of supply, which might include safeguard arrangements to facilitate orderly adjustments to new market conditions by consumers in *exporting* countries.

Quite appropriately, however, the primary focus of the new round of negotiations will not be on maintenance of the status quo but on a continued dismantling of trade barriers. It should thus be possible to avoid confusing the end—the expansion of profitable trading opportunities—with the means—the negotiation of rules governing trade. Countries have benefited greatly from the rapid expansion of trade in the past quarter century; and should this trend cease or be reversed because of a failure of international cooperation, the economic welfare of all countries, including the United States, would be likely to suffer.

As in the past, a major focus of the negotiations will be on a reduction of tariffs. While past trade negotiations have reduced the relative importance of tariffs, they remain the most visible obstacle to trade.

Approximately 60 percent of all trade in industrial products remains subject to tariffs in the major industrial countries, and the average rate of such tariffs is about 10 percent. Moreover, while in the aggregate, tariffs have been substantially reduced, some very high tariffs remain on a few important consumer goods. Of all trade, 4 percent is still subject to tariffs of 20 percent or more. It is hoped that the negotiations will result in a substantial expansion of the duty-free category as well as a substantial reduction in the average tariff on the remaining dutiable items.

Reducing Nontariff Barriers

In order to make possible the more effective management of the trading system, new understandings need to be negotiated with respect to a wide variety of nontariff barriers (NTB's), such as import quotas, preferential government procurement regulations, discriminatory standards, and unreasonable customs procedures. Some NTB's are imposed for the same reasons that tariffs are imposed, to protect a particular domestic economic activity. In negotiating reductions in NTB's the goal is the same as in negotiating reductions in tariffs: to remove or reduce the obstacles to free exchange of goods. Other NTB's, however, are merely the unintended by-product of programs designed to achieve various domestic social or economic objectives. The negotiating objective in such cases is to bring about modifications in the design or implementation of policies related to such an objective in order to avoid unnecessary distortion of trade. It may also be desirable to subject such policies to periodic review to make sure that the level of protection offered is the minimum necessary to achieve legitimate domestic goals.

There is a natural tension between the free market principle on which the GATT is based and the practical reality of extensive government intervention in the economy in most countries. The challenge for these negotiations is to devise arrangements that will give governments considerable leeway in forming and pursuing their own policies, while encouraging them to adopt policy measures that will minimize the disruption of the economic interests of other nations. Such arrangements in themselves will not eliminate potential policy conflicts among governments, but they can provide some guidelines for resolving such conflicts to everyone's satisfaction. The absence of such arrangements creates the danger that governments will try to protect themselves against the disruptive influence of actions by foreign governments in sensitive sectors by imposing new measures that distort trade.

Reforming Agricultural Trade

Trade barriers and domestic social objectives are perhaps most intertwined in the agricultural sector, where domestic programs to support farm income and to guarantee the availability of food supplies from domestic sources have been sheltered by comprehensive tariff and nontariff barriers. The challenge facing the negotiators is to work out some arrangements that would permit governments to honor their commitments to both farmers and consumers at lower levels of protection. A reduction of the level of protection would not only benefit consumers by reducing real food prices, but encourage producers to use their resources in a manner more consistent with comparative advantage. It is also true, of course, that the necessary shifts in production patterns would be difficult for some producers, and provisions to ease the adjustment costs would be needed in many countries. For some countries this will mean new measures to transfer income to those farmers who suffer income losses in the short run from lower levels of protection.

In working out an approach to the negotiated reduction of agricultural trade barriers, one must distinguish between cyclical and structural reasons for agricultural protection. Cyclical problems arise when market prices rise above accepted norms or farm incomes drop below accepted norms. Structural problems arise if the norms for prices and incomes differ between one country and another.

Cyclical problems. Most farm programs are designed to put a floor under farm incomes when production increases sharply. During periods of peak production, therefore, governments tend to raise farm incomes either directly by making up any shortfalls with direct payments, or indirectly by keeping farm prices above the level that would prevail in a free market. Governments can use either domestic or international trade measures to keep prices high. Farm prices can be raised by reducing supply through cutbacks in the production or restrictions on imports, or by increasing demand through financing the build-up of domestic stocks or subsidizing exports.

Governments may also attempt to restrain price increases when export markets expand or production declines sharply. During such periods, governments try as far as possible to increase domestic supplies and reduce domestic prices of food by drawing down domestic stocks, increasing domestic production, reducing exports, and increasing imports. Of course if all countries simultaneously have a problem of inadequate production, attempts by one country to increase imports or reduce exports, or both, will make the problem worse for other countries. The more a country depends on exports or imports, the greater its exposure.

Some countries, the United States among them, permit agricultural prices to vary over a wider range than is true in other countries, for example, the members of the European Community. This difference has permitted countries with narrower margins for price fluctuation to increase the stability of their own supplies and prices through trade at the expense of countries with wider margins for price fluctuation. The reason is that, long before the country with wider margins takes such action, the country with the narrower margin tends to limit imports and to increase export incentives when prices are falling and to limit exports when prices are rising. As a result, surpluses and shortages are exaggerated for the latter when price pressures develop in either direction.

Two conclusions can be drawn from all this. First, unless governments can develop some understandings on the use of trade measures during a period of excess or inadequate food production throughout the world, tensions will be inevitable. Second, governments will be reluctant to increase their dependence on foreign trade as long as they cannot receive adequate assurances that other governments will not pursue policies which seek to shift the costs of moderating swings in farm incomes and food prices to their neighbors.

Structural problems. Agreements on a set of rules regarding cyclically related trade measures can be separated from negotiations designed to reduce agricultural trade barriers arising from structural differences between the farm sector in one country and another. While most governments are committed to preventing agricultural prices from falling below or rising above accepted levels, these levels differ between one country and another. Under conditions of free trade, however, market prices in different countries will generally not vary by more than the cost of transportation. To the extent therefore that one country wishes to support a market price that is either lower or higher than in other countries, it has to impose some limitation on trade flows. If agricultural trade barriers are to be reduced, countries will need to find some means to reduce the differences in market support prices.

An approach to agricultural negotiations. International negotiations on agricultural trade are timely because many foreign governments are in the process of reassessing their agricultural policies in response to considerable public dissatisfaction with the results of current agricultural programs. During normal times, changes in existing programs would be difficult to negotiate even if no economic interest were seriously affected. At a time when change has become inevitable, it is far easier to work out a greater harmonization of national approaches to agricultural problems.

These negotiations need to be approached in a fairly pragmatic manner. It would be impractical, as some have suggested, to negotiate tight international agreements regulating prices, production, inventories, and trade controls on individual commodities. On the other hand, governments will be reluctant to increase the dependence of their consumers on imports and the dependence of their producers on exports, without some agreement on the availability of such imports when food is in relatively short supply and the accessibility of such exports to foreign markets when food is in relatively excess supply. Undoubtedly some degree of international understanding on the use of trade controls relative to domestic measures will be required. As part of such an international understanding, it may be desirable to achieve a better coordination of those internal policies which are undertaken to moderate extreme fluctuations in food supplies and prices.

Better international understandings on improved access to supplies as well as access to markets should persuade countries on their own to undertake more of the long-term changes in their agricultural programs that would result in more efficient patterns of worldwide production. Important in such long-term reforms would be the adjustment of relative prices among farm products. Another element could be a greater shift toward more direct methods of supporting farm incomes while allowing prices more room to decline during bumper crop years.

Negotiating a New International Safeguard System

New international agreements would also be useful with respect to the rules and procedures adopted by countries to deal with problems of import disruption. Most nations at one time or another find it desirable to limit the growth of imports for a transitional period so that domestic industry can have time to adjust. Since the current international rules and procedures have proved largely unworkable in practice, governments have generally worked out informal arrangements with each other. It would be desirable to bring these arrangements within an accepted international framework in which the interests of third parties could be better protected. The adoption of certain internationally accepted principles could also reduce some of the political friction which has tended to be associated with the negotiation of such arrangements. It would moderate the effects of adjustment, while giving the international community some better assurance that restrictive measures will not be any broader or continue any longer than necessary for domestic adjustment to take place.

Subsidies and Countervailing Duties

Better international understanding is also needed on the use of subsidies and the imposition of countervailing duties designed to offset foreign subsidies. Governments commonly employ subsidies to achieve specific economic and social goals. When such subsidies are used to favor industries competing with export or import industries, they affect not only domestic economic activity but foreign economic activity as well. Foreign governments can try to neutralize the effect of the subsidy on their own trade by imposing an equivalent duty on imports or an equivalent subsidy on exports. Given the widespread use of subsidies by most governments, trade would become increasingly subject to new tariffs if governments actually countervailed against every form of foreign subsidy. Conversely, the competitive position of unsubsidized businesses in some countries could be increasingly affected by subsidized production in other countries. What is needed therefore is international agreement on the types of subsidies that are not internationally acceptable, and consequently subject to countervailing duties, and general agreement on the types of subsidies that are acceptable.

Access to Foreign Supplies

The events of the past year have demonstrated that access to supplies can be as much of a problem as access to markets, and that international guidelines on access to supplies can be as valuable as international agreements about access to markets. The possibility has thus arisen of a new type of reciprocity in international trading relations: commitments by producing countries to consuming countries on access to supplies, and commitments by consuming countries to producing countries on access to markets. Similarly, safeguard arrangements which are designed to protect producers in consuming countries when excessively large increases in imports threaten to disrupt domestic production could be matched by safeguard

arrangements which are designed to protect consumers in producing countries when excessively large exports threaten to disrupt domestic markets in producing countries.

Pending Trade Legislation

In order for the United States Government to be able to make such far-reaching international commitments on trade practices and policies, it is necessary to obtain public backing and the appropriate legislative mandate. Two approaches were considered early last year. One approach would be first to negotiate preliminary agreements with other countries, and then on the basis of such agreements to seek the necessary legislation. The other approach would be first to seek a broad enough legislative mandate to cover negotiating outcomes that could be foreseen and a procedure for congressional participation where negotiating outcomes could not be foreseen, and then to negotiate an agreement within the context of that legislative framework. The second alernative was chosen both because other governments could not be expected to put forward their maximum concessions if U.S. offers did not have the explicit support of the Congress, and because it would make possible more active participation of the Congress in an area where congressional prerogatives have traditionally been strong.

Accordingly, last April the President sent draft legislation to the Congress. After extensive hearings, the House of Representatives approved a bill that would provide the necessary authorities to negotiate both a comprehensive reform of the international trading system and increased access to foreign markets and supplies. It would also significantly improve the management of U.S. trade policy on a day-to-day basis. In the coming months the Senate is scheduled to consider this legislation.

Congressional passage of trade legislation has become more important than ever because of the strains that the massive increase in international oil prices is likely to place on the international trading system in the coming year. All countries will be under pressure to reduce their imports and to expand their exports to pay for the increased cost of oil, even though all *oil-consuming* countries together will not be able to improve their trade balance by more than the *oil-producing* countries are prepared to increase their imports. Given the large increases in oil revenues and the small populations of most oil-producing countries, only a fraction of such revenues is likely to be spent on goods in the short run. At the same time, a number of key products could be in short supply at current price relationships, and this could induce new international competition for such supplies. In order to negotiate effectively with other countries on the resolution of some of these problems and in order to protect U.S. economic interests in the absence of such agreements, a new legislative mandate is urgently needed.

The draft bill before the Congress would improve the President's ability to manage U.S. trade policies in several respects. It would give the President limited authority to impose a temporary import surcharge or other import

limitations, either to deal with a serious balance of payments deficit or to cooperate in correcting a balance of payments disequilibrium. He could also reduce or suspend import restrictions in order to reduce either a persistent balance of payments surplus or excessive inflationary pressures in specific commodity areas. Other permanent authority would permit the President full exercise of U.S. rights and obligations under trade agreements, and still another provision would revise and expand the President's authority to take action against foreign countries which maintain unjustifiable or unreasonable import restrictions or other policies which seriously injure U.S. trade. The legislation would also liberalize the criteria for granting adjustment assistance to firms and workers displaced by import competition and would temporarily limit the growth of imports when such growth might seriously injure a domestic industry.

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In the context of the postwar period, developments in the international economy during the past year appear rather turbulent. Massive capital flows led to fluctuations in exchange rates that were far in excess of any that attracted attention in the recent past. Inflation accelerated throughout much of the world, as demand for goods outgrew the productive capacity of the world economy. Shortfalls in farm output and cutbacks in oil production, combined with selective embargoes on oil exports, created intense international competition for food and energy. In all these different ways, the world received an effective demonstration of the extent to which economic interdependence has become a reality.

Despite the economic difficulties, most nations were able to record significant economic gains; and despite some stresses and strains in international economic relations, the postwar framework for economic cooperation among nations remained intact. This ability of the world economy to adjust to the new realities was in large part due to the willingness of most governments to accept greater flexibility in their economic relationships, while continuing to recognize the need for self-discpline in the pursuit of individual national goals. Certainly the introduction of more flexible exchange rate relationships facilitated the adjustment of economic relations among individual national economies experiencing widely different domestic circumstances. Equally important was the willingness of governments to negotiate pragmatic accommodations to politically difficult international monetary and trade issues.

In the coming year, the new arrangements for international cooperation that were evolving in the past year will be put to a strenuous test. The continuing constraints imposed on the production and export of oil by a number of countries in the Middle East will intensify the competition for energy supplies and chemicals. In addition, the recent large increase in world oil prices will require major adjustments in relative incomes both within and among nations, in relative prices of both domestic and internationally traded goods, in world patterns of production and trade, and in the worldwide flow of

capital and the means of putting this capital to its most productive uses. These adjustments are likely to pose severe hardships for some countries, and some domestic economic difficulties for all nations. The pressures to take unilateral measures at the expense of one's neighbors could become quite intense in such an environment. Were just one nation, and then others, to pursue such a course, however, the resulting disruption of international trade would be likely to cause even more serious losses of economic welfare for everyone. International conferences such as the recently concluded meeting of finance ministers in Rome, and the coming conferences on the world oil and the world food situation, will be useful in the search for cooperative solutions. At the same time, the international monetary discussions and the multilateral trade negotiations will be indispensable to a broader effort to strengthen the international framework for managing the increasing number of economic problems that are of global significance.

SUPPLEMENT

Measurement of Effective Changes in Exchange Rates

Exchange rates between the United States and her trading partners have changed frequently over the past 3 years. Since such changes vary from currency to currency, it is useful to combine them into a single index number representing the effective change in the value of the U.S. dollar. Several methods of computing such a number have been developed, but the different methods produce different results. This supplement discusses the rationale behind some of the indexes that have been developed and examines the differences in results.

Each method of computing the effective change in the value of the dollar combines individual changes in exchange rates into a weighted average. The most commonly used weights are based on bilateral trade shares. The appreciation of the German mark, for example, would receive a greater weight than the appreciation of the French franc because Germany accounts for a larger share of overall U.S. trade.

The weights may be computed on the basis of export, import, or total trade shares, depending on the use of the index. The three sets of weights vary because the proportion of U.S. exports that goes to each trading partner will seldom equal the proportion of U.S. imports accounted for by that country. For instance, in 1972 Japan provided 16 percent of U.S. imports but purchased only 10 percent of our exports. The appreciation of the yen would therefore receive a larger weight in an import index than it would in an export index. A composite import-export index of the depreciation of the dollar might use weights equal to the sum of bilateral exports and imports as a fraction of total U.S. foreign trade.

Changes in exchange rates may be expressed in two ways: either as the increase in the value of a foreign currency in terms of dollars or as the decrease in the value of the dollar in relation to a foreign currency. The magnitude of the percentage change in each case differs. If the value of the mark expressed in dollars rises by 33 percent, for example, then the value of the dollar expressed in marks falls by only 25 percent. This is true for the same reason that 100 is 33 percent more than 75, but 75 is 25 percent less than 100. This confusing arithmetic fact has important implications for the calculation of these indexes, because the magnitude of the effective change in the value of the dollar will depend on how the changes in exchange rates are expressed.

An import-weighted index of exchange rate change is normally expressed in terms of the change in the dollar price of foreign currencies. If one assumes that foreign

exporters do not alter their prices, expressed in their own currency, then changes in the dollar value of foreign currencies accurately reflect the changes in dollar prices to American importers. Likewise, an export-weighted index is usually based on changes in the foreign currency prices of dollars, because changes in the value of the dollar reflect changes in prices to foreign purchasers if American exporters hold their dollar prices constant.

Selection of the countries to be included in the computation can markedly affect the value of the index. For completeness one might wish to include as many countries as possible in the sample, but because some countries account for only a small share of overall U.S. trade, limiting the sample to major U.S. trading partners should not significantly affect the value of the index. If a major trading partner were to be eliminated from the sample, however, the resulting index might not accurately reflect the effective depreciation of the dollar.

Bilateral trade shares of the United States have been shifting in the last 3 years in response to changes in exchange rates, further relaxation of trade barriers, and crop failures abroad. An index of the effective depreciation of the dollar could therefore be sensitive to the choice of the year for which bilateral trade shares are computed. In some cases, however, it is difficult to predict how these changes will affect trade shares. For instance, the depreciation of the dollar in relation to the currency of a trading partner should stimulate U.S. exports to that country but reduce U.S. imports from that country. Because these two results tend to offset each other, the net effect on total trade shares is uncertain.

Changes in exchange rates are computed in relation to the exchange rates in effect on some base date. Commonly used base dates include these: May 1970, the last month in which all major U.S. trading partners observed fixed exchange rate policies for their currencies; December 18, 1971, the day of the Smithsonian Agreement; and March 19, 1973, the first day of the float against the dollar for a number of foreign currencies. Because the value of the dollar generally declined from May 1970 to July 1973, indexes of effective depreciation of the dollar using an earlier base date for exchange rates will generally show a greater depreciation of the dollar than those based on a more recent date. Typical spot rates used are the daily noon spot rates quoted in New York or London.

The Change in the Value of the Dollar: A Comparison of Several Indexes

Two widely used indexes are the Morgan Guaranty index of effective exchange rate changes, published by the Morgan Guaranty Trust Company, and the Reuters Currency Index, computed by Reuters, Limited, the London-based international news agency. Both are composite indexes, combining bilateral export and import trade shares in one index, but different techniques are used to compute them.

The Morgan Guaranty index uses a sample of 14 countries other than the United States, which together accounted for about two-thirds of total U.S. trade in 1972.* Using separate export and import trade shares computed from 1972 trade data (before September 1973, trade data for 1971 were used), Morgan Guaranty first computes separate export and import indexes and then averages the two results according to the relative weights of exports to and imports from the other 14 countries in the sample. The export-weighted changes in the values of foreign currencies are expressed in foreign currency units per dollar; the import-weighted changes are expressed in dollars per foreign currency unit. Spot exchange rates are the daily noon dollar bid rates quoted in New York.

The Reuters Currency Index, which is followed closely by foreign central banks and foreign exchange markets, uses a sample comprising nine countries, eliminating

*The countries are: Canada, Japan, the United Kingdom, West Germany, France, Italy, Belgium-Luxembourg, the Netherlands, Switzerland, Austria, Denmark, Norway, Sweden, and Australia.

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Canada and four smaller countries used in the Morgan Guaranty sample. Each currency change is weighted by the sum of exports plus imports as a fraction of total U.S. trade. Trade weights are computed on the basis of average trade shares in 1970–71. Reuters uses noon spot rates in London for all currencies except the yen; for this they use the closing rate in Tokyo, because the yen market in London is thin and the quotations are not necessarily representative of world market conditions. All changes in exchange rates are expressed as changes in foreign currencies vis-a-vis the dollar. A comparison of these two indexes, plus three others that will be discussed below, is contained in Table 56.

TABLE 56.—*A comparison of several measures of the effective depreciation of the dollar from May 1970, 1971–73*

[Percent change]

Year and month	Morgan Guaranty index	Reuters currency index[1]	Treasury index	Multilateral index	Trade model index
1971:					
June	(2)	(2)	−2.3	−1.85	−1.84
July	(2)	(2)	−2.5	−2.11	−2.04
Aug.	(2)	(2)	−4.6	−3.39	−2.72
Sept.	−6.31	(2)	−5.5	−4.69	−4.01
Oct.	−6.93	(2)	−6.0	−4.78	−4.31
Nov.	−7.20	(2)	−6.3	−5.20	−4.57
Dec.	−9.05	−1.69	−8.2	−6.99	−5.91
1972:					
Jan.	−9.95	−.15	−9.0	−7.89	−6.43
Feb.	−10.73	.95	−9.7	−8.25	−7.08
Mar.	−10.94	1.15	−10.1	−8.63	−7.24
April	−10.98	.92	−10.0	−8.50	−7.26
May	−11.54	1.09	−10.6	−8.80	−7.57
June	−11.26	.86	−10.4	−8.58	−7.29
July	−11.16	.69	−10.4	−8.48	−7.26
Aug.	−11.10	.51	−10.3	−8.34	−7.19
Sept.	−10.80	.18	−9.6	−7.97	−6.99
Oct.	−10.57	−.39	−9.3	−7.70	−6.74
Nov.	−10.25	−.21	−9.1	−7.76	−6.53
Dec.	−10.29	−.37	−9.5	−7.76	−6.45
1973:					
Jan.	−10.64	.49	−9.7	−8.52	−6.73
Feb.	−17.23	10.37	−16.0	−14.34	−11.51
Mar.	−16.52	10.22	−15.8	−13.74	−11.21
April	−16.34	10.01	−15.5	−13.37	−10.83
May	−18.34	13.14	−17.4	−15.76	−12.61
June	−20.72	17.45	−19.6	−18.67	−14.95
July	−21.18	18.32	−19.9	−19.39	−16.12
Aug.	−19.25	15.58	−18.3	−17.23	−13.63
Sept.	−19.88	16.65	−18.9	−17.97	−14.03
Oct.	−19.90	16.07	−19.0	−17.82	−13.93
Nov.	−16.34	9.72	−15.6	−15.12	−11.82
Dec.	−15.49	7.85	−14.7	−13.22	(2)

[1] Measures the appreciation from December 1971 of a group of foreign currencies in relation to the dollar.
[2] Not available.

Note.—Data are for the last business day of each month. Base rates used are central rates in effect at the end of May 1970.

Sources: Morgan Guaranty Trust Company; Reuters, Limited; Department of the Treasury; Central Intelligence Agency, Office of Economic Research; and Council of Economic Advisers.

On Friday, July 6, 1973, the Morgan Guaranty index registered the largest depreciation of the dollar during 1973: 22.45 percent from the central rates in effect at the end of May 1970. On the same day the Reuters Currency Index indicated that a group of nine foreign currencies had appreciated 20.90 percent against the dollar from the central rates established by the Smithsonian Agreement in December 1971. When the Reuters index is recomputed to show the change in the dollar since May 1970, thus permitting the two indexes to be compared, the Reuters index indicates a

foreign currency appreciation of 36.39 percent. This number must be reconciled with the 22.45 percent depreciation of the dollar shown by the Morgan Guaranty index. The techniques used to compute these two indexes differ widely, and some of these differences in approach affect the computations more than others. By successively modifying the approach used by Reuters until the two procedures are equivalent, one can identify the effect each difference in method has on the calculations.

Morgan Guaranty uses the depreciation of the dollar in relation to foreign currencies when calculating export-weighted changes in the dollar, and it uses the appreciation of foreign currencies vis-a-vis the dollar when calculating import-weighted changes. Reuters uses only the appreciation of foreign currencies vis-a-vis the dollar. Recalculating the Reuters index to conform to the Morgan Guaranty weighting procedure lowers the Reuters index 5.49 percentage points, to 30.90 percent, still a larger measure of the depreciation of the dollar than is yielded by the Morgan Guaranty index.

Noon spot rates in New York on July 6 differed significantly from the noon spot rates in London. Because the dollar generally declined during the day, noon rates in New York, taken 5 hours after the noon rates in London, show a greater depreciation of the dollar than the London rates. Recomputing the modified Reuters index using New York instead of London spot rates increases the measured depreciation of the dollar about half a percentage point, from 30.90 percent to 31.46 percent.

The use of trade weights based on U.S. bilateral trade in 1971, instead of an average of bilateral trade during 1970 and 1971, increases the modified Reuters index from 31.46 to 31.91.

With these adjustments the Reuters index has been modified so that the computation technique is identical to that used by Morgan Guaranty; only the sample of countries differs. Adding Canada to the Reuters sample of nine countries lowers the Reuters measure almost 10 percentage points, from 31.91 percent to 22.26 percent. The relatively small depreciation of the U.S. dollar against the Canadian dollar is given a large weight in the calculation because of the importance of Canadian trade to the United States. Adding the four remaining countries to the Reuters sample plus Canada raises the index of the depreciation of the dollar to 22.45 percent, the number published by Morgan Guaranty on July 6, 1973.

Three observations are suggested by the results. First, the calculation is affected to only a minor degree by some of the differences in approach—for instance, the choice of spot rates, the selection of a year from which to compute trade shares, and the decision to include several countries with relatively small shares of U.S. trade. Second, excluding a major trading partner like Canada can have a great impact on the measure of effective exchange rate change. Third, the choice of whether to express changes in exchange rates in terms of the appreciation of foreign currencies or the depreciation of the dollar is also important, especially if the changes in exchange rates are large for some important trading partners in the sample.

An index used internally by the Treasury Department is computed by a method similar to that used by Morgan Guaranty, except that it covers all OECD countries (22 other than the United States) and the weights used are derived from 1972 bilateral trade data. Changes in the dollar cost of foreign exchange are weighted by bilateral import shares. Changes in the foreign exchange cost of dollars are weighted by bilateral export shares. The resulting import- and export-weighted indexes are then weighted by the relative importance of imports and exports in U.S. total trade with the 22-country group and finally averaged to produce a single index of the effective depreciation of the dollar.

On July 6, 1973, the Treasury Department index showed that the dollar had depreciated 20.8 percent since May 1970 in relation to the currencies of the other OECD countries, 1.65 percentage points less than the Morgan Guaranty figure. Some of the difference derives from the addition to the sample of eight countries whose

currencies have appreciated relatively little in relation to the dollar. Any remaining difference is due to the use of trade shares based on bilateral trade in 1972 rather than 1971.

Other Methods for Computing Weights

One problem associated with the use of these indexes is that the weights take into account only bilateral trade with the United States, when, in fact, changes in any one exchange rate affect trade of other countries as well. When the mark and the yen appreciate, for example, U.S. exports to Japan and Germany increase and imports from those two countries decline. In addition, third countries now find German and Japanese imports relatively more expensive than imports from the United States. For this reason, U.S. exports to third countries should also increase.

One solution is to weight changes in each country's exchange rate by that country's importance in total world trade. The multilateral index presented in Table 56 is one such measure. For each of the countries in the Morgan Guaranty sample, the depreciation of the dollar against each foreign currency is weighted by the sum of each country's exports to and imports from the other 14 countries (including the United States), divided by 1972 total trade among the 15 countries. The spot rates used were daily closing rates in New York.

An additional revision of weights based on past trade shares might incorporate the use of price effects to anticipate the importance of changes in the value of each country's currency to U.S. trade. A country whose trade is more responsive to price changes should receive a greater weight because changes in its exchange rate would have a larger impact on the U.S. trade balance than its relative trade share alone would indicate. A multilateral trade model may be used to compute a set of weights proportional to the effects of bilateral exchange rate changes on the U.S. trade balance.

To construct a trade model index of the depreciation of the dollar, weights were calculated with the use of a preliminary version of a trade flow model developed by the Office of Economic Research of the Central Intelligence Agency. The model assumes that prices have a significant effect on trade among the 17 countries and groups of countries that are included. In the preliminary form of the model, producers of any one good which is traded internationally are assumed to react similarly to a change in the price of their product, no matter which country they live in. The U.S. supply of chemicals on the international market, for example, is no more sensitive to changes in the domestic currency price of chemicals than is the supply from any other country. Similarly, importers of any one good also react to price changes in the same fashion, no matter where they live. As a result of these assumptions, the response of any two countries to a similar change in their exchange rates differs primarily because the product mix of their trade differs.

For July 6, 1973, the multilateral index showed an effective depreciation of the dollar equal to 20.54 percent, about 2 percentage points less than the Morgan Guaranty index. For the same day the trade model index showed that the dollar had depreciated 16.81 percent from May 1970, if the change in each currency is weighted by its relative contribution to the change in the U.S. trade balance. One reason why both these indexes show a smaller change in the value of the dollar than the Morgan Guaranty index is that in both cases changes in exchange rates are expressed in terms of the depreciation of the dollar in relation to each foreign currency. The Morgan Guaranty index, on the other hand, uses the appreciation of foreign currencies in relation to the dollar for part of its calculation, and the magnitude of changes expressed in this manner is greater.

Another reason both these indexes may differ from the Morgan Guaranty index is that the weights are calculated differently. While no simple pattern emerges from a comparison of the trade model weights with the bilateral weights, there is a clear pattern suggested by a comparison of the multilateral weights with the bilateral

TABLE 57.—*Changes in exchange rates from May 1970, 1970–73*

[Percent change]

Year and month	German mark		Japanese yen		French franc		British pound	
	Dollar rate	Effective rate	Dollar rate	Effective rate	Dollar rate	Effective rate	Dollar rate	Effective rate
1970:								
June	0.75	0.51	0.31	−0.12	0.59	0.24	−0.10	−0.64
July	.79	.46	.17	−.38	.64	.24	−.39	−1.15
Aug	.79	.37	.49	.13	.58	.15	−.51	−1.21
Sept	.79	.34	.57	.08	.60	.07	−.61	−1.39
Oct	.76	.31	.61	.15	.55	.01	−.52	−1.25
Nov	.81	.27	.64	.14	.64	.06	−.40	−1.21
Dec	.42	−.06	.65	.14	.57	.14	−.39	−1.17
1971:								
Jan	.64	.04	.56	−.15	.64	.03	.24	−.69
Feb	.99	.33	.69	−.15	.65	−.12	.74	−.28
Mar	.79	.13	.70	−.15	.69	−.01	.78	−.26
Apr	.71	.06	.70	−.13	.68	.00	.75	−.27
May	3.01	1.81	.72	−.31	.50	−1.22	.78	−.76
June	4.21	3.87	.72	−.37	.49	−1.79	.78	−1.04
July	5.14	3.73	.73	−.38	.73	−1.60	.77	−1.12
Aug	7.15	4.86	1.21	−.34	.70	−2.85	1.44	−1.29
Sept	9.05	5.37	6.50	4.26	.60	−4.55	2.89	−1.07
Oct	10.04	5.57	8.73	5.99	.38	−5.72	3.77	−.92
Nov	9.82	5.07	9.50	6.68	.51	−5.73	3.89	−.98
Dec	11.97	5.28	12.50	8.78	3.02	−4.94	5.27	−1.13
1972:								
Jan	13.30	4.71	15.12	10.75	7.36	−2.23	7.12	−.63
Feb	14.89	5.01	17.97	12.70	9.14	−1.71	8.49	−.25
Mar	15.45	5.10	18.99	13.54	10.17	−.99	9.09	−.02
Apr	15.17	5.09	18.59	13.26	10.26	−.60	8.76	−.14
May	15.12	4.88	18.27	12.93	10.77	−.24	8.85	−.22
June	15.51	5.01	19.05	13.40	10.73	−.37	7.05	−2.02
July	15.78	5.28	19.59	14.20	11.03	−.04	1.86	−7.54
Aug	14.86	4.69	19.53	14.24	11.01	.25	2.09	−7.06
Sept	14.62	4.67	19.55	14.35	10.96	.43	1.71	−7.27
Oct	14.13	4.57	19.60	14.55	10.56	.51	−.22	−8.81
Nov	14.25	4.84	19.61	14.70	10.19	.26	−2.06	−10.97
Dec	14.42	5.13	19.51	14.47	9.18	−.82	−2.30	−11.16
1973:								
Jan	14.51	5.03	19.29	13.73	9.26	−.79	−1.83	−11.01
Feb	21.78	6.77	29.75	21.88	16.57	1.35	1.15	−12.90
Mar	30.11	9.29	37.48	25.16	23.25	2.18	3.02	−14.47
Apr	29.02	9.93	35.60	23.89	21.96	2.66	3.49	−12.92
May	31.18	10.38	36.03	23.75	24.09	3.11	5.44	−12.10
June	41.96	15.11	36.11	22.73	30.37	4.11	7.34	−13.78
July	56.72	21.36	36.08	21.52	36.94	3.82	5.73	−19.20
Aug	50.86	19.98	35.73	22.10	30.67	1.58	3.15	−19.76
Sept	50.96	19.63	35.60	21.75	30.33	.90	.76	−22.39
Oct	51.63	18.99	35.17	20.80	31.73	1.46	1.22	−22.73
Nov	41.88	16.24	29.39	17.35	26.01	1.69	−.54	−20.71
Dec	37.72	16.54	28.49	17.52	20.84	.37	−3.44	−21.54

Note.—Monthly figures are averages of daily figures.
Morgan Guaranty Trust Company computes the effective change in the value of foreign currencies by applying the same techniques used to compute the effective depreciation of the dollar.

Sources: Federal Reserve Bank of New York and Morgan Guaranty Trust Company.

weights. First, multilateral trade within the European Economic Community accounts for a large share of total trade among the 15 countries in the multilateral index sample, and hence the relatively large depreciation of the dollar in relation to most European currencies is given a relatively large weight in the multilateral index. Second, because Canada accounts for only 9 percent of total trade among the 15 countries, the small depreciation of the U.S. dollar in relation to the Canadian dollar receives a much smaller weight in the multilateral index than in an index based on bilateral trade shares. These two effects would tend to raise the level of the multilateral index and bring it closer to the Morgan Guaranty figure.

Effective Changes in Other Currencies

Although the discussion in this supplement is directed specifically toward measuring the effective depreciation of the dollar, the same techniques are used to compute the effective change in the value of other currencies as well. An index of the effective changes in a foreign currency is useful because changes in the dollar rate alone can be deceptive. The sharp appreciation of the German mark in terms of dollars, for example, is a misleading indicator of the overall increase in the value of the mark, just as the depreciation of the dollar against any single currency may give a misleading impression of the decline in the value of the dollar. Changes in the dollar exchange rates and effective changes in the exchange rates for several foreign currencies are presented in Table 57 for comparison.